

PARADISE FOUND AT LAST!

JOURNEY TO DISCOVER THE BEST PLACE WHERE TO LIVE



With the facts at your fingertips you will be able to choose the most suitable Country to live according to your needs and expectations

Updated Version **2.0**

Description

Do you ever feel overwhelmed by your life? Do you really want to live in a better world? Would you like to know more about the world you are living in? Then, this is the right e-book for you! You will be taken on a captivating tour where you will be shown a wide range of topics which will help you to spot the best place in the world and, therefore, to find out your own Eden.

The book takes into account the geophysical (climatic conditions, areas at greater risk from future earthquakes, hurricane danger zones and so on), economic (cost of living, tax pressure, inflation and so on) and social aspects (criminality index, education level, healthcare quality and so on) of each country in the world (196 of them!).

Each chapter examines its topic in depth and, as pictures speak louder than words, a world map shows, in different colours, the specific conditions of the countries.

The world is full of lies, of half-truths and of statistics as well. This is the reason why the figures of our world maps come from a reliable source. The statistical data are supplied by the leading organisations on the subject (ONU, World Bank, NOAA, etc..).

These figures can be fully relied on.

All you have to do is compare the different countries in the world and you will discover your own Eden, the real place able to meet your unique requirements and needs.



The maps found in this book have been produced using ArcGis geo-spatial software, version 10.4.1, edited by Esri Italia

Roberto Stanzani – Sergio Senesi

Paradise,
Found at Last!

Journey to discover the best place where to live.

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Have a nice journey!

You are on the verge of beginning one of the most challenging adventures with our amazing journey, which will lead you, step by step, to discover your personal Eden.

This book can change the course of your life completely; it is up to you. This book can give you the tools and knowledge you have never had before, so that you can get rid of false beliefs and stereotypes. This book can teach you a lot of useful information, whether you use it or not.

Human beings have always been searching for happiness and this is probably your greatest need as well. People find it hard to reach their perfect state of wellness, but the prerequisite, and often the substitute for happiness, is peacefulness, both inner and outer peace. A number of people would like to live in a world without any wars or poverty, or where they do not need to work all day long to live worthily. Everybody is searching for their own “earthly paradise”, though some say it aloud and some just think about it. If you are not lucky enough to be born there, you try to reach it.

Every human being has an inner desire to find out his/her own ideal place to live in, even though everybody has their own personal Eden. Some people could describe it one way, but others could come up with a completely different one. This is the reason why people usually look for it at different periods of their life and in many different ways. Somebody even may get to an imaginary or unreal artificial paradise on earth. Actually, some people use an unreal “self” and make up a sort of “second life” running parallel to the real one. Role-playing is the most innocent and playful way to do that, where people create an alter ego, embodying an imaginary character and performing heroic deeds. Moreover, there are the so-called virtual environments, where people create a virtual extension of their own real life, more precisely the more or less harmless “social

networks”.

It is also important to remember some extreme cases of alcohol and drug abuse, which are much less rare nowadays, with their magic but devastating effects. This is likely to happen as people are looking for a “form of life” they have not reached yet and they think they will never have. It would be wiser to keep on looking for your own “earthly paradise” in the real world of your own experience with life. This is exactly what our book aims at.

There are so many different places around the world and most of them are totally different from the one we live in. Some places are even worse, but others are possibly better. Each part of the world is amazing in itself, even though it may not meet our requirements. Everybody, as inhabitants of this world, should have the right to choose the place to live in.

Do you ever feel your life is drifting away towards a colourless future? Do you have the feeling that you do not belong to the town or country you are living in?

Great majorities of individuals are unsatisfied with the place they live in, and sometimes it really is the worst place to live in the world! This may be due to many reasons: prevailing climate conditions of a region (too cold, too hot, too rainy), increasing levels of air pollution, rising poverty rates, worsening of quality life, crumbling away of human relations and an unsatisfying economy. In addition, the list could go on and on and on. Whatever the reason you dislike the country you are living in, it is always difficult to decide to change the direction of your life and move somewhere else.

Of course, you are attached to the country you live in! It is the country you were born in! You have got used to it and it is the place where your friends, your knowledge, your social relations and routines are! You have always lived there so far, but what about finding out a place where you could have a better life? Many of our forefathers travelled thousands of kilometres away from their country dreaming of a better life. You could do the same! Your life is unique! Do not throw it away!

Many people think it would be nice to point a finger to a place on a world map and say: "I'll leave". A number of people dream of changing their life and moving to another country. Actually, just few are brave enough to do it, and many of them do for a short time, and then they go back to their hometowns, thinking they were wrong, hasty and thoughtless.

You should think carefully before moving to another country!

The problem is that a globe can just tell you the topographic profile of the place you are looking for. You need to know many other basic parameters so that you can be aware of what you will really find in the country you want to move to. You need to judge with a full knowledge of the facts.

Take a world map (like the one shown below) and point your finger to the country you like best. Ask yourself: Am I sure it is the best place for me to live in? Does it live up to my expectations? Do I have an intimate knowledge of this country so that I can really say it meets my requirements? You should not be rash.

The majority of people studied geography when they were at school but have vague memories of it now. Of course, they watch amazing documentaries from around the world on TV, read articles on living abroad in magazines, hear of natural disasters overseas, but they usually judge on the basis of stereotypes or often report what other people say.

You should not run the risk of choosing a foreign country without an in-depth and adequate knowledge of it. You could choose one of the cities most likely to be destroyed by a natural disaster, with the highest risk of being battered by hurricanes, rocked by earthquakes or burned by a volcano eruption. You could choose a place where citizen rights are trampled on, where you could die of a simple appendicitis, or where the average human lifespan is only 50. You could also choose a place with a high criminality rate or with a poor state education system. There might be many other limiting factors and you would be very disappointed to learn about them when it is too late! Hardly anybody really knows the dynamic, ever changing planet, which is our World!

Each chapter of this book describes its topic in-depth and every single state is dealt with from a geophysical, social and economic point of view, based on real information. Our world is full of lies, half-truths and statistics. Our data, corresponding to the different colours on the map, are based on the most reliable statistics. Therefore, they can be considered as an absolute truth, being supplied by the leading organisation on the subject.

An ancient Chinese proverb says: “One picture is worth ten thousand words” and actually it is easier to learn by looking at pictures. This is the reason why, in each chapter, you will find a world map pointing out, in different colours, the different conditions of each state on a given topic, so that comparisons can be easily made, as all the maps are equal in size and shape. The maps could be printed and virtually superimposed. Then, with a tracing paper and some felt-tip pens, you could highlight the places you are most interested in. This is an easy way to find out your Eden little by little; the real place is waiting for you to come.

Accompanied by the chapters and the maps of this book, you will experience a spectacular journey all around the world and you will enhance your knowledge as well. Afterwards, you will be able to point your finger to the place that really meets your requirements. Nobody will force you to move there for real. What counts is that you will learn that the place meeting your requirements does exist. You could say that dreams are dreams and must stay alive. Of course, you can keep on dreaming. The book has an open ending. Nevertheless remember that, at the end of this tour, you will be able to identify your own “Eden”, not an abstract and unreal place, but a real and tangible one that will bring new light to your future!

Biblical Eden

Before starting this amazing journey that will explore the real world and focus on essential issues affecting everybody's life, it is necessary to know the exact meaning of the word "Eden". As a matter of fact, its origins date back to ancient times.

The Garden of Eden story goes back to the dawn of time. Human beings have been searching for the "Paradise" described in "*Genesis*" for ages and they have always tried to identify the location of it somewhere on Earth. That happiness is gone but never forgotten. The Eden Myth has considerably influenced religious literature, and it has also stimulated the imagination of artists, non-religious people and travellers. Medieval cartography was affected as well. People have never stopped being fascinated by it.

According to the Torah (the first five books of the Bible), The "Garden of Eden" (often referred to, in Hebrew, as "*Gan Eden*") (גן עדן) is the place where Adam and Eve, the first man and woman on Earth, were created and lived for some time, until they committed the first sin against God, the sin of pride. Having committed this original sin, God sent them out of the Garden of Eden, and their punishment extended to all their descendants throughout time. The Hebrew word "*Gan*" (which means "garden" or "enclosure") is translated in Greek with the word "*Paràdeisos*", which is translated in Latin with the word "*Paradisus*" (always with the meaning of "garden" or "enclosure"). The Hebrew term "Eden" means "delight" and refers to something valuable such as precious metals and stones. The Eden Myth was anciently known in both the Sumerian and the Hebrew traditions. The Christian and, later, the Arabic cultures inherited the Hebrew tradition. After creating Adam and the animals, God put the first man in a garden, built within a larger region named "Eden". The garden was called "*Gan Eden*" (Garden of delight).

Below you will find the quotes about the Garden of Eden from the Bible. They are taken from “*Genesis*”, the first book of the Sacred Scripture, which is about God’s creation of the heaven and the earth and of every living creatures.

Note: The verses identifying Eden with a specific location on Earth are in bold.

Genesis 2,8: Now the Lord God had planted a garden in the east, in Eden; and there he put the man he had formed.

In this verse, it is clearly stated that Eden was a real place, a real region within which God created a Garden.

Genesis 2,9: The Lord God made all kinds of trees grow out of the ground-trees that were pleasing to the eye and good for food.

Genesis 2,10: *A river watering the garden flowed from Eden; from there it was separated into four headwaters.*

Genesis 2,11: *The name of the first river is the Pishon; it winds through the entire land of Havilah, where there is gold.*

Now let us find out where the above mentioned Havilah is situated. The tenth chapter of Genesis presents the Table of Nations arranged on a genealogical basis. The text reveals that every race upon the earth comes from a main stem then divided into groups. The Garden of Eden was the idyllic, primordial place of mankind. Adam and Eve had several children, among whom Seth, who became the father of Enosh, who was the father of Kenan, who became the father of Mahalalel, who was the father of Jared, who was the father of Enoch, who became the father of Methuselah, who had a long life. The latter became the father of Lamech, who was the father of the famous Noah, the ark boat builder.

These are our ancient patriarchs. Then, Noah became the father of Shem, who was the father of Arphaxad, who became the father of Cainan, who was the father of Shelah who became the father of Eber, who was the father of Joktan. Therefore, Joktan is the sixteenth generation after Adam and Eve.

Below you will find a short excerpt from Genesis, Chapter 10, where we learn that Havilah is on the eastern hills, from Mesha to Sephar. The name “*Havilah*” is a Hebrew word and means “sandy” or “a stretch of sand”. The people mentioned were, consequently, the first settlers on Earth and the villages and towns they founded were named after them.

Genesis 10,26-29: Joktan was the father of Almodad, Sheleph, Hazarmaveth, Jerah, Hadoram, Uzal, Diklah, Obal, Abimael, Sheba, Ophir, Havilah and Jobab. All these were sons of Joktan.

Genesis 10,30: Their settlements extended from Mesha to Sephar, the hill country of the east.

There is no such thing as absolute certainty, but Havilah is commonly connected to the Arabian Peninsula and, as a matter of fact, as it is stated in the above mentioned *Genesis 2,11*, there are still many gold mines in Saudi Arabia nowadays.

Genesis 2,13: *The name of the second river is Gihon, it runs through the whole land of Ethiopia.*

The river Gihon is still unknown to mankind. The morphology of the landscape has considerably changed and now there is desert where, once, there was plenty of water. In East Africa, the Rift Valley (a long tectonic plate) runs north to south. The chapter dealing with preventable natural disasters will also analyse tectonic plates, so that we can better understand the reason why the Arabian tectonic plate and the African plate are moving away from each other. In fact, in ancient geological times, Africa and Arabia were joined to each other. Therefore there could have been some rivers where the Red Sea is now located, sea that keeps on expanding year after year.

Genesis 2,14: *And the name of the third river is the Tigris, which flows east of Assyria. And the fourth river is the Euphrates.*

The Tigris and the Euphrates are famous as Mesopotamia means “the land between these rivers”. Today, the headwaters of both are in the Armenian Highland and in the region of Lake Van, located in Turkey. Ashur, also spelled Assur, was the ancient capital of Assyria. The remains of the city are situated on the western bank of the river Tigris (as verse 14 states). The discovery of two Neanderthal skulls in the area showed that the region had

been inhabited since Paleolithic times. One of the most important archeological sites of the Neolithic period is in the Hassuna region. At the end of the third millennium BC, this land was colonised by a Semitic people (the word “Semitic” comes from Shem, one of Noah’s sons), later known as “The Assyrians”(from the ancient city of Assur). For a long time, the Assyrian Empire was subdued by the Babylonian Empire, alternating expansion and decline then The Assyrians reestablished control and ruled all over the Fertile Crescent, Egypt and most part of Anatolia (today’s eastern Turkey) until 612.

Genesis 2,15: The Lord God took the man and put him in the Garden of Eden to work it and take care of it.

Genesis 2,19: Now the Lord God had formed out of the ground all the wild animals and all the birds of the heavens and brought them to the man, to see what he would call them. And whatever the man called every living creature, that was its name.

Genesis 2,25: And they were both naked, the man and his wife and were not ashamed.

The Bible goes on telling why Adam and Eve were put out of the Garden of Eden, the story everybody knows. Here, this part is omitted, as it is irrelevant to location of the Garden of Eden.

Genesis 3,23: The Lord God sent him away from the garden of Eden, to work the ground from which he had been taken.

Genesis 3,24: He drove out the man and at the east of the garden of Eden he placed the cherubim, and a flaming sword that turned every way, to guard the way to the tree of life.

According to the first book of the Bible (Genesis), Adam and Eve had many sons and daughters. Cain was one of them.

Genesis 4,16: Then Cain went away from the presence of the Lord and settled in the land of Nod, east of Eden.

Nobody knows exactly where the land of Nod is situated. Some Biblical Scholars identify it with today’s Afghanistan, others with the city of Teheran, in Iran. Another book of the Bible, *2 King 19,12*, says that the people of Gozan, Harran, Rezeph and Eden were in Tel Assar. It is written:

2 King 19,12: *Did the gods of the nations that were destroyed by my predecessors deliver them – the gods of Gozan, Harran, Rezep and the people of Eden who were in Tel Assar?*

Telassar or Thelasar (2 King 19,12 and Isaiah 37,12) is an Assyrian province. It has been identified as Tall Afar in Mesopotamia, situated fifty kilometres away from Sinjar. Telassar, which was inhabited by the people of Eden, is mentioned together with Gozan, Harran and Rezep (called now Rusafah). The latter, which is abandoned today, is 145 kilometres west of the Euphrates, south of Harran. Still today, the city appears in the distance like a mirage in the desert. High pink stone walls with off-white and chalky inclusions, creating really stunning glows of light, surround it. These indications are the coordinates to site the land of Eden on a physical map.

Mesopotamia, whose name comes from the Greek “*en mèsos potamos*” (*mèsos* means “middle”, “*potamos*” means “rivers”), as already mentioned, means “land between rivers”. It is a very fertile region, rich in the basic wild food for human life in ancient times: cereals, leguminous plants, sheep, and bovine animals. Mediterranean forests of oaks, pines, cedars and junipers were found in the northern mountains, which also housed many forms of wild animals, such as leopards, lions and deer. These aspects can also be seen in art iconography still today. Both the Tigris and The Euphrates rise out of the Taurus Mountains which extend to Lake Van. Both rivers flooded unpredictably and they seem to have shifted their beds repeatedly over the course of the millennia, one indication of recurrent severe flooding. The Bible says that the Garden of Eden was full of ornamental shade trees and fruit trees providing plenty of food and that it also had many different sorts of animals. Therefore the Garden of Eden must have been very big. It is usually referred to as a garden but “park” would be more appropriate. The soil of this “big garden” was irrigated by the river coming from the land of Eden. Once in the garden, the river divided into four branches. As Adam and Eve were naked, the climate must have been very mild.

Since the creation of the Garden of Eden, morphological and climatic upheavals have happened. Among them, the catastrophic event known as The Flood (myth that different religions share all over the world).

However, several archaeological sites confirm the cities and the places mentioned in “Genesis” and, thanks to the indications supplied by the Sacred Scripture; the supposed Garden of Eden has been located in an area in Mesopotamia which, nowadays, is within five different countries: Turkey, Armenia, Syria, Iraq and Iran. The most qualified Biblical Scholars support this hypothesis.

This does not mean that your own Eden should be identified with this place, but now, at least, you know more about it and, most importantly, you know that “Eden” may be associated with a “real” place on earth. Unfortunately, it has changed a lot since then. Turkey, Armenia, Syria, Iraq and Iran are still charming places, but the “Earthly Paradise” is no longer there. Many of them have gone through political and religious conflicts, but they are still rich in culture. Several scientists and scholars, on the contrary, think Eden is just a myth and that it has nothing to do, and has never had, with a place on earth. Anyway, this myth keeps on seducing people and nobody can prevent us from believing that there are places on earth that we can call our Eden. Unluckily, we are not allowed to live in that garden of delight created by God. However, we can be happy, as we live on a big planet, which is full of lovely, healthy and dynamic places to discover.

THE BIBLICAL LOCATION OF THE GARDEN OF EDEN



>

ON THE FIRST PART OF YOUR JOURNEY

At the core of the Earth and its farthest ends

You are about to leave: fasten your seat belts and set your seat vertically! You are going to have a shattering experience, from which you will learn a lot about the Planet Earth. Maybe you do not know enough about it. Our planet was formed about 4,7 billion years ago and it is the only one, in our Solar System, able to support life, at least for the time being. All through our journey, you will visit different foreign lands and that will be very exciting! You will fly over the clouds and discover all the different kinds of climatic conditions all over the world. You will sink into the depths of the sea and explore the geophysical and tectonic mechanisms causing natural and devastating phenomena, such as earthquakes and volcanoes. You will sail on the ocean, which, on the one hand is so precious for life but, on the other hand, can be so devastating with its hurricanes and seismic sea-waves, called tsunami. Then, you will fly over the countryside and cities and you will realise that air pollution is destroying many parts of the world nowadays. In this part of the journey, you will feel like you are back at school again, but this time you will study the essential subjects for life. Be patient and open-minded. Your journey towards your own Eden has just begun!

Chapter 1

How to choose your favourite climate

Your journey towards your own Eden has just started! This interesting and charming part of the book is about choosing the climate you prefer. This chapter could be the most complex of all the chapters you are going to read, so please concentrate, although it is not going to be too difficult! Imagine going abroad for a full year to experience all the climate changes of a locality in all seasons, so that you can choose it according to its weather pattern. Before moving there, it would be advisable to know in advance if the weather is cold, hot, wet, dry, or changeable. You could really learn about the different kinds of climate all over the world, compare them with your needs and, eventually, decide whether that locality can really meet your requirements. Please pay attention and take this advice to heart! Nowadays, people are very interested in weather variations and meteorologists are always attempting to improve the accuracy of short-range and long-range forecasts, by using more modern and reliable satellites. Before going on a trip, everybody usually listens to the weather forecasts and pay even more attention to the weather conditions if their holiday is longer, in order to pack adequate clothing. You enjoy your stay if the weather is nice, so before choosing your ideal place on earth, you should be aware of its climate!

The chaos theory. Successful long-range weather forecasts are impossible owing to the turbulent flows of atmospheric circulation. In view of the atmosphere's nonlinear behaviour, the physicist Edward Lorenz elaborated his "Chaos Theory" in the 1970s, as far as weather conditions are concerned. He presented a paper at the annual meeting of the American Association for the Advancement of Science where he explained that a butterfly flapping its wings in Brazil could set off a tornado in Texas. He came out with this ludicrous statement and gained wide currency among chaos theorists of the time. This concept is well-known as "butterfly effect".

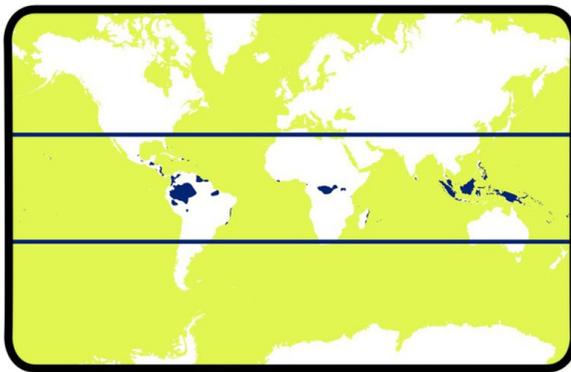
Absolute certainty and a complete understanding of climate. Sometimes even a short-range weather forecast (i.e. three days) can be unreliable, not to mention long-range forecasts (i.e. one month), purely hypothetical. However, today's weather statistics are absolutely reliable. Therefore, sequences of weather data reflecting historic conditions can be used to classify the climates of places on our planet. This classification is scientific, efficient and reliable! There are places where the weather is warm all year round or just for some months, places where it rains a lot in summer and others where it rains a lot in winter. Moreover, there are places where it is rainy all the days of the year and places where it never rains. The most important thing to note is that there are many different elements that affect climate. These include: temperature, precipitation, solar radiation, wind and humidity. As for air temperature, everybody knows that it is warmer in the sun than it is in the shade and people feel comfortable at different temperatures, say 5°C (41° F) or 45°C (113°F); it is a personal matter. As for precipitation, it affects how people perceive climate and the type of vegetation that grows in a country. Areas with high annual rainfall will have lush vegetation but will force people to stay indoors or to go out with an umbrella most of the time. On the contrary, regions with low rainfall will have a low vegetation index, but people can spend more time in the open air there. In this chapter, the amount of rainfall will be measured in centimetres per square meter. Another essential element for climate is sun radiation. The Sun is the energy source that drives the circulation of air masses and the evaporation of water. It heats air and the Earth's surface at different angles of incidence so the amount of solar energy varies significantly depending on the location, the time of year and the time of day (The Equator is an exception). The average amount of incoming solar radiations decreases from the Equator to the Poles and the highest levels are in the tropics and not at the Equator, as many believe. In fact, the Equator is not the hottest area: here, the air is denser owing to the humidity of the atmosphere, and vegetation becomes more abundant and moisture more plentiful, which causes a decrease in the average temperature. On the contrary, the hottest areas are the continental ones towards the Tropic of Cancer and the Tropic of Capricorn. Similarly, the poles of cold do not correspond with the geographic ones but they are towards the continental regions near the poles themselves. The climate is very much influenced by the angle of incidence of the sun's rays on the Earth's surface but it is also

influenced by daylight hours. However, the amount of daylight hours depends on latitude and seasons, so they can be very long or very short. In spite of this, there is the same number of hours of daylight and darkness everywhere on the Earth at the end of the year, even though they are not distributed the same: at the Equator, there are 12 hours of daylight and 12 hours of darkness every day of the year; at the Poles there are 6 months of daylight and 6 months of darkness; at intermediate latitude, the hours of daylight and darkness alternate in a different way and in a linear relationship between day and night over the year. At Latitude 45° , corresponding to the 45^{th} parallel, the longest day is 16 hours of daylight and the shortest is 8 hours. On equinox dates, night and day are nearly exactly the same length - 12 hours - all over the world. On solstice dates, one of the two poles and the area within its corresponding Arctic Circle is 24 hours of daylight, while the other pole and the area within the corresponding Arctic Circle is 24 hours darkness.

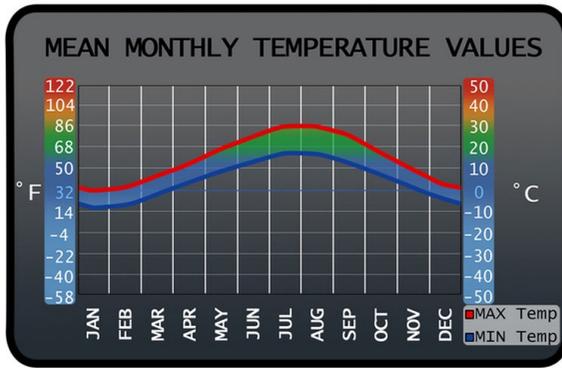
The developer of climate classification. After analysing three of the main factors forming the atmospheric conditions (temperature, rainfall, sun radiation), it is essential to show a clear classification of the different kinds of climates all over the world, so that you can choose the one you like best. The first reliable and exhaustive classification of the climates on our planet was made by Wladimir Peter Koppen, in 1918. In addition to being a meteorologist, he was also a geographer and botanist. He realised that the best way to classify the different kinds of climates was to distinguish them according to vegetation distribution. It is well-known that plants can live only under certain climate conditions, as they are greatly affected by temperature and rainfall. Have you ever watered or heated a plant of yours too much or too little? Have you ever exposed it to direct sunlight for too long? The plant died, of course. You did not purposely want it to die; maybe you do not have green fingers! Plants need their right environment to live. In Botany, the plant kingdom is divided into five groups, according to the climate conditions they need to survive. This is the reason why Koppen created five major climate regions which generally coincide with world pattern of vegetation and soils. Then, these regions were further subdivided, in order to better characterise the different climatic conditions on our planet, making a total of 27 of them.

Climate card. In order to better understand the features of the 27 types of climates on our planet, we have created a practical card for each of them. On this card, five pieces of information will explain, all in all, the characteristics of the climates.

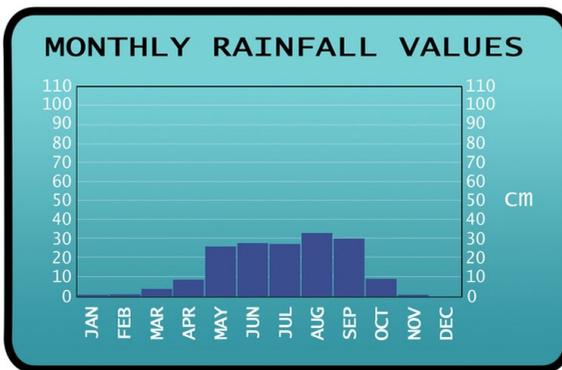
The first piece of information on a *climate card* will let you identify the geographical area affected by a particular kind of climate and a small map of the world will show you how the climate extends to create a climate zone. For example, this card is showing the climate zone which is typical of the “Equatorial Climate”.



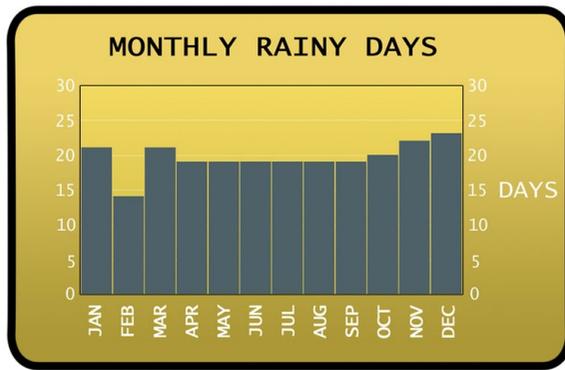
The second piece of information on a *climate card* will let you know the temperature you have to expect if you live in that given climate zone. A chart shows the mean temperatures over the year. The red curve shows the mean maximum temperatures, while the blue curve shows the mean minimum temperatures. Therefore, you will be able to know the day and night temperature for each month of the year. The example below shows the “Humid Continental (with warm summer) Climate”. You can easily see that temperatures decrease in winter and increase in summer, and that the difference between the minimum and maximum temperatures, that is between day and night (about 8°C – 46F), is invariable in winter, whereas in summer the range of temperature increases.



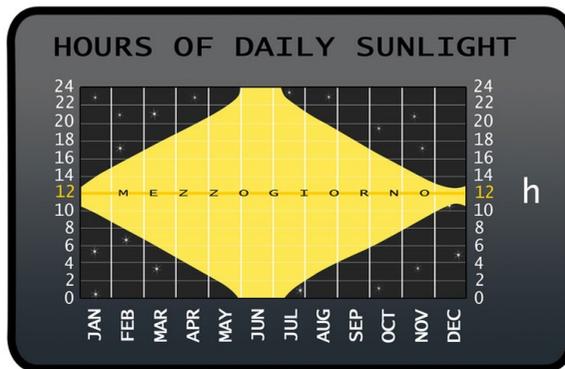
The third piece of information on a *climate card* will let you find out how much rain a particular location with a given climate gets. A simple bar chart, showing rainfall (in cm) for each month of the year, will tell you which season gets more or less rain. The example below, shows the “Tropical Wet and Dry or Savanna Climate” with the almost total absence of rainfall in wintertime, and with mean monthly rainfall of 30cm in summertime.



The fourth piece of information on a *climate card* will tell you how many days it rains, on the average, each month of the year. In some places with a particular climate, it almost rains every day in a month. The example below shows the “Humid Subtropical with Warm Summers Climate”, where, as you can see, it rains 20 days a month on average.



The fifth and last, piece of information on a *climate card* will let you know the hours of daily sunlight throughout the year. As we have already said, at different latitudes and periods of the year, the hours of sunlight can be longer or shorter in a day. Look at the chart below. It is the “Tundra Climate”, where, in June, there are 24 hours of daily sunlight! That is in the Northern Hemisphere.



Hard work. As already said, this chapter is the most difficult to understand and needs hard work. Even though it deals with a simple topic from a technical point of view, there are a lot of complex aspects that make it really challenging. Now you have come to a crossroad: you have to pay attention to the 27 climate cards, analyse them so that you can choose your own ideal place, from a climatic point of view. Be patient as you “travel” through all the different kinds of the world’s climates. If you prefer, you can take some notes. If you are tired, then stop! What you are about to learn now, will be very important for you in the future!

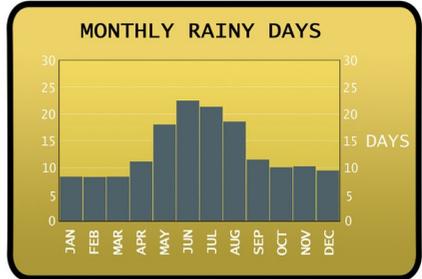
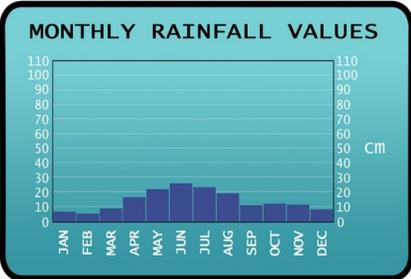
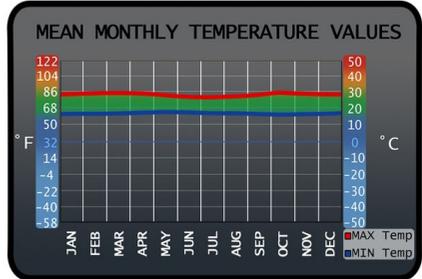
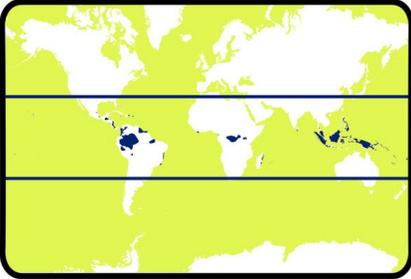
Tropical moist climates

The first group of climates you are about to meet is Tropical Moist Climates, the cradle of the so called megatherms, plants needing continuously high temperatures and moisture. Therefore, in the regions with these climates, mean monthly temperatures are always above 18°C (64°) throughout the year. There is no real winter season and, as annual rainfall is heavy and greater than annual evaporation, humidity is high. There are three minor climate types: Tropical Wet or Equatorial Climate (some call it “the endless summer”), Tropical Monsoon Climate, (with a dry season and a wet season, which has usually heavy rainfall), and Tropical Wet and Dry or Savanna Climate (with two distinct seasons: wet and dry).

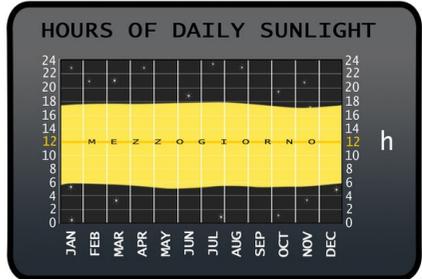
01

EQUATORIAL CLIMATE

(WITH NO DRY SEASON)



Ladies and Gentlemen, this is the climate of the never-ending summer! It has high quantities of rainfall throughout the year and often follows the same daily weather pattern; it often rains at the same time every day. Tropical rainforest (also rain forest) develops in this kind of climate, where 80% of the world's biodiversity (the diversity of plant and animal species) is found.



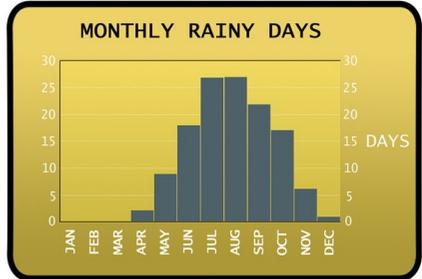
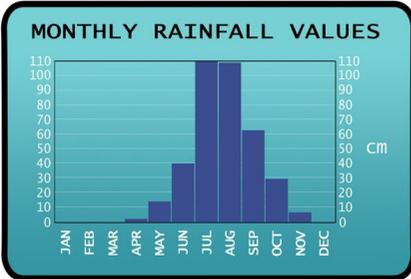
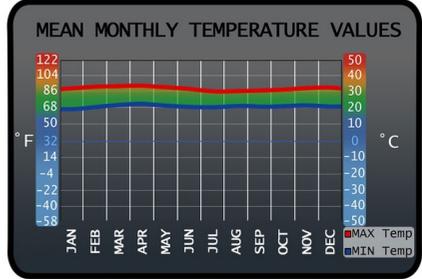
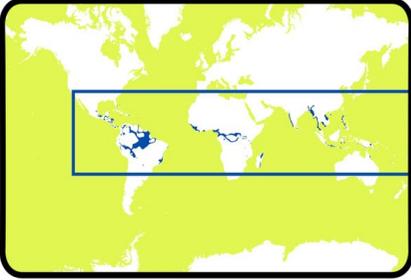
St. Helena, in Venezuela, is a good example of Equatorial Climate, where the mean monthly day temperature is about 30°C (86°F) and 18°C (64°F) at night year round. Rainfall is usually heavy and frequent all through the year. The highest peak is from April to August, when mean monthly rainfall is about 20cm (8 inches).



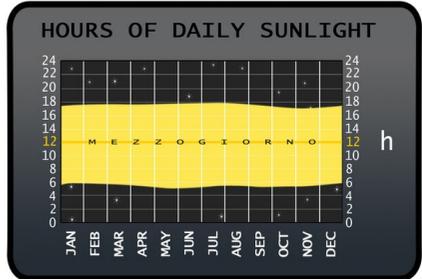
02

TROPICAL MONSOON CLIMATE

(WITH WET AND DRY SEASONS)



The Tropical Monsoon Climate develops two distinct seasons – wet and dry season. In the wet season, very heavy rainfall can sometimes cause devastating floods. There are high and even temperatures all over the year.



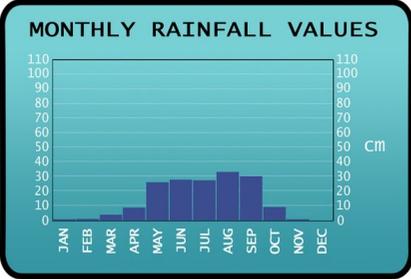
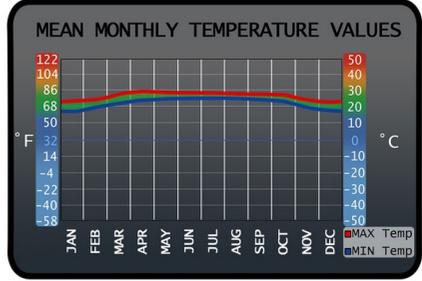
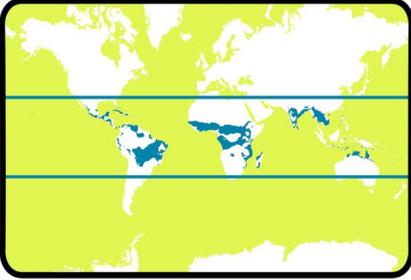
An example of the Tropical Monsoon Climate can be found in Conakry in Guinea, Africa. Here, the mean monthly day temperature ranges from 30°C (86°F) to 34°C (93°F) and from 19°C (66°F) to 22°C (72°F) at night all throughout the year. Mean monthly rainfall, in the rainy season, can even reach 110 cm (43 inches), while very little rainfall occurs during the dry season.



03

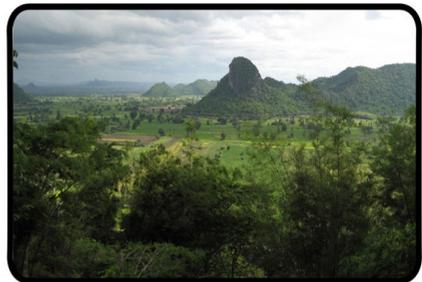
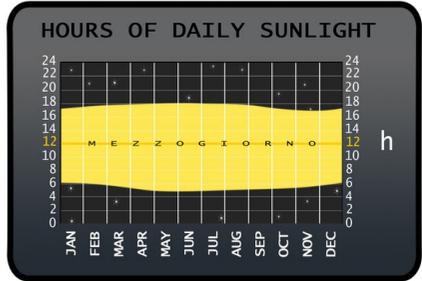
SAVANNA CLIMATE

(WITH WET AND DRY SEASONS)



Compared with the Equatorial and the Monsoon Climates, Savanna is drier and with greater daily and yearly ranges of temperature, so that a winter season can be found (but never cold). There are two distinct seasons: a wet and a dry season and both last about six months. In a few places, the dry season occurs in summer and the rainy season occurs in winter, but in other places it could be the opposite. Anyway, during the wet season, heavy rainfall may last many days, with frequent thunderstorms. On the contrary, it never rains during the dry season, which is called the dry period.

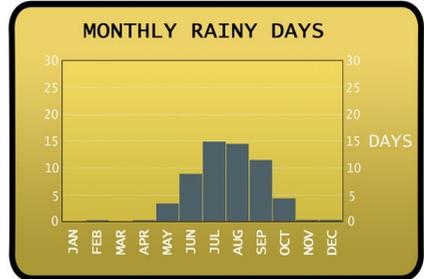
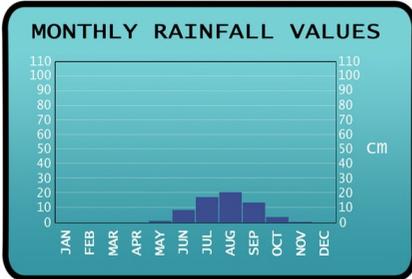
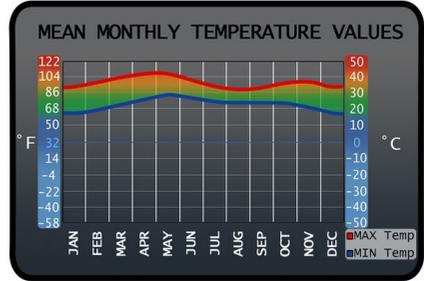
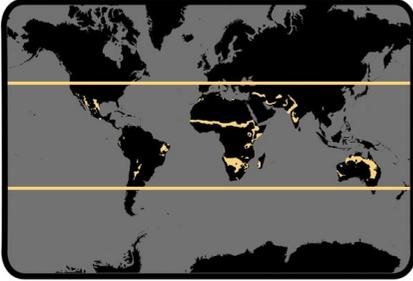
An example of the Savanna Climate is Vientiane in Laos. In the wet season, the mean monthly rainfall is 25 cm (10 inches) and the mean monthly day temperature is about 28°C (82°F) and about 25°C (77°F) at night. On the contrary, in the dry season (when rainfall is almost absent), the mean monthly day temperature ranges from 23°C (73°F) to 26°C (79°F) and from 16°C (61°F) to 20°C (68°F) at night.



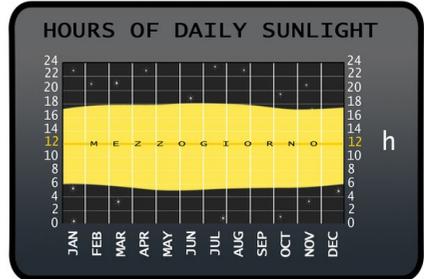
ARID CLIMATES

Your journey is proceeding with the second of the five major climatic groups: Arid Climates. It corresponds to the area where the xerophytes live. These plants have adapted to survive extremely long droughts. There are two minor climate types: Dry Arid (Desert) Climate and Dry Semiarid (Steppe) Climate.

04 HOT SEMI-ARID (Steppe) CLIMATE



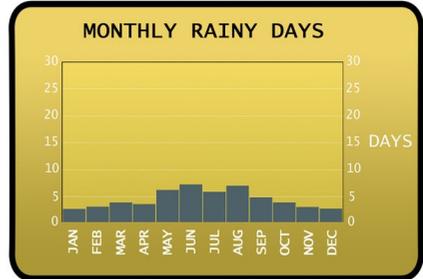
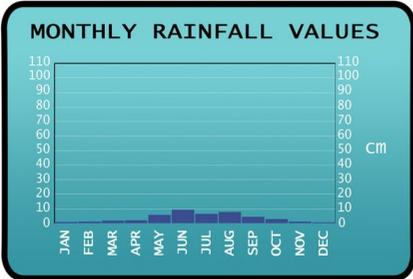
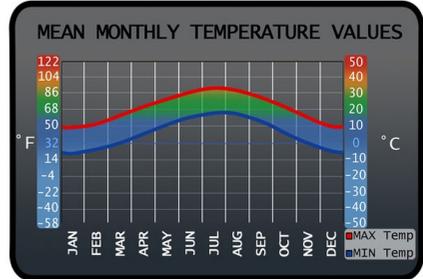
The Hot Semi-arid (Steppe) Climate occurs on the periphery of the deserts, where annual rainfall is low and vegetation is limited to some grasses and herbs.



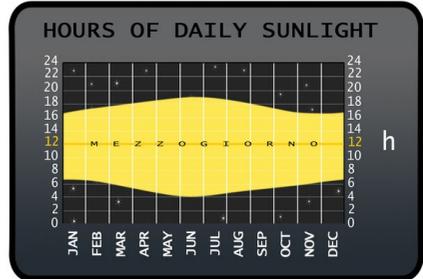
Kayes, in Mali, Africa, experiences the Hot Semi-arid (Steppe) Climate. It has a dry and a wet season, which is characterised by heavy rainfall. During the hottest months, the mean monthly day temperature ranges from 35°C (95°F) to 42°C (108°F), and from 25°C (77°F) to 28°C (82°F) at night, while in the coldest months, it ranges from 32°C (90°F) to 35°C (95°F) during the day and from 16°C (61°F) to 20°C (68°F) at night.



05 COLD SEMI-ARID (Steppe) CLIMATE



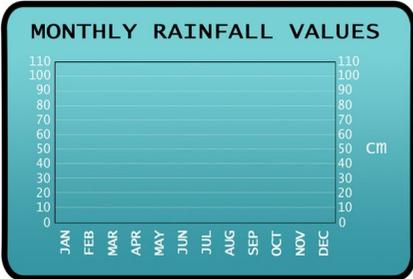
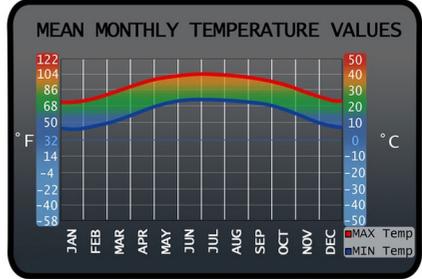
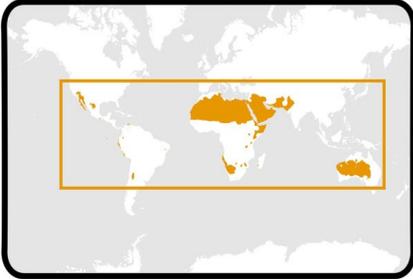
The Cold Semi-arid (Steppe) Climate is usually found next to "cold desert" areas. Annual rainfall is low and only a few grasses and herbs survive, just like in the Hot Semi-arid Climate.



Amarillo, in Texas (USA) is a good example of this kind of climate, where annual rainfall is low and the highest peak is during the hot season, about 7 cm (2.8 inches) per month. The mean monthly day temperature in the hottest months ranges from 23°C (73°F) to 33°C (91°F) and from 13°C (55°F) to 18°C (64°F) at night, while, in the coldest months, it ranges from 9°C (48°F) to 13°C (55°F) in the day and from -6°C (21°F) to 0°C (32°F) at night.

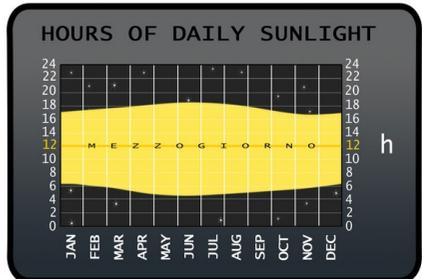


06 HOT DESERT CLIMATE

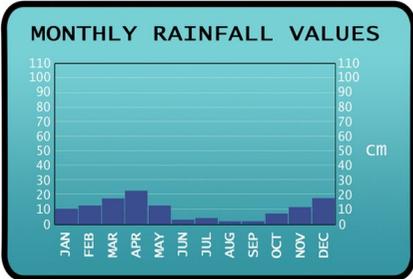
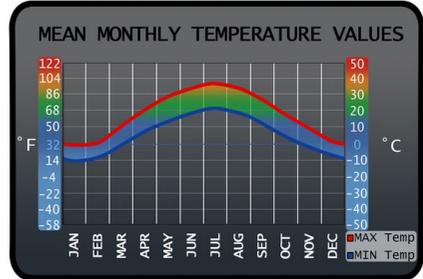
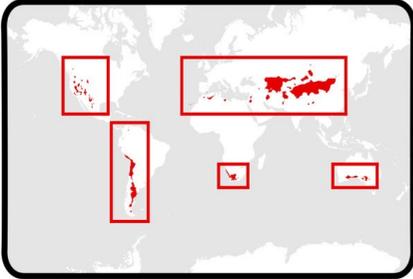


In the Hot Desert Climate, evaporation exceeds precipitation, so the soil is dry and sandy. Many areas receive no rainfall in some years. There is huge range of temperature between night and day

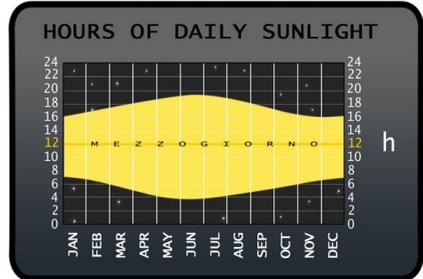
A good example of the Hot Desert Climate can be Kharga, in Egypt. Here, rain rarely falls over one year. In the hottest months, the mean monthly day temperature ranges from 35°C (95°F) to 40°C (104°F) and from 17°C (63°F) to 20°C (68°F) at night, while in the less hotter months, the mean monthly day temperature can drop to 22/24°C (72/75°F) and to 6/8°C (43/46°F) at night.



07 COLD DESERT CLIMATE



The Cold Desert Climate has very dry soil. There are not quite large ranges of temperature between night and day. In some of the regions with this kind of climate, temperatures can drop to several degrees below zero in wintertime.



A good example of this kind of climate is Aqbaytal in Uzbekistan, where rainfall is very low and the mean monthly day temperature, in the hottest months, ranges from 30°C (86°F) to 36°C (97°F) and from 18°C (64°F) to 22°C (72°F) at night. On the contrary, in January, which is the coldest month, the mean monthly day temperature drops to 0°C (32°F) and -10°C (14°F) at night.

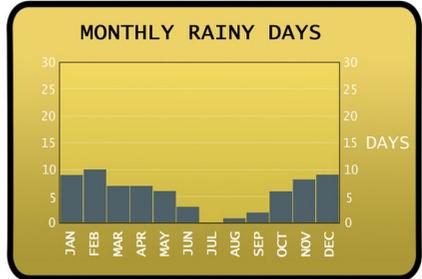
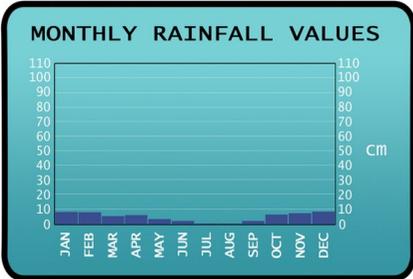
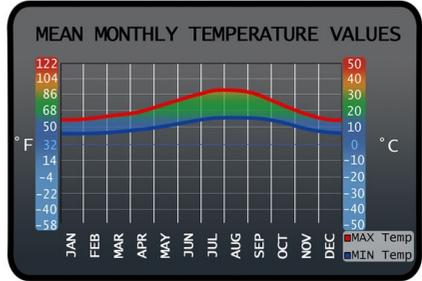
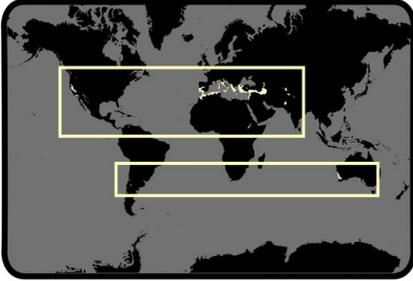


TEMPERATE CLIMATES

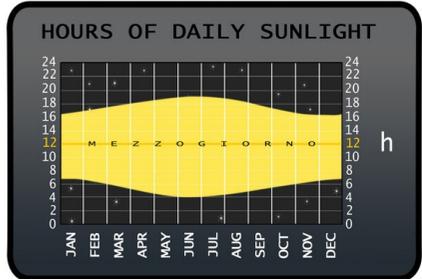
The third of the major climatic groups you are going to meet is Temperate Climates, an extensive one. Mesotherms live in this area, plants needing only moderate amounts of heat and moisture. The primary characteristic of these climates is that, in summertime, the average temperature is always above 10°C (50°F), and in wintertime, it never drops below -3°C (27°F). There are three minor types of Temperate Climates: Mediterranean Climate, (with dry summer), Marine West Coast Climate (or Oceanic) Climate (with dry winter) and Humid Subtropical Climate (with no dry season).

08 MEDITERRANEAN CLIMATE

(WITH VERY HOT SUMMERS)



The Mediterranean Climate (with very hot summers) is characterised by dry summers and by mild winters. Most of the rainfall usually occurs in the dry season in almost all the other kinds of climates, but here, there are rainy winters and at least two consecutive dry months during the summer. The disadvantage is that plants cannot survive the months of low rainfall.

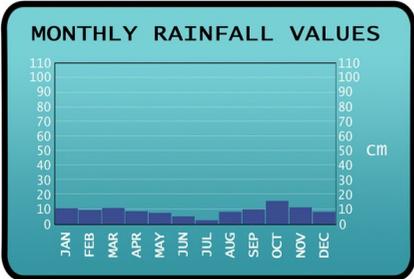
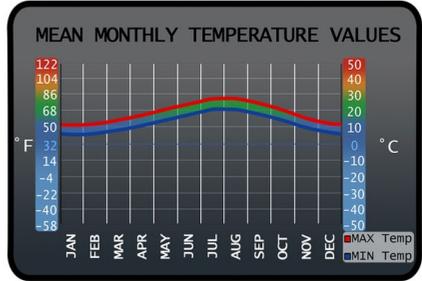
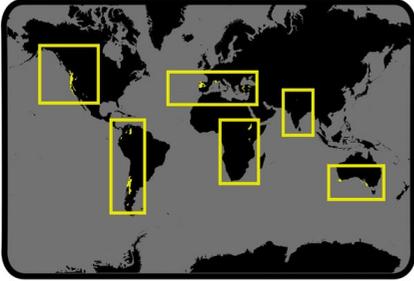


Beja, which is situated in the south of Portugal, is a good example of the Mediterranean Climate, being characterised by very hot summers. Rainfall is absent in July and August. The mean monthly day temperature is about 30/33°C (86/91°F) and about 15/16°C (59/61°F) at night. In the coldest season, rainfall can reach 8 cm (3 inches) a month and the mean monthly day temperature ranges from 14/16°C (57/61°F) to 6/8°C (43/46°F) at night.

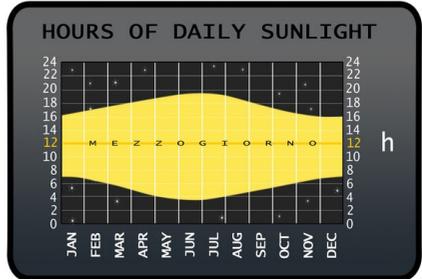


09 MEDITERRANEAN CLIMATE

(WITH WARM SUMMERS)



The Mediterranean Climate with warm summer is characterised by dry summers and mild winters too. It rarely frosts in winter but there are at least two consecutive dry months during the summer, which is a disadvantage for agriculture.

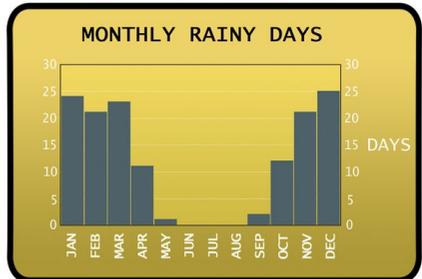
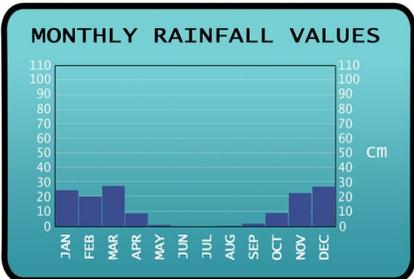
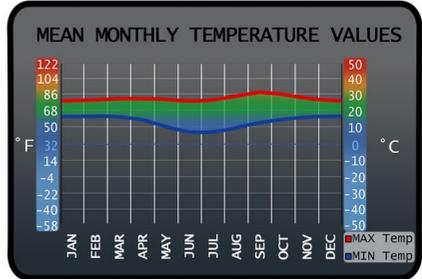
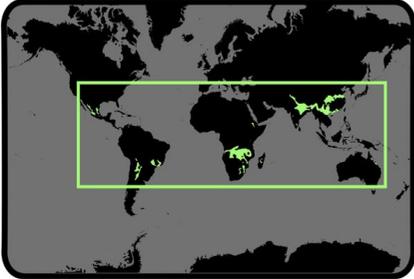


Genoa, in Italy, has this kind of climate. Rainfall is low in summer, when the mean monthly day temperature is 24/27°C (75/81°F) and 18/21°C (64/70°F) at night. The average day temperature in the coldest month drops to 11°C (52°F) and to 5°C (41°F) at night, owing to more rainfall.

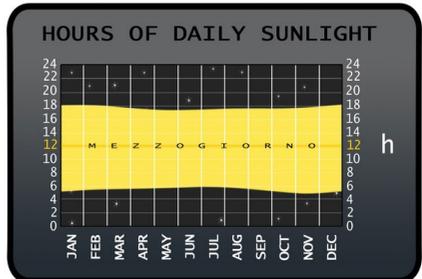


10 OCEANIC CLIMATE

(WITH VERY HOT SUMMERS)



The Oceanic Climate can be considered as an extension of the Tropical Monsoon Climate; it has dry winters. Rainfall mostly occurs in summer, which is the best condition for agriculture. Large ranges of temperature between night and day.

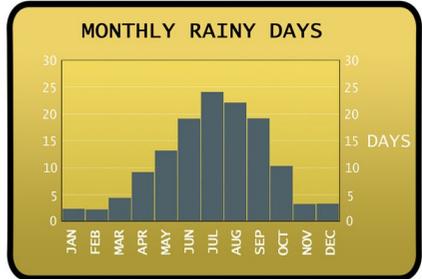
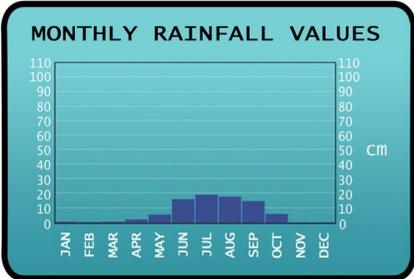
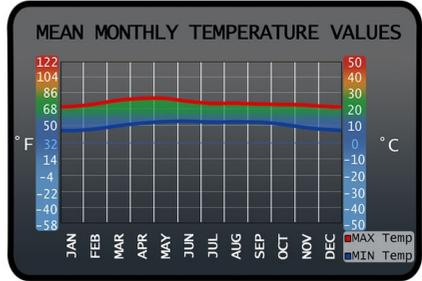
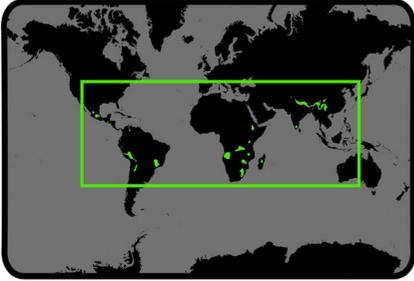


The Oceanic Climate can be found in Mwinilunga, in Zambia, Africa, where mean monthly rainfall is from 20 to 27 cm (8 to 11 inches), concentrated mostly in summer as mentioned above. In summer, the mean monthly day temperature ranges from 27°C (81°F) to 31°C (88°F) and from 14°C (57°F) to 17°C (63°F) at night. In the coldest months, the average temperature drops to 26/27°C (79/81°F) during the day and to 6/10°C (43/50°F) at night.

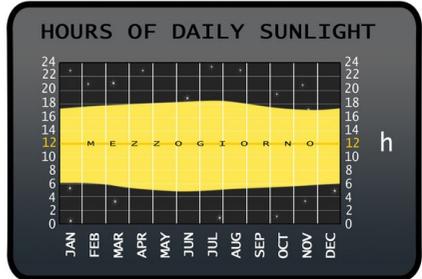


11 OCEANIC CLIMATE

(WITH WARM SUMMERS)



The Oceanic Climate (with warm summers) has dry winters too. Rainfall mostly concentrates in summer. Great ranges of temperature between night and day, mostly in areas far away from the sea.

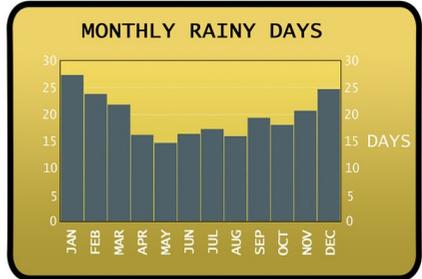
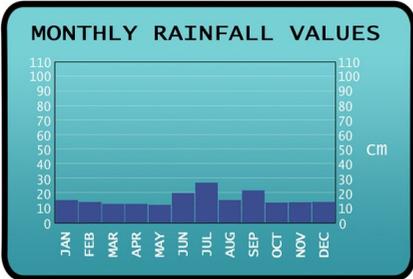
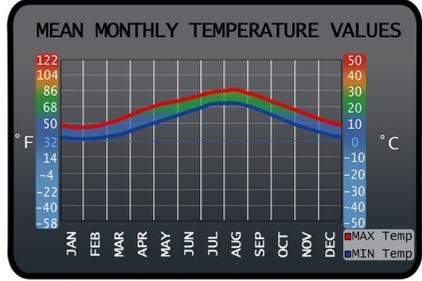


Mexico City (the capital of Mexico) is an example of this kind of climate where rainfall occurs only in summer, 15/19cm (6 to 7 inches) a month and the mean monthly day temperature ranges from 23°C (73°F) to 27°C (81°F) and from 11°C (52°F) to 13°C (55°F) at night. In the coldest and driest months, the mean monthly day temperature drops to 21/23°C (70/73°F) and to 7/9°C (45/48°F) at night.



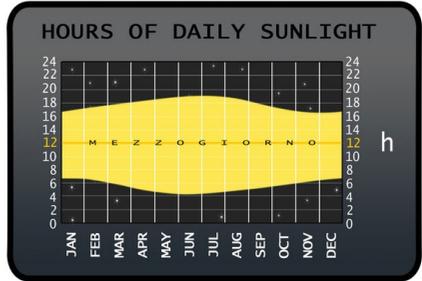
12 HUMID SUBTROPICAL CLIMATE

(WITH VERY HOT SUMMERS)



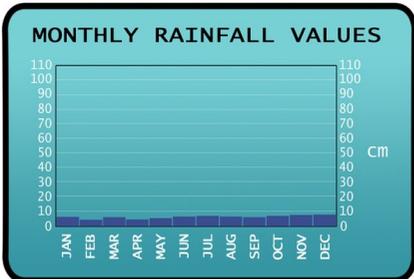
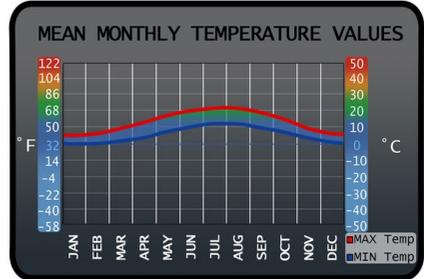
Humid Subtropical Climate (with very hot summers) areas do not have a dry season and are characterised by heavy rainfall both in summer and winter.

Matsu, in Japan, is a location which experiences this kind of climate. In the hottest months, the mean monthly day temperature ranges from 26°C (79°F) to 31°C (88°F) and from 18°C (64°F) to 23°C (73°F) at night, while in the coldest months, it ranges from 7°C (45°F) to 10°C (50°F) during the day and from 1°C (34°F) to 4°C (39°F) at night. Heavy rainfall occurs all year long but the peaks are in the dry season, with 20/25cm (8 to 10 inches) a month.

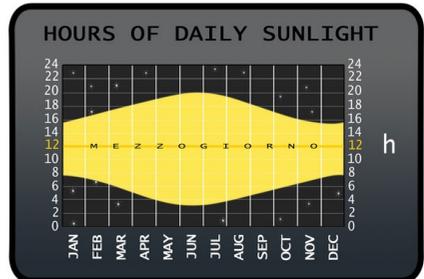


13 HUMID SUBTROPICAL CLIMATE

(WITH WARM SUMMERS)



The Humid Subtropical Climate (with warm summers) does not have a dry season and rainfall occurs both in summer and in winter. The average temperature of the hottest month is lower than 22°C (72°F).



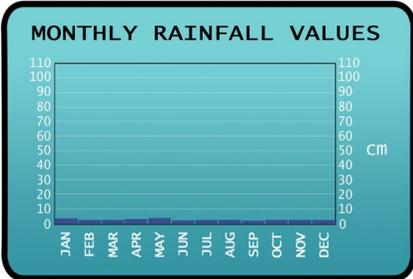
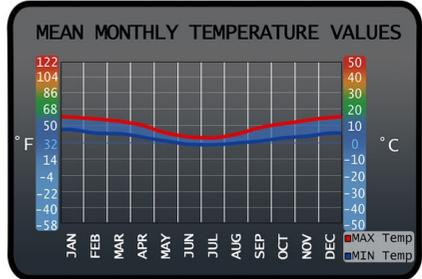
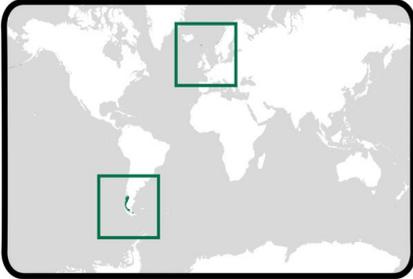
De Bilt, in the Netherlands, is a good example of this kind of climate, where rainfall is steady throughout the year, 7cm (2.8 inches) a month. In the warmest months, the average day temperature is from 20°C (68°F) to 26°C (79°F) and from 10°C (50°F) to 14°C (57°F) at night, while in the coldest months, it drops to 4/6°C (39/43°F) during the day and -2/+0°C (24/32°F) at night.



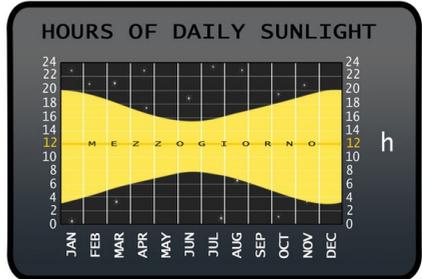
14

HUMID SUBTROPICAL CLIMATE

(WITH SHORT COOL SUMMERS AND COLD WINTERS)



Humid Subtropical Climate (characterised by short cool summers and cold winters) areas are few, small and with no dry season. Steady rainfall both in the summer and winter seasons.



Punta Arenas, in Chile, is a good example of this kind of climate, where rainfall is low and steady all year, about 3cm (1.20 inches) a month. During the short summer, the mean monthly day temperature is from 13°C to 15°C (55 to 59°F) and from 6° to 7°C (43 to 45°F) at night, while in the coldest months, it drops to 2/4°C (36 to 39°F) during the day and to -1/+2°C (30 to 30°F) at night.

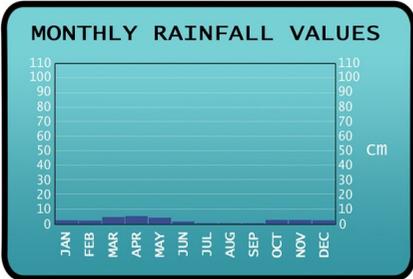
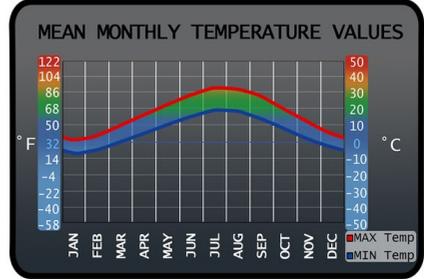
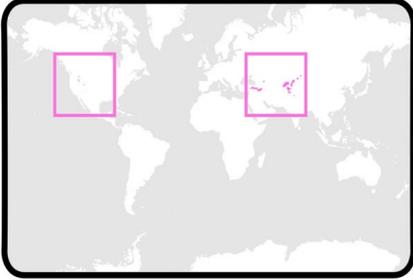


MOIST CONTINENTAL MID-LATITUDE CLIMATES

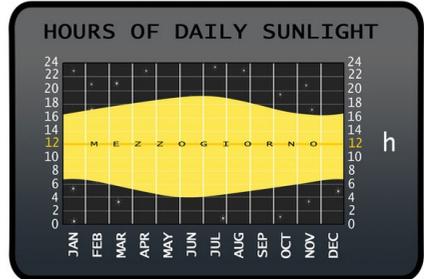
The fourth of the five major group climates you are about to meet corresponds to the area where the microtherms live. These plants are able to survive even temperatures lower than -3°C (27°F). Moist Continental Mid-Latitude Climates can only be found in the Northern Hemisphere. They have short and relatively hot summers but long and cold winters with very low minimum temperature values. Winter precipitation occurs mainly as snow. There are three minor types: Continental Subarctic or Boreal Climate (with dry summers), Continental Subarctic Climate (with dry winters) and Boreal Forest Climate (all wet seasons).

15 BOREAL CLIMATE

(with very hot summers)



The main feature of the Boreal Climate (characterised by very hot summers) is summer without any precipitation. Moderate rainfall occurs in winter.



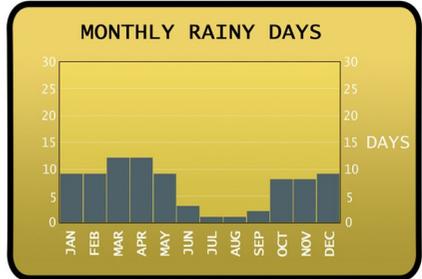
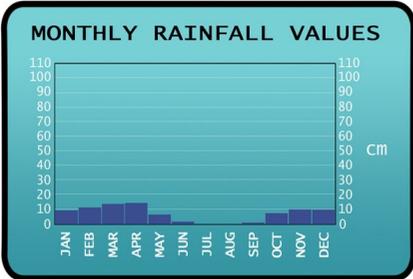
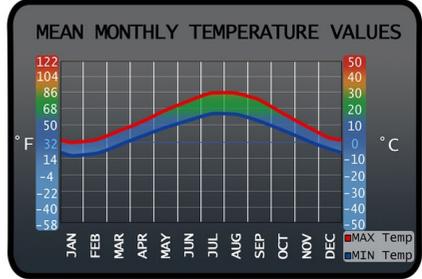
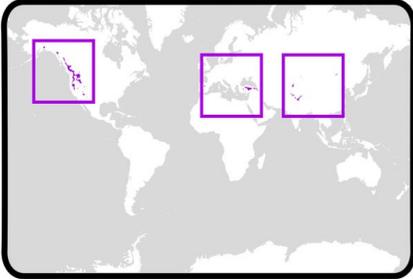
Tabriz, in Iran, experiences this type of climate. In summertime, without any significant rainfall the mean monthly day temperature ranges from 29°C (84°F) to 34°C (93°F) and from 15°C (60°F) to 19°C (66°F) at night. Rainfall occurs only in wintertime, from 2.5 to 5cm (1 to 2 inches) a month. In the coldest month, the average temperature is +1°C (34°F) during the day, and -7°C (19°F) at night.



16

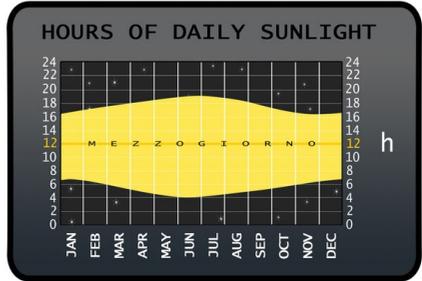
BOREAL CLIMATE

(WITH WARM SUMMERS)



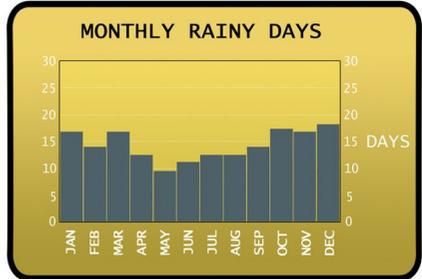
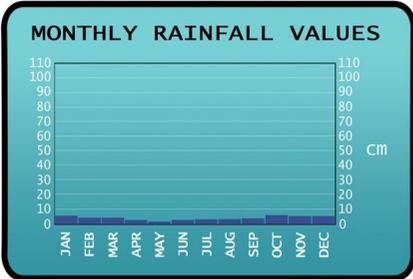
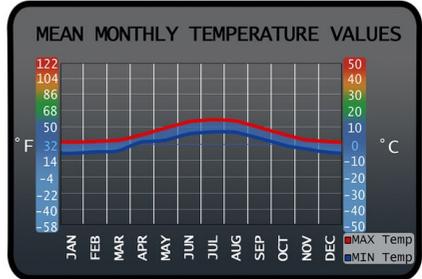
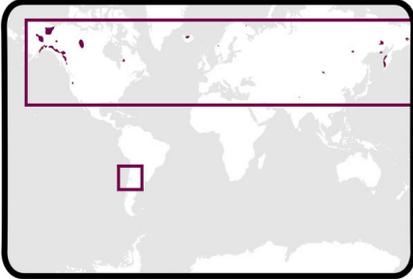
The Boreal Climate (characterised by warm summers), similar to Boreal Climates, has got dry summers. Moderate precipitation, mostly as snow, occurs in wintertime.

A good example of Boreal Climate with warm summers is Hakkari, in Turkey. In summertime, without any significant rainfall, the mean monthly day temperature ranges from 20°C (68°F) to 29°C (84°F), and from 10°C (50°F) to 17°C (63°F) at night. Very low rainfall occurs only in wintertime, about 10cm (4 inches) a month. In the coldest month, the average temperature is 0°C (32°F) during the day and -8°C (18°F) at night.

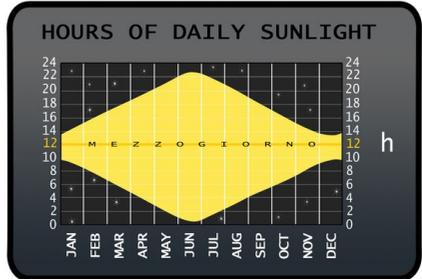


17 BOREAL CLIMATE

(WITH COOL SUMMERS)



The Boreal Climate (characterised by cool summers) has dry summers, similar to the Boreal Climates. Precipitation is low and occurs in the cold season. This type of climate is very rare and can only be found in small areas.

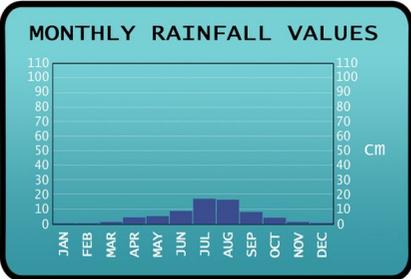
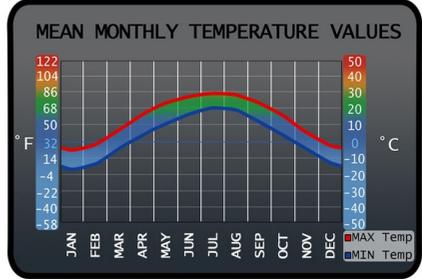
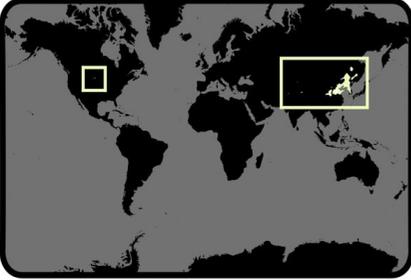


Akureyri, in the North of Iceland, has this type of climate. In summertime, when rainfall is very low, the mean monthly day temperature ranges from 10°C (50°F) to 14°C (57°F) and from 5°C (41°F) to 7°C (45°F) at night. Precipitation, mostly as snow, is just a little bit higher in wintertime, from 3 to 6cm (1.20 to 2.5 inches) a month. In the coldest month, the average temperature is +1°C (34°F) during the day and -6°C (21°F) at night.

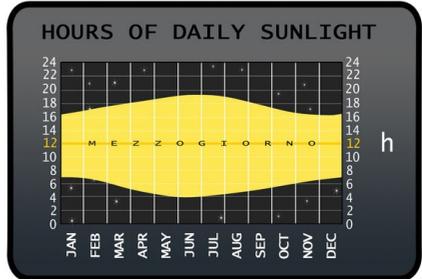


18 HUMID CONTINENTAL CLIMATE

(WITH VERY HOT SUMMERS)



In Humid Continental Climates (characterised by very hot summers), poor precipitation occurs in summer. Winter, which is very long and cold, is a dry season.

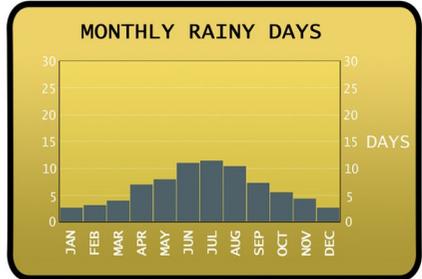
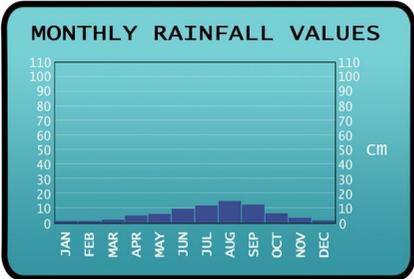
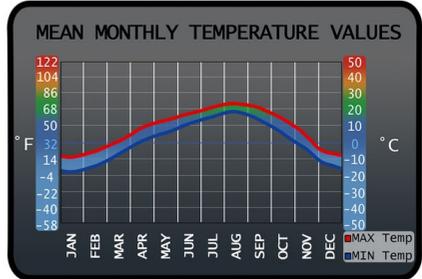
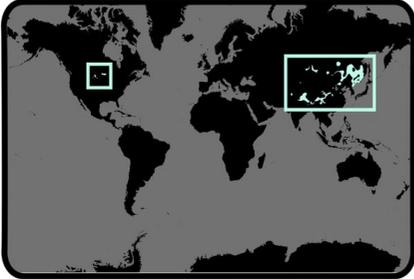


A good example of this kind of climate is Shenyang in China, where, in summer, the mean monthly day temperature ranges from 25°C (77°F) to 30°C (86°F) and from 15°C (60°F) to 20°C (70°F) at night, while in the coldest months, it ranges from -5°C (23°F) to 0°C (32°F) during the day and -16°C (3°F) to -10°C (14°C) at night. Low rainfall occurs only in summer, from 10 to 16cm (4 to 6 inches) a month.



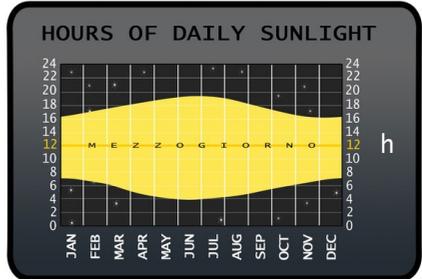
19 HUMID CONTINENTAL CLIMATE

(WITH WARM SUMMERS)



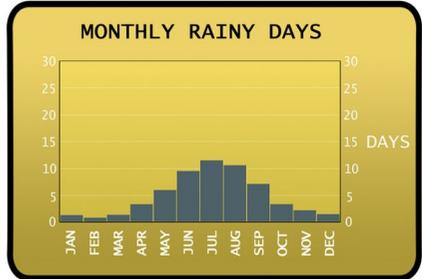
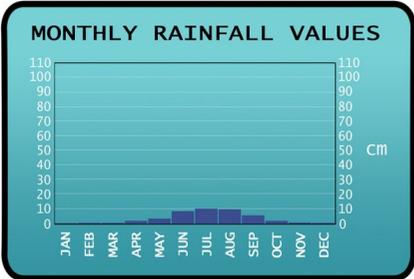
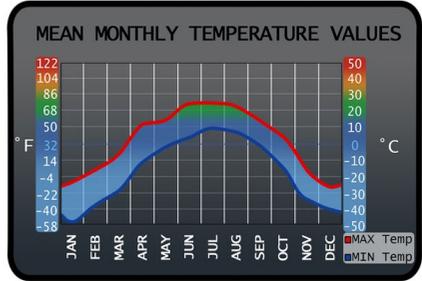
The Humid Continental Climate (characterised by hot summers) has long, dry and very cold winters. Rainfall occurs mainly in summers. As for vegetation, there are coniferous trees. These species can survive through extreme cold weather, like red firs, evergreen trees with needle-like leaves, which can be more than 90m (295 ft) high.

Vladivostok, in the Russian Federation, experiences this kind of climate. Rainfall is very poor during the coldest months and is concentrated in summertime, from 10 to 14 cm (4 to 5.5 inches) a month. In this season, the mean monthly day temperature ranges from 20°C (70°F) to 26°C (79°F) and from 12°C (54°F) to 15°C (60°F) at night. The average temperature of the coldest month is -8°C (18°F) in the day and -21°C (-6°F) at night.

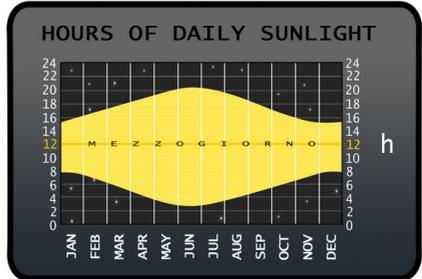


20 SUBARCTIC CLIMATE

(WITH SHORT COOL SUMMERS AND COLD WINTERS)



This climate, like other minor types of Moist Continental Mid-Latitude Climates, has poor rainfall and mostly concentrated in summer, while winter is very cold and dry. The most common type of vegetation is Coniferous Forest, able to survive very cold temperatures, such as red firs, evergreen trees with needle-like leaves that can be over 90m (295 ft) high.

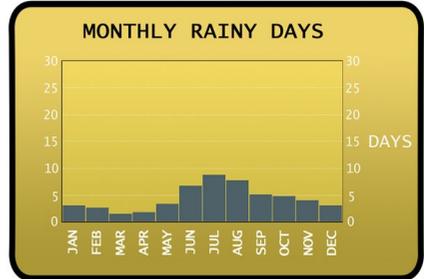
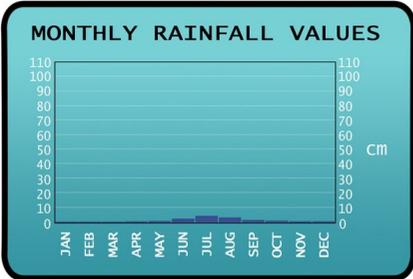
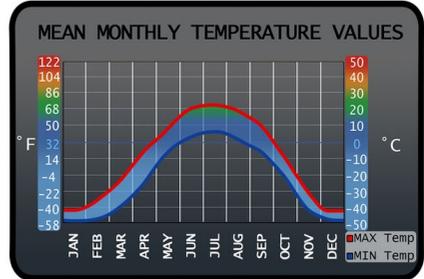


A good example of Subarctic Climate with short cool summers and cold winters is Kalakan, in the Russian Federation. Rainfall is concentrated in summer, when the mean monthly day temperature ranges from 20°C (68°F) to 24°C (75°F) and from 5°C (41°F) to 9°C (48°F) at night. On the contrary, in winter, there is no significant rainfall and the mean monthly day temperature drops to -20/-26°C (-4/-15°F) and to -38/-48°C (-36/-54°F) at night.

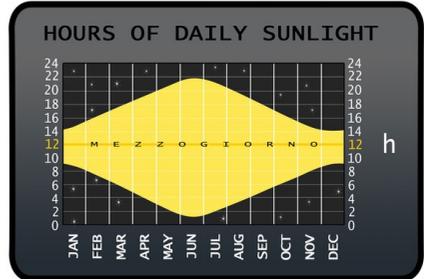


21 SUBARCTIC CLIMATE

(WITH VERY COLD WINTERS)



In the areas influenced by this type of climate, the average temperature of the coldest month is always lower than -38°C (-36°F), while it is higher than 10°C (50°F) for at least three months in a year. Winter is dry and rainfall occurs mostly during the warmest months. Vegetation is made up of coniferous trees, adapted to the harsh conditions of an extreme environment, like red firs, evergreen trees up to 90 m (295 ft) in height. Each part of the tree helps in its survival, with needle-like leaves for example.



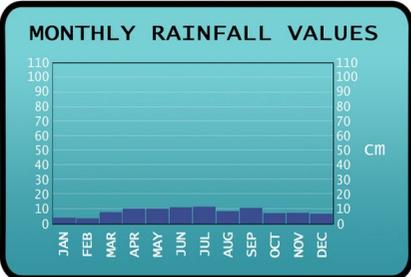
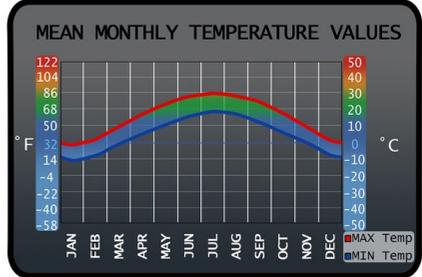
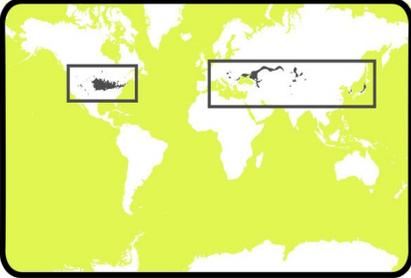
The Subarctic Climate (with very cold winters) is found in Oymyakon, in the Russian Federation. Rainfall is always very low and concentrated in summertime, from 3 to 5cm (1,20 to 2 inches) a month, when the mean monthly day temperature ranges from 18°C (64°F) to 22°C (72°F) and from 2°C (36°F) to 6°C (43°F) at night. In wintertime, the mean monthly day temperature ranges from -32°C (-26°F) to -42°C (-44°F) and from -41°C (-42°F) to -50°C (-58°F) at night.



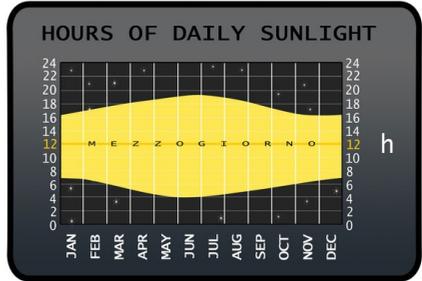
22

BOREAL FOREST CLIMATE

(WITH VERY HOT SUMMERS)



The Boreal Forest Climate (characterised by hot summers) has short summers, long winters and no dry season. Rainfall, which is low, is distributed throughout the year, but mostly in summer. Vegetation is not only made up of coniferous plants but also of those usually to be found in temperate climates, such as beech trees, oaks and poplars.



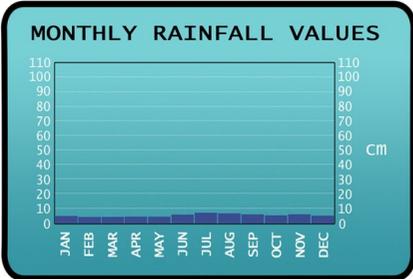
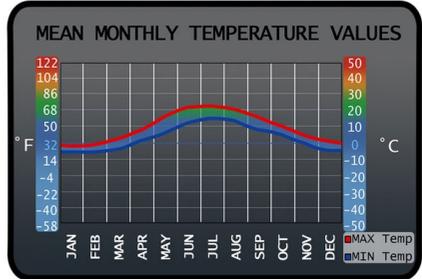
A good example of Boreal Forest Climate (with hot summers) is Peoria in Illinois, USA. Rainfall is distributed throughout the year but mostly in summer, from 8 to 10 cm (3 to 4 inches) a month, when the mean monthly day temperature ranges from 25°C (77°F) to 30°C (86°F) and from 15°C (60°F) to 18°C (64°F) at night. On the contrary, the coldest mean monthly day temperature drops and ranges from -1°C (30°F) to 5°C (41°F) and from -10°C (14°F) to -5°C (23°F) at night.



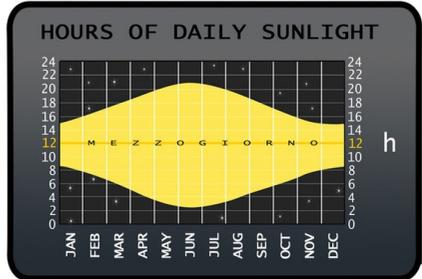
23

BOREAL FOREST CLIMATE

(WITH WARM SUMMERS)



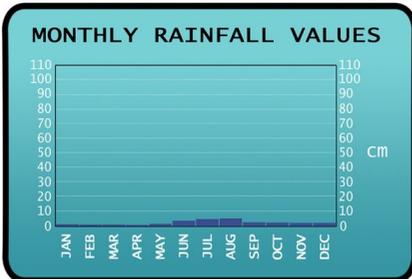
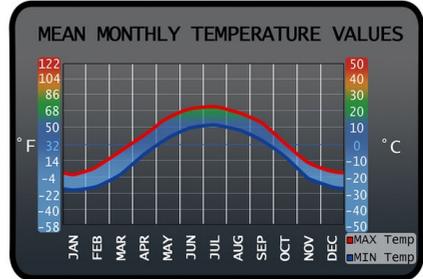
The Boreal Forest Climate (characterised by warm summers) has short summers and very long winters, but not a dry season. Rainfall is distributed throughout the year. Here you will find the temperate Deciduous Broadleaf Forest, which is made up of birches, beech-trees, oaks and poplars.



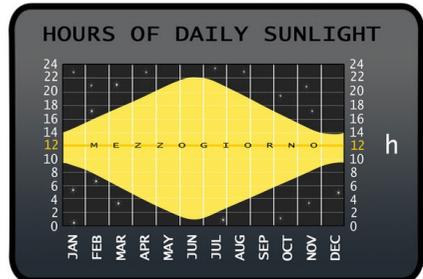
Stockholm, in Sweden, experiences this kind of climate. Rainfall, not heavy but steady, is distributed throughout the year, from 5 to 7 cm (2 to 2.8 inches) a month. The mean monthly day temperature of the warmest month ranges from 20°C (68°F) to 22°C (72°F) and from 12°C (54°F) to 14°C (57°F) at night. On the contrary, the mean monthly day temperature of the coldest month drops to -1°C (30°F) and to -5°C (23°F) at night.



(WITH SHORT COOL SUMMERS AND COLD WINTERS)



The Boreal Forest Climate (characterised by short cool summers and cold winters) has very long and cold winters. There is not a dry season and rainfall, which is very low, occurs mostly in summer. Vegetation is made up of Deciduous Broadleaf Forest able to handle low temperatures, like birches.



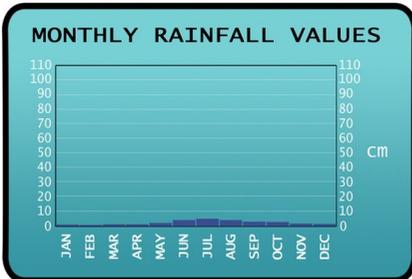
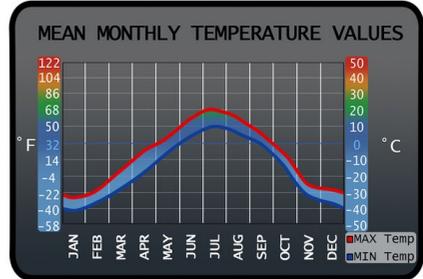
A good example of this type of climate is Fairbanks, in Alaska, USA. Rather poor rainfall occurs throughout the year but mostly in summer, from 4 to 5cm (1.60 to 2 inches) a month, when the mean monthly day temperature ranges from 15°C (60°F) to 22°C (72°F) and from 3°C (37°F) to 10°C (50°F) at night. The mean monthly day temperature of the coldest month drops to -19°C (-21°F) and to -28°C (-18°F) at night.



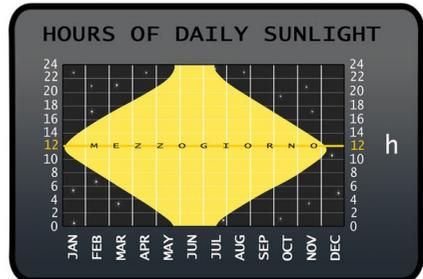
25

BOREAL FOREST CLIMATE

(WITH VERY COLD WINTERS)



The Boreal Forest Climate (characterised by very cold winters) has very long cold winters but not a dry season. Rainfall, which is low, occurs throughout the year but mostly in summer. Vegetation is primarily made up of coniferous forests, also called “Taiga”, “land of the little sticks” in Russian.



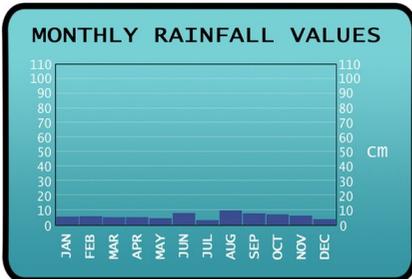
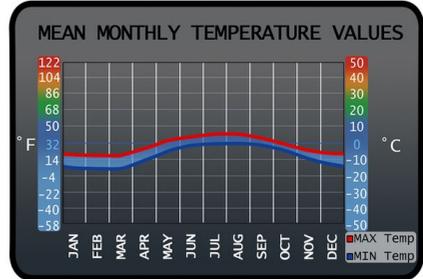
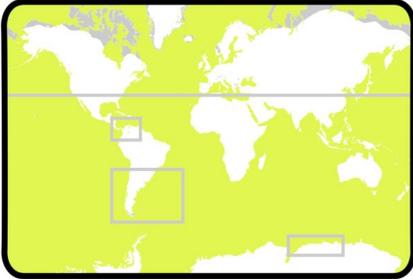
Olenok, in the Russian Federation, is a good example of the Boreal Forest Climate (with very cold winter). Low rainfall occurs throughout the year but mostly in summer, from 3 to 4cm (1.20 to 1.60 inches) a month, when the mean monthly day temperature ranges from 15°C (60°F) to 20°C (68°F) and from 5°C (41°F) to 10°C (50°F) at night. During the coldest months, the mean monthly day temperature ranges from -25°C (-13°F) to -33°C (-27°F) and from -32°C (-26°F) to -41°C (-42°F) at night.



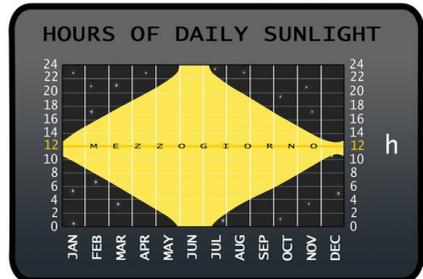
POLAR CLIMATES

The last of the major climate categories this journey is going to show you is the one corresponding to the area of the hekistotherms, plants of the polar zones, able to survive very low temperatures. The primary distinguish characteristic of Polar Climates is that the warmest month has an average temperature below 10°C (50°F). They have year-round very cold temperatures. Precipitation is usually low and mostly as snow. Two minor climate types exist: the Polar Tundra Climate and the Polar Ice Caps.

26 TUNDRA CLIMATE



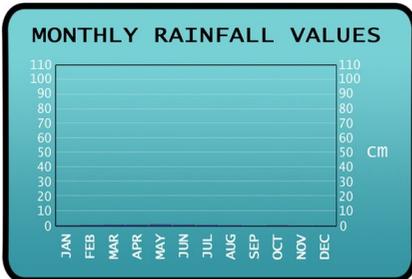
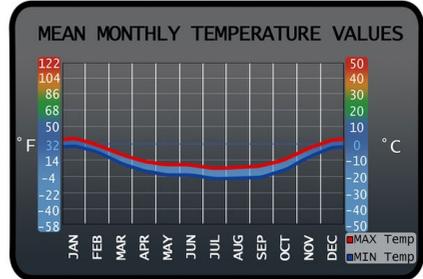
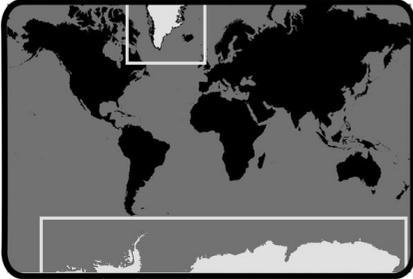
The Tundra Climate is characterised by cold winters, cool summers and little precipitation. Average annual temperature is lower than 0°C (32°F), it rises only in the warmest month but its average temperature is never greater than 10°C (50°F). The typical “Tundra” vegetation consists of algae, lichens and mosses. “Tundra” comes from the Finnish word “Tunturia” meaning “Treeless Plain”.



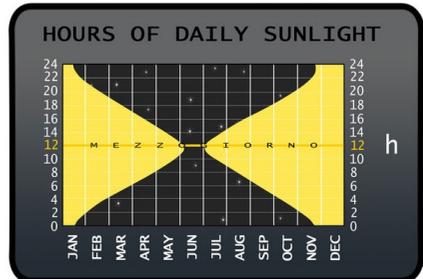
A good example of the Tundra Climate is Aputiteq, in Greenland. Steady precipitation throughout the year, with a few peaks in summer. In this period, the mean monthly day temperature ranges from 2°C (36°F) to 5°C (41°F) and from -2°C (28°F) to 0°C (32°F) at night. In winter, the mean monthly day temperature of the coldest months ranges from -7°C (19°F) to -8°C (17°F) and from -15°C (5°F) to -16°C (3°F) at night.



27 ICE CAP CLIMATE



This climate is the coldest of all. The mean monthly temperature is generally below 0°C (32°F) and vegetation is absent. The coldest temperature ever recorded on earth was -91.5°C (132.7°F) at the Vostok Research Station, in Antarctica.



The area surrounding Davis Station in Antarctica is a good example of this climate, which is also called Snow and Ice Climate. Little precipitation all year. In the two months that are less cold, the mean monthly day temperature ranges from 0°C (32°F) to +5°C (41°F) and from -5°C (23°F) to 0°C (32°F) at night. The average temperature of the coldest months ranges from -10°C (14°F) to -15°C (5°F) during the day and from -15°C (5°F) to -21°C (-6°F) at night.



You have just come across the five major climatic groups on earth, each of which corresponds to the area where a category of plants grows. You have also seen that each of them is divided into some minor types, making a total of 27 different kinds of climates! A card has been made for each of these types, taking into account the mean monthly temperature, monthly rainfall and wet days, and hours of daily sunlight over the year. These charts are very useful, easy to read and clear to understand, but it is advisable to examine them several times. In particular, pay attention to the double curve of temperatures which allows you to realise the heat differences between night and day and summer and winter. Once you have learned the features of each type of climate, you will be able to recognise your ideal climate and the areas affected by it.

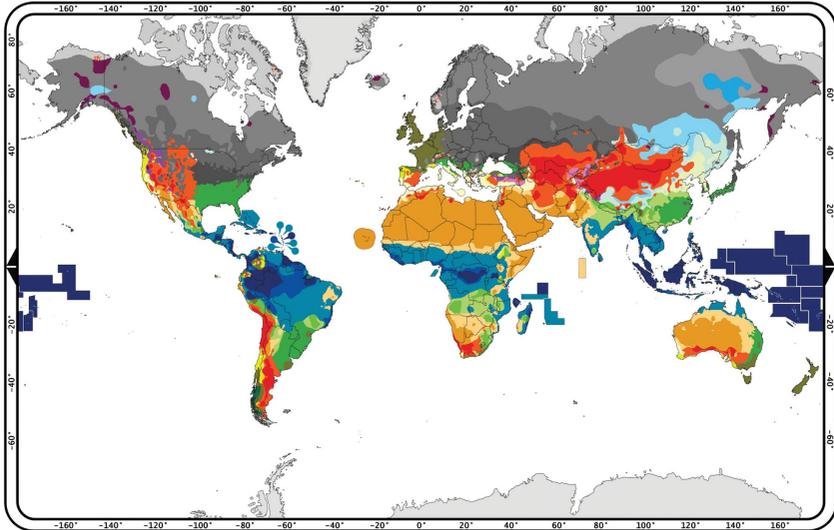
World climate map. The *world map of climates* contains the 27 types of climates you have just met. They form 27 bands, which are, more or less, parallel to the Equator. You could even travel many thousands of kilometres within the same climate band and still experience the same climatic conditions. After analysing each single type of climate you should be able to identify the climate bands you prefer. It is likely that your “Earthly Paradise” is located just there! At least, from a climatic point of view! Of course, climate is not everything, but for many people it is important. When you have to live in a place for a long time you cannot disregard it! Your journey has just begun and you may already know where your favourite climate is located. Think about it! This is essential! When you are absolutely certain about it, you will be able to focus on the many other different destinations of your journey.

CLIMATES

01	EQUATORIAL CLIMATE (with no dry season)	
02	TROPICAL MONSOON CLIMATE (with wet and dry seasons)	
03	SAVANNA CLIMATE (with wet and dry seasons)	
04	HOT SEMIARID (Steppe) CLIMATE	
05	COLD SEMIARID (Steppe) CLIMATE	
06	HOT DESERT CLIMATE	
07	COLD DESERT CLIMATE	
08	MEDITERRANEAN CLIMATE (with very hot summers)	
09	MEDITERRANEAN CLIMATE (with warm summers)	
10	OCEANIC CLIMATE (with very hot summers)	
11	OCEANIC CLIMATE (with warm summers)	

12	HUMID SUBTROPICAL CLIMATE (with very hot summers)	
13	HUMID SUBTROPICAL CLIMATE (with warm summers)	
14	HUMID SUBTROPICAL CLIMATE (with short cool summers and cold winters)	
15	BOREAL CLIMATE (with very hot summers)	
16	BOREAL CLIMATE (with warm summers)	
17	BOREAL CLIMATE (with cool summers)	
18	HUMID CONTINENTAL CLIMATE (with very hot summers)	
19	HUMID CONTINENTAL CLIMATE (with warm summers)	
20	SUBARCTIC CLIMATE (with short cool summers and cold winters)	
21	SUBARCTIC CLIMATE (with very cold winters)	
22	BOREAL FOREST CLIMATE (with very hot summers)	
23	BOREAL FOREST CLIMATE (with warm summers)	
24	BOREAL FOREST CLIMATE (with short cool summers and cold winters)	
25	BOREAL FOREST CLIMATE (with very cold winters)	
26	TUNDRA CLIMATE	
27	ICE CAP CLIMATE	

WORLD MAP OF CLIMATES



Map: based on Peel MC, Finlayson BL & McMahon TA (2007), Updated world map of the Köppen-Geiger climate classification, *Hydrology and Earth System Sciences*, 11, 1633-1644.

[Open the World map of independent states to see the names of the states](#)

Chapter 2

Avoidable risks: Earthquakes, Tsunamis and Volcanoes

Now your journey, searching for your own Eden, invites you to go up mountains ranges to discover the secrets at the core of our dynamic planet. It is absolutely necessary for you to delve into the mysteries behind natural disasters and to learn more about some powerful physical phenomena such as earthquakes, tsunamis and volcanoes. If you decided to live in a place likely to be destroyed by a violent earthquake, for example, you would put your life at risk. Many people have no choice but to live in potentially dangerous places, which are at high risk for all kinds of natural disasters. On the other hand, you can choose, after careful consideration, the place that could be your ideal home. What about learning what causes earthquakes, tsunamis or volcanic eruptions to happen? You should take into account these factors before choosing your Earthly Paradise!

Unacknowledged genius. In the last few years, geology has provided well-founded answers. Geologists have been studying the causes of earthquakes and have developed tools for understanding new phenomena and improving the reliability of predictions of natural disasters. When Alfred Wegener, a German geologist and meteorologist, proposed his theory of Continental Drift in 1915, he was mocked and criticized for it by the scientific community. Before Wegener's theory, geologists thought that continents and basins were stationary and did not move around. It is no surprise that people thought that way. The scientific community took 30 years after Wegener's death to accept his theory. Wegener's evidence for his theory was that the shape of the coasts of different continents, even though separated from the ocean, fitted perfectly, like pieces in a jigsaw puzzle. Moreover, he provided Paleontological, Lithological and Paleo climatic evidence. Firstly, he showed that the same types of fossilised animals and plants, from the same time period, were found in South America and

Western Africa. Secondly, he stressed that South America and Africa appeared to be formed of the same kind of rock. Finally, he studied ancient climates and discovered that in South America and Africa, a massive sheet of ice covered large areas of land at the end of the Paleozoic Era. However, Wegener's theory of Continental Drift was rejected until the advent of the Plate-Tectonic theory. As a matter of fact, in the last few decades, there have been remarkable advances in this field and solid scientific evidence has dramatically changed the scientific understanding of the dynamism of Earth and the approach to the different natural phenomena occurring on it, like earthquakes, tsunamis and volcano eruptions. As Earth's interior is still very hot and active, it continuously emits heat from its surface. This thermal flow is explained by the phenomenon of radioactivity. It can be inferred that radioactive decay of Uranium-238 and Thorium-232 in the Earth's crust and mantle emits particles whose kinetic energy is converted to heat. Therefore, Earth's nucleus gives off heat (the temperature of the nucleus of Earth is above 4,000°C (7,000°F), which gradually cools down as it is transferred to the upper layers (mantle and crust). The mantle is a layer of liquid rock that behaves like a pot of water starting to boil: when the liquid is heated, it rises, when it is cold, it goes down swirling. Similarly, the liquid rock in the mantle is continuously driven by circular convection currents. The liquid and hot rock, which forms lava, tends to rise to the surface while the denser and colder rock of the crust sinks downward into a level in which, owing to high temperatures, melts and changes into magma that then, rises to the surface to create new crust. The circular movement of these convection cells of molten rock acts like giant conveyor belts and it is the most likely cause of plate movement. As you can see in the following map, Earth's lithosphere is divided into tectonic plates. It is easier to think of plates as rigid "rafts" floating on convection cells of *magma* (= molten rock). The study of these structures and of the dynamics of their movement is called "Plate Tectonics" and the phenomena of geological and structural modification related to them is called "Continental Drift". Plate movement is not only influenced by the convection cells of molten rock, but also by Earth's rotation (called the Coriolis Effect) which drives the plates westward in the Northern Hemisphere. The Coriolis Effect is the apparent acceleration of a moving body on or near Earth as a result of Earth's rotation. This is the reason why tectonic plates are continually moving and slowly changing the landscape

on Earth. They move about 5cm (2 inches) a year, about as fast as your fingernails grow. Despite their movement, which has caused remarkable changes in the length and shape of continents in the different geological eras, the total surface area of Earth remains constant with time, so that the radius of Earth is always 6,378 km (3,963 miles). This presumes that spreading must be balanced by consumption of plates elsewhere.

The movement of tectonic plates. The problem is when plates collide. (Be patient just a little bit as this topic is important!) The interaction between plates at plate boundaries can be broadly divided into three categories: divergent, convergent and transform.

1. Two tectonic plates can pull away from each other.

When two plates are moving away from each other, a divergent plate boundary occurs. Along these boundaries, magma rises from the mantle and, on the torn edges of the plates, crust is created, triggering intense volcanic activity, forming volcanic ridges at the spreading zone (called Dorsal Ridges). The best known of the divergent boundaries is The Mid-Atlantic Ridge, which crosses the Atlantic Ocean in the latitudinal direction. A few of the volcanoes on the Mid-Atlantic Ridge emerge creating famous islands such as Cape Green and Iceland. Divergent plate boundaries can occur in continental and oceanic lithosphere.

2. Two tectonic plates can move toward each other.

When two oceanic plates converge, one subducts beneath the other – the older plate is forced under the younger one. The magma formed at a subduction zone rises up towards Earth's surface, builds up magma chambers and leads to the formation of volcanic islands, known as Island Arc. Examples include the Japanese and the Philippine Archipelagoes. Moreover, this collision can also give rise to tsunamis. When an oceanic plate converges on a continental plate, the denser crust of the oceanic plate sinks beneath the more buoyant continental plate. In this type of convergence, the rapid uplift of mountain ranges along the coastline is common. The collision between the South American plate and the oceanic Nazca plate gave rise to the Andes. A collision between two continental

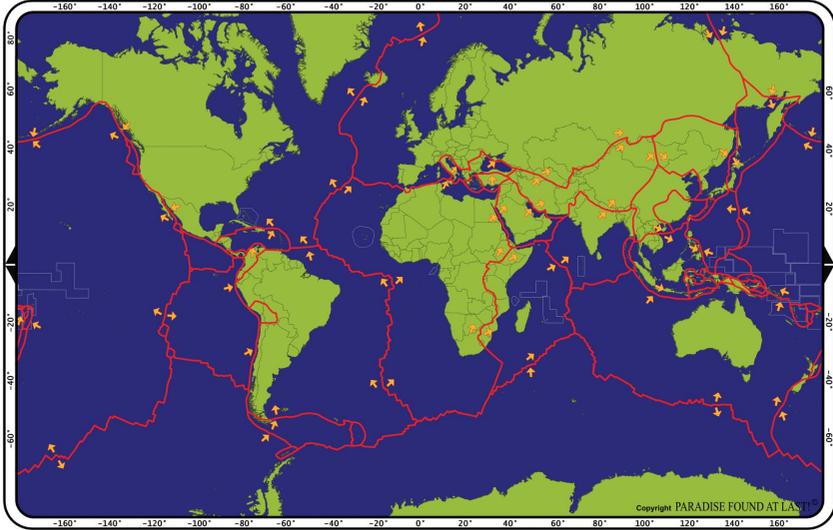
plates crumple and fold the rock at the boundary, lifting it up and leading to the formation of mountains and mountain ranges on the continents. The Himalayan Mountain Range in Southern Asia, stretching from The Pyrenees to the Kamchatka Peninsula was formed by the collision of the Indian and Eurasian Plates.

3. Finally, two tectonic plates can slide past each other.

When two plates slide past each other, they can move in different directions or in the same direction at different speed. In this case, tectonic plates grind past each other in a horizontal direction. This kind of boundary results in a “fault”, a crack in Earth’s crust that is associated with this movement. One of the most famous faults is the San Andreas Fault in California, responsible for the periodic powerful earthquakes occurring in San Francisco. It is located at the boundary between the Pacific and North American Plates.

Here is Earth’s Plate Tectonic jigsaw puzzle. The orange arrows show the direction in which the plates move.

WORLD MAP OF TECTONIC PLATES



Open the *World map of independent states* to see the names of the states

Earthquakes

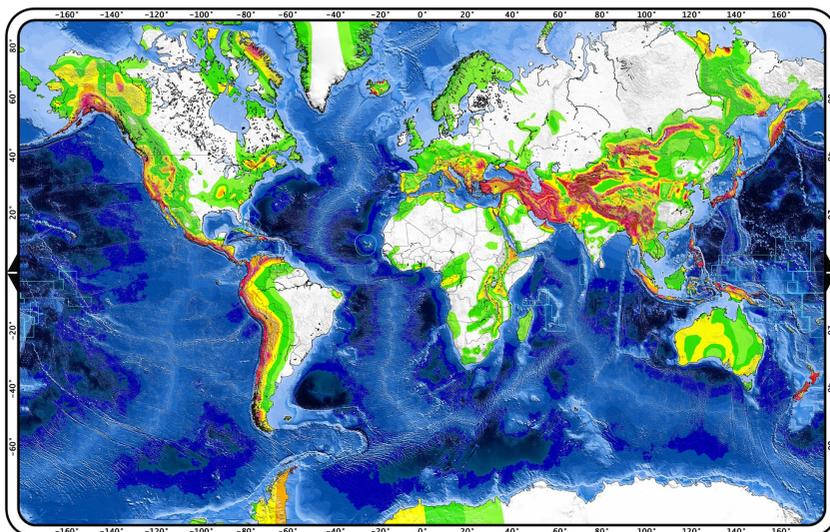
When tectonic plates move around, they can cause earthquakes. Almost all of the world's earthquakes occur along the boundaries of Earth's shifting plates. As already stated, they can collide, diverge or slide past each other. The movement at the edges of tectonic plates releases a huge amount of energy deep within Earth, generating vibrations which propagate to Earth's surface. The focus or Hypocentre of an earthquake is the point on a fault where the slip begins, whereas the Epicentre is the point on Earth's surface vertically above the Hypocentre. The magnitude is a measure of an earthquake in terms of the energy released at the focus. The first widely-used method to measure the magnitude of an earthquake is the Richter scale, developed by Charles Francis Richter, an American physicist and seismologist. It is a base-10 logarithmic scale where small increases in values can correspond to very high amounts of energy released, which may cause confusion if not explained. It goes without saying that when you decide to live in a place at high risk for earthquakes, you do it at your own risk. Think about, for example, the Nepal earthquake, which devastated its capital Kathmandu and tens of villages, where more than 7,000 people died.

The map. Geology has a thorough knowledge of earthquakes at present and it is continually making progress. Even though there is no reliable method available to predict earthquakes, scientists know with a high degree of confidence where earthquakes are more likely to happen. The *world map of seismic hazards* is the result of scientific knowledge on earthquakes elaborated by the GSHAP (which stands for Global Seismic Hazard Assessment Program). The map is essential for those who are searching for their own Earthly Paradise. Seismic hazard is calculated according to ground acceleration in an earthquake and assessed on the basis of a 10% probability of occurrence in 50 years. If you analyse carefully the *world map of seismic hazards*, you can choose with full knowledge of the facts your own Eden, located in an area which may have a low or high risk for earthquakes.

SEISMIC HAZARDS

LOW	
MODERATE	
HIGH	
VERY HIGH	

WORLD MAP OF SEISMIC HAZARDS



Map: Giardini, D., Grünthal, G., Shedlock, K. M. and Zhang, P.: The GSHAP Global Seismic Hazard Map. In: Lee, W., Kanamori, H., Jennings, P. and Kisslinger, C. (eds.): International Handbook of Earthquake & Engineering Seismology, International Geophysics Series 81 B, Academic Press, Amsterdam, 1233-1239, 2003

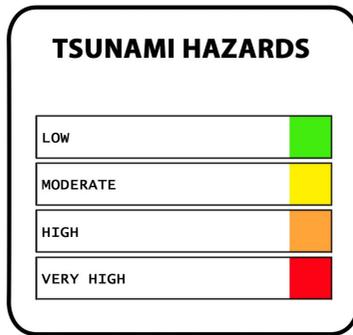
[Open the World map of independent states to see the names of the states](#)

Tsunamis

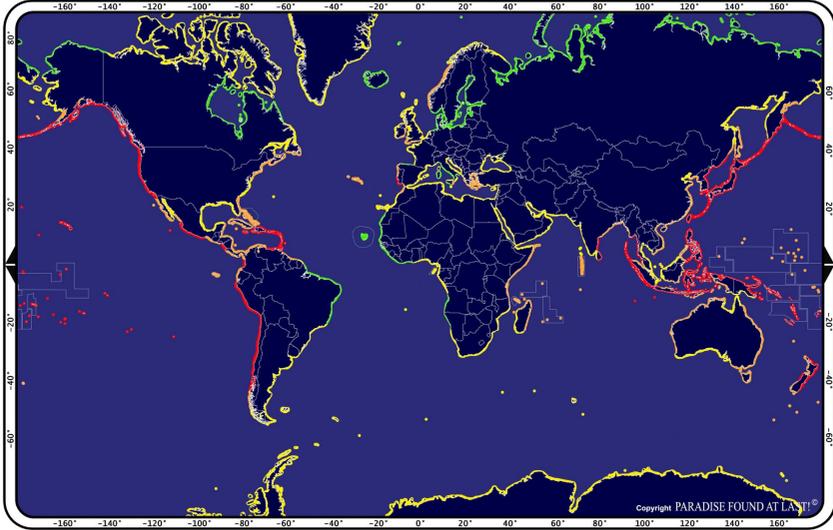
Tsunamis are some of the most devastating natural disasters on Earth and, at first sight, they would seem not to be connected with traditional seismic episodes. On the contrary, they are closely linked to them in most cases. Tsunamis are seismic sea-waves caused by sudden motion under the ocean. Such cases are not infrequent and, as you have just read, they are related to the dynamic and movement of the tectonic plates, much like an earthquake. A tsunami occurs underneath the ocean, often far away from the coastline and therefore it would seem not to be a risk for people. However, the enormous quantity of energy it releases is then transferred to the water column above and sometimes it can generate, even though not always, a huge wave whose height is inversely proportional to the water depth. In the open ocean, this “wave train” can propagate very quickly over large distances, with almost imperceptible heights. The worst characteristic of this kind of waves is that they often reach coast regions still with enough energy to be able to devastate them. “*Tsunami*” is a Japanese word meaning “Harbour wave” as harbours and coastal settlements are most vulnerable to direct impacts and likely to be destroyed by it. Therefore, a Tsunami is the devastating consequence of a seaquake. The seismic sea-wave travels the speed of a jet airplane in very deep water but, as it approaches shore, the depth of water decreases, causing the tsunami to slow down and sometimes coming onshore similar to a rapidly rising tide. On the contrary, sometimes the wave crest refracts (bends) toward the shore and its energy may grow to be several metres or more in height. It is not just one big wave, so you do not have to think that a tsunami event is over after the first wave passes. As a matter of fact, there may be many more waves offshore and it could take up to two hours for the next wave to arrive. They could even be more devastating than the first one. The most powerful tsunamis produced record high waves of about 30-40 metres (100 feet) but most tsunami waves are less than 10 feet high. Elevating your house or living on top of a hill will help reduce damage from most tsunamis.

The map. The NOAA (National Oceanic and Atmospheric Administration) has collected all the academic and historical reports of the places where

tsunamis are estimated to have originated and the locations they have hit. There is a database of more than 2400 events, starting from 2000 B.C. up to now, which has allowed them to create a map showing the areas at risk for tsunamis around the world. This map highlights the coasts with the highest risk of this unlucky event.



WORLD MAP OF TSUNAMI HAZARDS



Open the *World map of independent states* to see the names of the states

Volcanic activity

It is important to point out that most volcanoes rise at the boundaries of tectonic plates and, as most of them are located near the ocean floor, a number of volcanoes lie underwater. There are about 700 active submarine volcanoes on Earth and the largest concentration (60%) is located along a belt known as the Ring of Fire, which circles the Pacific Ocean.

Hot spot volcanism. It does not occur at the boundaries of Earth's tectonic plates, where all other volcanism occurs. Some volcanic areas are even to be found very far away from the plate boundaries. These are called "Hot Spots", namely regions deep within Earth's mantle from which heat rises, facilitating the melting of rock, which often pushes the crust. These could be thought of as safety valves of the planet. As it is the case with all the types of volcanoes, when magma rises, it produces seismic waves, which cause earthquakes. The Hawaiian Islands, an archipelago of volcanic origin in the Pacific Ocean is a good example. They are located in the middle of the Pacific plate at about 4000 km (2500 miles) from the nearest tectonic plate edge. In the main island, Hawaii, which is the most recent in the archipelago, there are three active volcanoes nowadays. As mentioned before, tectonic plates are able to drift westward owing to Earth's rotation (in the Northern Hemisphere). Therefore, as the Pacific plate moves, the islands located to the west are older and more subject to erosion compared to the ones to the east, which are younger. With time, the volcanoes moving westward with respect to the hot spot, stop erupting.

Volcanic hazards. As already stated, there are two main types of volcanoes: volcanoes located along ocean ridges and hotpot volcanoes. The former are the most hazardous, with explosive eruptions involving large volumes of pyroclastic flows, which may travel distances of several kilometres or more. Therefore, if you decide to live in an area where such a dangerous volcano is situated, your house should be at least 30 km (20 miles) away from it! On the contrary, hotspot volcanoes are generally characterised by non-violent extrusion of very hot, fluid lava which flows downhill, extending

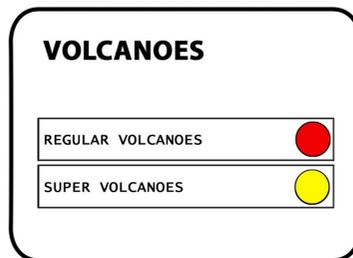
even tens of kilometres under the force of gravity. If you live near this kind of volcano, in case of eruption, you will have more time to run off but it is better to live at not less than 100 km (60 miles) from the vent. This kind of eruption is called “effusion eruption” and also occurs in continental rift settings, namely, as mentioned above, in areas where two tectonic plates are moving away from each other. Finally, you should pay attention to very high and snow-covered volcanoes as, when they erupt, the melting of large quantities of snow may cause a giant mudflow of volcanic materials, which sometimes last several months and could endanger even communities living hundreds of kilometres away.

Absurdity of the human mind. Volcanology is a very solid science. All volcanoes in the world have been mapped and volcanic hazards and risks are well-known nowadays. Then, one wonders: “Why do so many people keep on living at the foot of a volcano? Why are so many important and densely populated cities all over the world built in hazardous areas, where powerful earthquakes often occur, and they are mostly doomed to be destroyed?” Maybe this happens just because people usually think that such devastating events are likely to occur to someone else. Moreover, people think that the human lifespan is always very short compared to geophysical eras. However, it is worth noting that irrationality is a trait of the human mind and any time an eruption causes severe damages to structures or a lot of people are killed, people often say that they have just had back luck or that they have been cursed. Actually, everybody can understand the risks of living in areas that are more exposed to natural hazards nowadays.

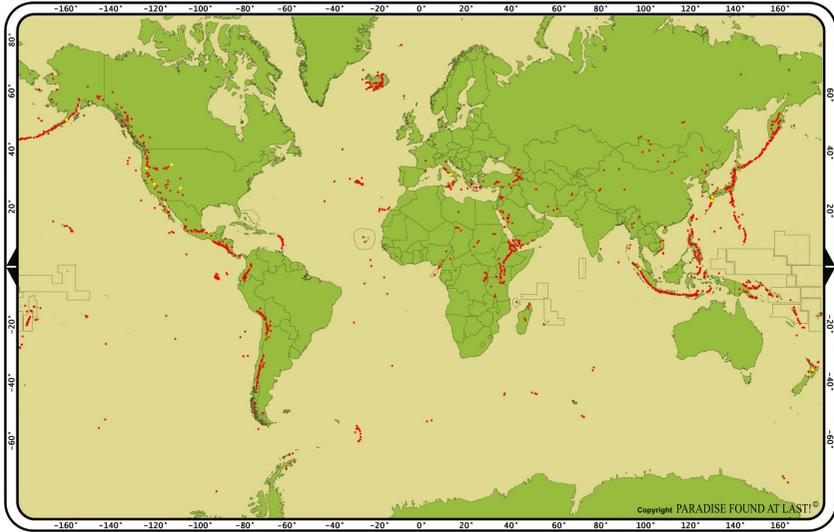
Super volcanoes. There are volcanoes and super volcanoes. These can produce global catastrophic effect and dramatically change the surrounding landscape when they erupt. They can also have a devastating impact on Earth’s climate for many years. Moreover, their eruptions can create damage to the scale of a continent and have cataclysmic effects for life on Earth. As a matter of fact, such an explosive eruption can erase virtually all life in a radius of hundreds of kilometres from the site and entire continental regions can be buried metres deep in ash. “Super volcano” is not a scientific term. Actually, it was popularised in a TV documentary on a British channel just few years ago. Until then, no word could properly

describe these “monsters”. From a scientific point of view, it is thought that a hot spot, which rises from deep within Earth, powers super volcanoes. Unlike regular volcanoes, they do not have the usual cone like structure, rather they are situated in large depressions, called calderas. These can reach sizes of tens of kilometres in diameter, so you could walk on them but you may not realise it. Above calderas, lakes, forests and even towns could be found. The last eruption of a super volcano occurred thousands of years ago and its effects had a significant impact on large areas of our planet for several years. Fortunately, there are not so many calderas of this kind on Earth; they are about ten overall. The most hazardous volcanic areas are located in Alaska (USA), Indonesia, Yellowstone Park (USA) and the Campi Flegrei district (Naples region, Italy). The best strategy to avoid the effects of a super-volcanic eruption is to keep away from that area.

World map of volcanoes. The *world map of volcanoes* aims at showing the location of well-known volcanoes on the Earth’s crust and ocean floor. Secondary volcanic phenomena, such as geysers, fumaroles and hot springs are shown as volcanoes. This is because there could be hidden volcanoes beneath them. Super volcanoes are highlighted in yellow.



WORLD MAP OF VOLCANOES



Open the *World map of independent states* to see the names of the states

Chapter 3

Hurricanes

Your journey to Eden is about to advance into an extreme environment, which is the result of the complex dynamics of the Earth's atmosphere. It is a dangerous place, where nature gets really nasty and triggers its violent and destructive force in a way that appears to be completely irrational. Today's topic is the hurricane, a phenomenon which occurs in many parts of the world, yet, greatly misunderstood. Actually, the majority of people can only associate hurricanes with their terrible devastating effects and only few of them know where, when, and mostly, why, hurricanes happens. This chapter will let you know what a hurricane is and where it takes place on Earth. First of all, there is something mysterious about hurricanes. The word "hurricane" comes from "*Huracan*", a native Caribbean word meaning "God of Storms". Therefore, there is nothing good about a hurricane. Greek culture was aware of this. In Greek Mythology, The God of Storms was Typhoes. He was so huge that his head was said to touch even the stars. His upper body was that of a man's, but each of his two legs was made of vipers reaching out in each and every direction, and hissing as he moved. He had one main head which hosted one hundred snake heads screaming the sound of various animals. A dreadful description. Ordinary people were terrified by the "God of Storms". You always fear what you cannot understand.

What is a hurricane? A hurricane is a violent storm that forms over tropical oceans. Its extremely high winds blow around a relatively calm central area known as the "eye" of the hurricane. In this storm-centre, which is 25 km (15 miles) in diameter on average, the winds die down and the clouds rise. A hurricane produces winds of 120km/h (75mph) or over. However, when its wind speed is below 120 km/h (75 mph) or over 60 km/h (37mph), it is called a tropical depression. When its wind speed is below 60 km/h (37mph), it produces a tropical depression or a tropical

storm, which usually represent the early or final stages of a hurricane. Yet, tornado winds are stronger than hurricane winds, even though they are limited to tiny areas and have a limited diameter which is usually below 1.5 km (about 1 mile). Tornadoes last just for a few minutes but they can be very dangerous and sometimes even deadly. A tornado, also known as “Whirlwind” or “Twister” appears as a rotating funnel-shaped cloud, which is in contact with both the ground and the base of a cumulonimbus. Tornadoes are usually associated with violent thunderstorms, can travel for hundreds of kilometres and have very damaging effects. Even big objects can be sucked up by a tornado and become as dangerous as bullets so that they can kill you. Wind speed in a tornado can reach 500 km/h (300 mph). Unlike tornadoes, the strongest winds in a hurricane do not exceed 250 km/h (155 mph) but can reach a diameter of 450 km (300 miles) and can last for some days. Therefore, hurricanes tend to cause much more destruction than tornadoes as they can cover a much larger area. Since hurricanes exist all around the world, different regions have different names. Storm systems forming over the western regions in the North Pacific Ocean, which regularly hit Japan, are called “Typhoons”, whereas in the North Indian Ocean, they are called “Cyclones”. Sometimes they are known as “Willy-Willy” in Australia. In almost the rest of the world they are known as “Hurricanes”. Now you know that hurricanes, typhoons, cyclones or willy-willy are different terms for the same thing.

When, where and how a hurricane occurs. Hurricanes form over oceans and typically between 5 and 15 degrees latitude north and south of the Equator. Most of them develop in specific oceanic regions and only in some seasons of the year, where sea surface temperature is very warm. The main hurricanes occur in areas with very little wind circulation and they usually begin in late summer or early autumn as they need warm sea water temperature (at least 26°C/77°F). The main energy source of hurricanes is solar radiation that heats sea water, and when water vapour rises, it condenses to form clouds and rainfall. Once the air goes over the top of the mountains, it cools and sinks back again in the shape of strong winds (as happens to magma in the lower part of the Earth’s crust). However, Earth’s rotation causes the system to spin, known as the “Coriolis force” (or effect). This force is null at the Equator but, at about 500 km (310miles) from it

(between 5 and 20 degrees latitude), it deflects the cooled winds which start swirling around, moving faster and faster as they approach the centre of the vortex. Hurricane air flow moves counter-clockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.

When a hurricane fades away. A hurricane is essentially a massive system of circulating clouds, winds and thunderstorms. It is an amazing spectacle seen from a satellite image. It is a white vortex in a blue sea. It is a snow white spinning top twirling around its centre, the “eye” of the hurricane, but downwards, it can devastate anything in its path and people hit by a hurricane usually pray that it will stop as soon as possible. As a matter of fact, a hurricane is a self-propagating system until it runs out of warm water. Hurricanes usually fade away slowly as the latent heat of evaporation fails. This situation occurs when the source of warm moist air decreases as a hurricane moves to different latitudes closer to the Poles or over cool water or land, where it gradually loses energy. However, this does not occur when a hurricane moves over pieces of land such as small islands, as warm moist water around them keeps on feeding it. In many cases, a hurricane gradually weakens until it becomes a tropical storm or, if it reaches higher latitudes, it can turn into an extra-tropical cyclone, called simply a depression. Extra-tropical cyclones are the largest possible displacement for atmospheric vortices and can have a diameter of thousands of kilometres. They do not usually have very strong winds but, anyway, they can reach considerable speed. In the last few years, there has been an increase in the number of strong extra-tropical cyclones even in northwestern Europe, due to the effects of global warming on our planet.

How a hurricane moves. Hurricanes have something in common: after forming, their tracks move pole ward. For example, at first, hurricanes forming over the Atlantic Ocean swing slowly pole ward and after a few days, in which they move roughly from east to west, they drift northwards. It is the opposite in the Southern Hemisphere. They can even travel 1500 km (900 miles) per day following a curved path. Hurricanes rarely deviate from their paths but sometimes they can change direction and even describe circling deep tiny central eyes around a particular area. When this happens, the storm may last much more than usual over this area so that

people living there could really think that the God of Storms is persecuting them!

Damages. The intensity of a hurricane is measured on a scale from 1 (weakest) to 5 (strongest). In the first category, wind speed is 120 km/h (70mph) or over, whereas in the fifth category wind speed can be over 250 km/h (155mph) as the rarest and strongest winds are involved. As hurricanes get closer to coasts, there may be a sudden sea level rise, even up to 5/6 metres (16/20 feet) above normal water level, caused by very strong winds. As waves propagate over the new sea surface, they further increase sea level, which can inundate flat low-lying coastal and inland areas for tens of kilometres. This is the reason why hurricanes will mostly leave death and damage in the coastal areas. On the contrary, sudden heavy rainfall (up to and over 50 cm/20 inches) can cause rivers and streams to overflow in the mountains.

Important. There has been an increase in the number of hurricanes all over the world and this is likely due to global warming as the surface of the world's tropical oceans has become warmer by 0.25/0.5 of a degree Celsius in the last few decades. This is the reason why hurricanes are expected to get more powerful, more frequent and to affect larger areas in the future.

How to forecast a hurricane. Hurricanes need bad weather to develop; they come from storms. Once a depression (or a tropical storm) has been spotted, it is possible to follow its path and development. Nowadays, the exact position of a hurricane can be located thanks to artificial satellites supplied by the meteorological service. Moreover, there has been a significant improvement in prevention and warning systems, which have become more and more reliable and accurate, providing people with useful information and advice in areas where hurricanes can strike. These effective communication systems have drastically reduced the number of deaths from hurricanes, even though damage to properties and things is still extensive, mostly in coastal areas.

Good news. After dealing with the most technical aspects of hurricanes and pointing out their destructive powers, now there is room for two positive

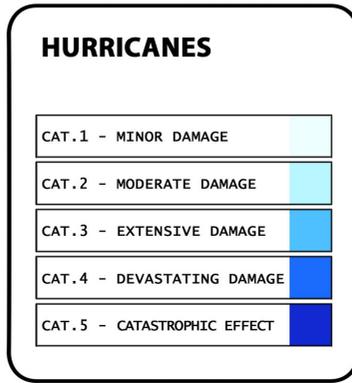
remarks. It is time for you to sigh with relief! Firstly, hurricanes are periodic, therefore it is possible to speak of a hurricane season, and to predict when they could hit a specific area. Secondly, hurricanes usually follow a sort of “highway”, covering the same macro zones in 99% of cases, and rarely deflect, so what about learning where these areas are?

The map. Thanks to the data supplied by the NOAA (which stands for the National Oceanic and Atmospheric Administration), the *world map of hurricanes* has been drawn up. It shows the paths of the hurricanes that have struck Earth in the last 150 years. As you can see, they tend to move within two parallel horizontal bands. Consequently, there are large areas all over the world that will never be hit by a hurricane. If you look at the map carefully, you will realise that, actually, there are not many continental areas that can be affected by a hurricane, and that the most damaged areas are coastal regions, even though hurricanes cannot bring damaging winds several kilometres inland. Moreover, you can see that hurricanes can develop over many basins from which cyclones are generated in different periods of the year. The dark squares, on the map, correspond to each basin and they also define the period of time they are active in a year. Besides, they show their highest peak activity. The different basins have been numbered from 1 to 7. As mentioned above, there are five types of hurricanes according to different wind speed:

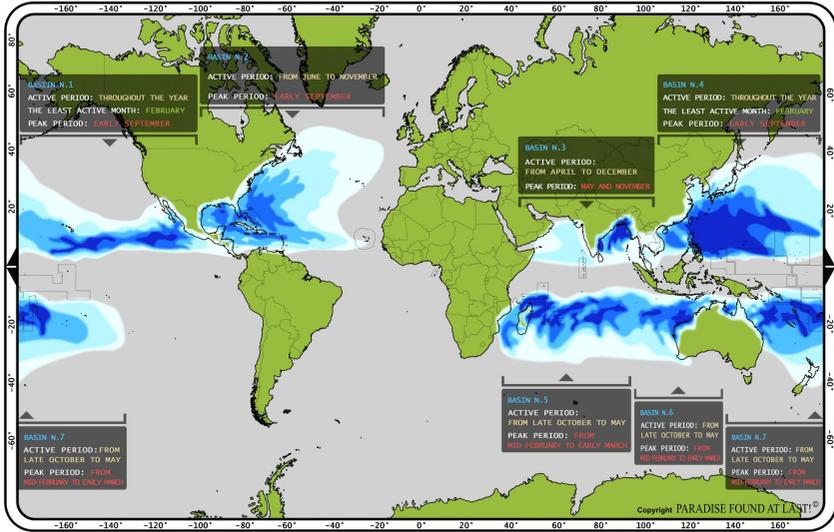
- Category 1, with speed wind ranging from 121 to 152 km/h (75/95mph), where minor damage can be expected.
- Category 2, with speed wind ranging from 153 to 176 km/h (95/109mph), where moderate damage can be expected.
- Category 3, with wind speed ranging from 177 to 208 km/h (110/129mph), where extensive damage can be expected.
- Category 4, with wind speed ranging from 209 to 248 km/h (130/154mph), where devastating damage can be expected.
- Category 5, with wind speed over 248 km/h (154mph), where catastrophic effects can be expected.

Look at the map! It is the right tool that will enable you to (or not to) avoid

some areas of the world and this choice will get you closer to your ideal place!



WORLD MAP OF HURRICANES



[Open the World map of independent states to see the names of the states](#)

Chapter 4

The sea of your dreams

After climbing devious paths winding their way up mountain tops and then venturing deep into the centre of Earth going through its most violent phenomena, now you are ready to go on by sea. Are you one of those who would like to live near a fabulous beach? Do you long to spend most of your life by the sea? Then you have come to the right place; this chapter is for you! You are about to learn of seawater temperature and marine pollution. If you look at our planet's surface from Space, it looks like a wonderful "blue planet" as the oceans dominate the surface far and wide. Oceans cover approximately 70% of Earth's surface and create an amazing world still largely unknown to human beings. Sea lovers should pay attention to the Southern Hemisphere as the great abundance of oceans (60%) is to be found here (the Northern Hemisphere contains the remaining 40%). Actually, the spatial distribution of ocean regions and continents is unevenly arranged across Earth's surface. However, even though the Southern Hemisphere has got less land with respect to the Northern Hemisphere, myriads of archipelagoes are waiting for you there, full of stunning, long and large beaches where the sea is synonymous with relaxation. Therefore, no problem for those who would like their Eden to be by the sea.

Seawater Temperature

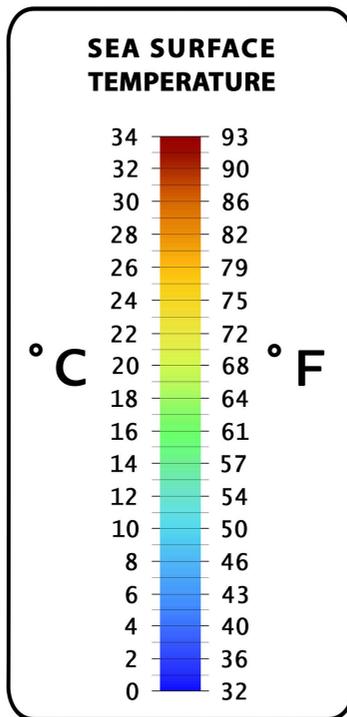
The sea of your dreams does exist! You can choose your ideal seawater temperature for swimming. As you know, it is not the same all over the world but this will be dealt with later.

Speaking in broad generalities, the major source of heat for sea water is the Sun. As water has a greater heat capacity than soil, heat tends to propagate

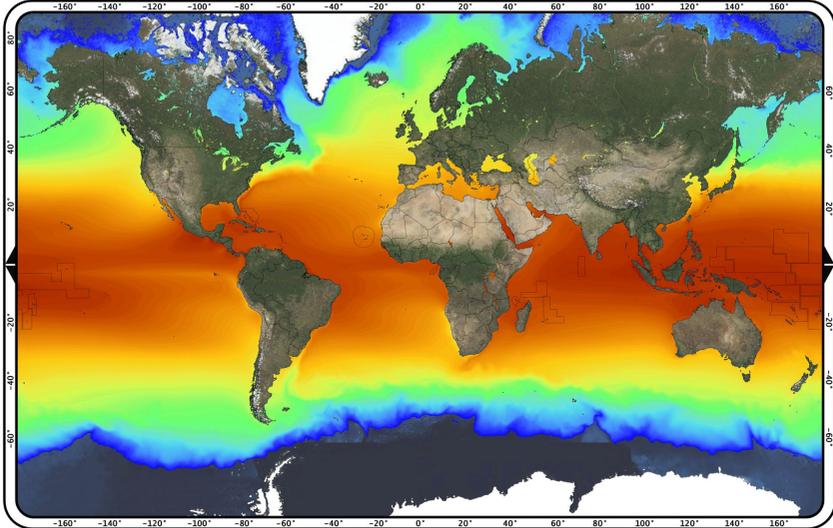
slowly within water. This is the reason why water takes longer to heat up than land. In general, diurnal variation in sea surface temperature is of little importance. If you swim during the day or at night, sea temperature is the same as there is a very low range in sea temperature between day and night, whereas annual ranges in sea temperature are larger (up to 10°C/50°F). Moreover, variation in sea temperature is slower than in the atmosphere. In winter, water is generally warmer than air; on the contrary, in summer, water is cooler than air. It is also well-known that water is warmer very near the coast, and that it gets colder as you move away from it. Those who like swimming offshore know this phenomenon very well. Is water warmer south or north of the Equator? It may sound strange, but sea surface temperature is higher in the Northern Hemisphere (up to 33°C/90°F) and it is slightly lower in the Southern Hemisphere. This is because the Northern Hemisphere has much more land and, consequently, less water compared with the Southern Hemisphere. A small quantity of water gets warm faster. As you move away from the Equator towards the poles, temperature decreases and it gradually drops to -1,9°C (28°F) as you reach the seas near the poles. Now, something weird happens to water. As sea water has salinity in the order of 35 grams (1,2 ounces) per litre on the average, it freezes at -1,9°C (28°F). This change in state reduces the lowering of temperature, so that ice prevents water from cooling further. In fact, while air temperature drops even by several tens of degrees below zero, seawater temperature is rather stable and near its freezing point: the layer of ice becomes just thicker. It is also bizarre that there is a huge difference between mean sea surface and deep water temperatures. For example, mean annual sea surface temperature is 15°C (60°F), whereas mean annual deep water temperature drops to 3,5°C (38°F). There is a lot of speaking about the greenhouse effect and global warming nowadays. It is important to stress that there is a close relationship between air and oceans. Several studies have shown that atmospheric concentrations of CO₂ have increased since the beginning of the Industrial Revolution. The main reason the planet's surface temperature has risen less than expected due to gas emission, is that Earth's oceans have soaked up more than 50% of the atmosphere's excess heat. However, the ocean's heat buffering ability may be weakening. It seems that oceans might be starting to release their thermal heat, releasing great quantities of water vapour, the most important

greenhouse gas, which could contribute to significant global temperature increases. As a consequence, there could also be an increase in heavy rainfall and violent hurricanes in the coming years. It is a positive feedback phenomenon (self-enforcing), which produces gradual and slow effects in time but which could be worrying for the entire climate in the future.

The map. The GHRST (which stands for *Group for High Resolution Sea Surface Temperature*) has made a map based on the most sophisticated Pathfinder Satellite Observations and on the most modern data processing techniques. This map shows Mean Sea Surface Temperature all over the world and represents the most reliable tool to get information about this topic at present. Please examine the *world map of sea surface temperature* and try to identify the sea temperature meeting your requirements.



WORLD MAP OF SEA SURFACE TEMPERATURE



As for the Map, the data were supplied by the GHRSSST and by the US National Oceanographic Data Center. The NOAA's CDR (Climate Data Records) Satellite Program has partly supported the project. References: Casey, K.S., T.B Brandon, P. Cornillon, and R. Evans (2010). "The Past, Present and Future of the AVHRR Pathfinder SST Program", in *Oceanography from Space: Revisited*, eds V.Barale, J.F.R. Gower, and L. Alberotanza, Springer. DOI: 10.1007/978-90-481-8681-5_16.

[Open the World map of independent states to see the names of the states](#)

Ocean Pollution

Oceans have always looked after themselves and protected life on Earth so that new life could develop from them, just like a pregnant woman takes care of her health and her new baby's. Everybody knows that life on our planet depends on oceans but mankind has always behaved badly towards them, considering them to be a sort of natural litter bin. In the past, it was assumed that the effects of dumping litter into the ocean would only have minimal consequences, thanks to its natural ability to degrade toxic substances. Oceans can defend themselves against pollution in different ways. On the one hand, dilution of pollution plays a leading role as it makes dangerous substances lose their initial strength. On the other hand, the use of marine bacteria for biodegradation is an important mechanism by which organic substances are turned into inorganic materials. However, as the dumping of toxic-waste into oceans has significantly increased, their power of self-purification is no longer sufficient. Besides, inorganic substances, like plastic, do not get break down easily. Many people know that the ocean is polluted but to what extent? National Center for Ecological Analysis and Synthesis, in Santa Barbara, California, USA has recently carried out important research work on this topic. What we have heard about oceans is very disturbing. At present, pure water can only be found in 4% of oceans. Almost all of the world's oceans have been polluted (96%) with toxic waste owing to human activities. There are different kinds of pollution: land, nuclear, ship and air pollution. Moreover, overfishing can cause extensive loss of marine life and create dead zones whereas the increase in sea surface temperature, owing to the effects of global warming, can strongly influence the distribution and abundance of fish.

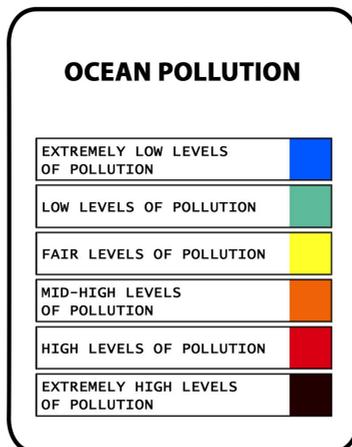
Land pollution. The most toxic waste materials dumped into the ocean (44%) come from land. Industrial and urban waste water, both filtered and unfiltered, contaminates nearby lakes and rivers that flow into oceans. This also involves pesticides, fertilisers and other chemicals used on farms. A lot of chemicals dumped into sea cannot decompose in a short space of time and they tend to accumulate in fatty fish and other living organism tissues. The long term effect on marine life can include cancer, changes to the

endocrine system's function, failure in the reproductive system and immune system dysfunction. Therefore, pollution can do harm to an ecosystem, by interrupting the life cycle of young living organisms. Like the majority of human activities, mining operations and the metalworking process produce toxic waste as well, like mercury, which contaminates fish and sea food and can be a serious health threat for human beings. Even nuclear power plants during normal operation release heavy marine pollution. The reprocessing plants of radioactive waste situated in La Hague, in France and in Sellafield, in the UK, are classified as the most dangerous situations. Their radioactive waste has contaminated the marine environment around and the contamination has spread along the coasts of Norway and west Greenland, where radioactive seaweed can be found. Ship transport accounts for 12% of marine pollution and causes severe stress to the sea surface too. The most dangerous form of ship pollution is due to large tanker accidents but oil enters the seas also from intentional spills made by criminals with no scruples. Moreover, illegal dumping of toxic waste into sea inside barrels, carried out by the so-called "toxic ships", may cause irreversible damage to the environment. Toxic waste should be managed, according to law, with expensive procedures, but it is directly dumped into sea. A remarkable part of marine pollution is also due to chemical substances that are present in the air and that concentrate onto the sea surface. Air pollution is mainly the result of human activities of course. A series of big chemical reactions is taking place in seawater and this is causing ocean acidification. It is also well-known that overfishing is causing very serious damage to several fish and seafood. More fish are caught than the population can replace through natural reproduction, as today everybody wants to eat fish. Some species have decreased even by 90%. Altogether, the effects of the sources of pollution described above are responsible for the unhealthy conditions of most oceans all over the world at present. Even though their intellect is limited, human beings must change their attitude and behaviour towards Nature! Unfortunately, people able to think clearly with regards to their relationship with nature are as rare as hen's teeth. On the contrary, most people do not realise the seriousness of our environmental problem. I think you are a smart person. I hope this information is useful to you and that will help you to make your life better. Everybody can and must do something to prevent world oceans from dying! All you have to do is think about something that can be done,

both individually and collectively. First of all, everybody could control pollution through proper garbage disposal. Secondly, people should try to avoid using chemical substances for cleaning the house and in everyday life as well. Thirdly, it would be wiser to change your dietary habits and only buy farm-raised fish. Fourthly, walking or using your bicycle or public transport whenever you can is a great idea. Finally, in general, people should try to change their mindless behaviour with the advent of so-called “progress”.

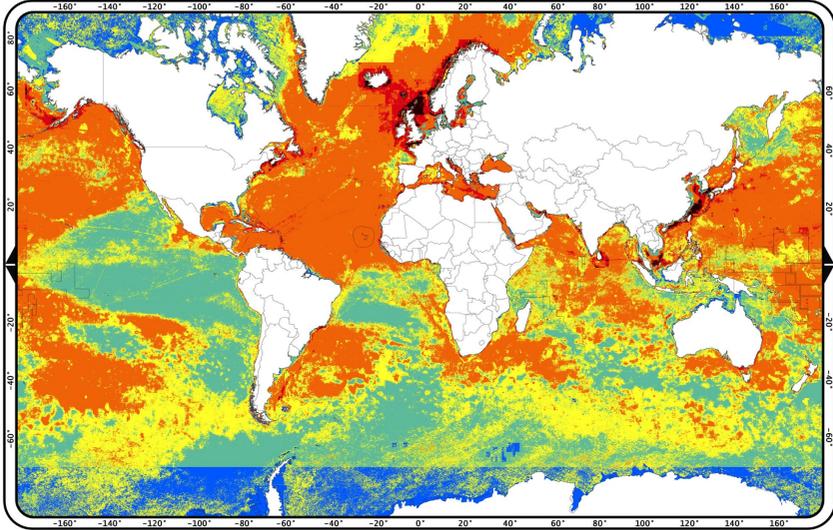
The map.

When you analyse the *world map of ocean pollution*, you will see that oceans are not endless. Neither are their resources. World’s Oceans are contaminated as the result of damaging human activities. The worst affected regions are the ones overlooking the North Sea, together with the English Channel, the Chinese regions merging the South and East Seas, the Persian Gulf and, finally, some portions of the Atlantic Ocean near the East Coast of the United States. The Mediterranean is one of the most contaminated seas as it is semi-enclosed and it is exploited by highly industrialised nations. This is quite sad! Anyway, if you love sea life and want your Earthly Paradise to be located on an untouched shore, study the map, analyse its data carefully and you will be able to identify the sea you are looking for. The areas without pollution are the ones nearest the Poles of course, but the map will also show you other latitudes where you can find areas with still clear seas.



#

WORLD MAP OF OCEAN POLLUTION



[Open the World map of independent states to see the names of the states](#)

Chapter 5

Air Quality

Think about a country where you can breathe sweet and pure air. You do not think that such wonderful places could exist in real life, do you? Maybe you are right, especially if you are used to living in an industrial urban area. What is commonly called “progress” has badly damaged our environment with tragic consequences for the survival of mankind. Nowadays air pollution is the rule rather than the exception. Anyway, if you are looking for a place where you can really breathe pure air, I want to tell you that some of them are still to be found on Earth, fortunately. Not many, but they do exist! Actually, breathing is at the centre of human life. It is the first thing we do when we come into this world and it is the last thing we do when we leave. Have you ever wondered what air is made of? For many centuries, it was thought that air was an element, but actually it is made up of different gases, mainly nitrogen and oxygen, which makes up 99% of it. To be more specific, the mixture of gases is composed of nitrogen (78%), oxygen (21%) and to a lesser extent of carbonic anhydrase and water vapour (0,04%). There are also other gases such as argon, neon, helium, methane, krypton, xenon, hydrogen and HDL one, which are also known as “trace gases” because they are present in such small concentrations. As you can see, the air that you breathe should be a mixture of well-balanced kinds of gases. However, it is difficult to breathe clean air nowadays, that is air with the right ingredients belonging to the early atmosphere. When new gases are introduced in Earth’s atmosphere or the quantity of the old ones is modified, air pollution occurs. You are travelling in order to identify your own Earthly Paradise and now you have come to an important crossroad: What are the most air- polluted areas in the world? What are the areas with the healthiest air to breathe? You are going to learn it!

Poisonous substances. Pollutants have harmful effects on living beings and the environment. It depends on the quantity and the strength of air

pollution they are exposed to. The effects of air pollution on people's health can be minor and reversible (such as eye irritation or sore throat) or debilitating (such as aggravation of asthma) and even fatal (such as cancer). Once toxic substances are released into the air, they are carried away by airstream. They may travel for long distances and for a long time until they reach different levels of height. A large part of them usually fall short distances (a few metres to several kilometres) whereas the remaining part travels long distances (up to 1,000 kilometres/ about 620 miles or more) after undergoing several chemical reactions, mainly in the form of oxidation and photolysis. Most air pollution phenomena occur in the lower part of Earth's atmosphere and extend over the height of 1 km/0.62 miles. Specific air quality standard indicators have been created so that air quality can be classified into different levels; different areas of a region can be compared and changes can be highlighted. It is a good way to study and monitor air quality all around the world. One universal air quality standard indicator does not exist but there are different kinds of them, according to National Ambient Air Quality standards for each pollutant; combined effects are defined as well. This journey will show you the index provided by the MACC (Monitoring Atmospheric Composition and Climate Project). It is valid, reliable and supported by research and atmospheric models.

This index takes into account the following air pollutants:

- Ozone (O₃)
- Nitrogen Oxides (NO_x)
- Particulate Matter PM10
- Sulphur Dioxide or Sulphur Anhydride (SO₂)

We are going to analyse the chemical properties of these pollutants, highlighting the reasons why they come into being and also pointing out their main negative effects on your health and your children's.

Ozone (O₃). The first pollutant to be analysed is ozone. It is a toxic gas if you inhale too much of it, but at the same time, it is essential for life on Earth. It is a "trace gas" and represents just the 0.000004% of all the gases

in the air. However, ozone plays an important role in protecting life as it absorbs harmful solar radiations. As a matter of fact, it screens out more than 90% of ultraviolet radiations. Its positive actions are performed at great heights, greatly above air traffic routes and where nobody can breathe it. Ozone is concentrated in the ozonosphere, which is located at altitudes from 20 to 30 km (about 12 to 20 miles). Yet, ozone can also be created by chemical reactions at lower levels. This is what happens during thunder and lightning storms for example. Ozone can be produced by electric discharge, when a molecule of oxygen (O_2) is converted into a molecule of triatomic oxygen (O_3). Unfortunately, an unexpected event has happened due to human activities and “bad” ozone is produced in a new way and at ground level nowadays. Ozone is created from another pollutant, nitrogen dioxide (NO_2), owing to solar irradiation. NO_2 is emitted when transportation fuels are burned, therefore from motor vehicles, passenger cars and trucks, as well as from fuel burning heating systems and thermal power plants. To sum up, ozone, a harmful gas which would naturally be confined to great heights and would not come into direct contact with life-forms, is also being produced in increasing quantities on ground level and this is worrying!. Its presence in the lower layers of the atmosphere can trigger a variety of health problems for human beings, animals and vegetation. It can also have harmful effects on buildings and monuments. As for vegetation, ozone causes oxidative damage, inhibits photosynthesis and the movement of nutrients from roots to leaves, speeding up ageing. As for human beings and animals, it is toxic if inhaled in large quantities. On the contrary, if you breathe small amounts of ozone over a short period of time, the effects should disappear after exposure, leaving no damages. However, even in this case, there may be health concerns for a number of unusually sensitive individuals, who may experience damages to their lungs, nasal cavity and throat. In particular, children, whose lung’s defence systems are still developing, may impair lung function permanently if they have a higher level of exposure to ozone. This is the reason why children should be brought up far away from the towns and cities!

Nitrogen oxides (NO_x). The second pollutant which is taken into account is nitrogen oxides (NO_x). The term “nitrogen oxides’ (NO_x) is usually used to include nitric oxide (NO) and nitrogen dioxide (NO_2). As mentioned

before, nitrogen is the main element found in the air we breathe. When nitrogen reaches temperatures over 1200°C (2000°F) through the combustion process, it reacts with oxygen, creating “nitrogen oxides”, which is a very toxic gas. Major releases of nitrogen oxides are mainly from combustion processes caused by human activities (motor vehicles, heating systems and thermal power plants). There are also minor natural sources such as lightening, fire or volcanic eruptions. The quantity of NO_x produced by human activities is estimated to be one tenth of the one in nature. However, the problem is connected to distribution: natural sources distribute nitrogen oxides uniformly around the earth, whereas sources from human activities concentrate NO_x in narrow areas. Concentrations in towns are even 100 times larger than outside of them. The well-known yellowish colour of mist which covers polluted cities is just a result of nitrogen dioxide. People who live in these towns do not mostly realise that above their usual dull sky there could be another brighter blue one! Health effects of NO_x generally appear several hours after exposure so that people do not often realise that their problem is due to the polluting air they have been breathing! Nitrogen oxides can be highly damaging and cancer-producing. Short-term exposure can cause irritation, allergy and respiratory infections but long-term exposure causes potentially fatal pulmonary fibrosis.

Particulate matter PM10. The third pollutant is PM10. It is a complex mixture of extremely small particles and liquid droplets (dust, smoke) whose diameter is less than or equal to 10 micrometres, that is 10 thousands of a millimetre. It includes, therefore, what is commonly known as dust. Sources of these particles can be natural such as fire, soil erosion, volcanic eruptions, pollen and marine salt in the air. However, the primary source of PM10 is to be found in human activities: internal combustion engines, heating systems, industrial activities, incinerators and thermoelectric power plants. Moreover, a large part of PM10 in the atmosphere comes from the transformation of some gases into liquid or solid particles (nitrogen and sulfur compounds), always emitted by human activities. The size of the particles is directly linked to their potential for causing health problems. Larger particles usually get caught in the nose and throat. On the contrary, smaller particles can penetrate the respiratory

system until they reach the larynx, the trachea, the bronchial tubes and sometimes air cells. This toxic pollutant can cause asthma, cardio-pulmonary infections and weaken lung functioning. The WHO, which is the acronym for World Health Organization, says that 0.5% of deaths are due to exposure to small particles.

Sulphur dioxide or sulphurous anhydride (SO₂). Finally, sulphur dioxide, the fourth pollutant, is a colourless and irritant gas with a pungent smell that results from the chemical reactions of oxygen with sulphur, which is present as an impurity in fossil fuels (coal, petrol, fuel oils and diesel). It is mainly emitted by thermoelectric power plants, heating systems and some heavy industrial activities such as refineries, foundries and cement manufacturing. However, motor vehicles contribute to its emission, in particular diesel engines. The sulphur content of a fuel essentially determines the SO₂ emissions. The new regulations, imposing lower sulphur content fuels (for example Directive 99/32/EC), together with the increased use of methane gas, are effective tools to reduce emissions of SO₂. At present, it is universally accepted that the most harmful effects on humans and the environment are caused by sulphur dioxide. It is intensely irritating to the eyes and upper respiratory tract. When sulphur dioxide mixes with moisture, it changes into sulphur acid and acid rain occurs, causing serious damage to vegetation. Half of the European forests are considered in greater danger than ever owing to acid rain. Besides, acid rain can also cause statues and centuries-old monuments to deteriorate faster in urban areas.

A precious tool to assess the health of our planet. In order to go on with your journey towards your own Eden, you need a reliable tool so that you can examine air pollution all over the world. The MACC European Project has indeed developed the “Air Quality Index” and a World Map has been created, combining all the four different pollutants described above. Therefore, now you can choose your ideal place on Earth taking into account air quality as well. When you analyse the map, you will see that most polluted areas are concentrated in the Northern Hemisphere and this, once again, shows that the most serious damage to the environment is caused by industrial activities. Urban areas are unhealthy places even

though, air has remarkably changed its composition there in the last few decades. As a matter of fact, there has been some decrease in sulphur dioxide levels (SO_2) thanks to fuel switching and fuel quality improvements. Moreover, new directives have established stricter standards for the emission of pollutants. Finally, it is important to note that, while coal and fuel oil were still the dominant fuels used in heating systems (80%) in the 1960s, they have currently been replaced by low-sulphur fuels and, recently, by methane gas. As for the latter, which in many aspects is the “cleanest” of the fuels, it also produces the highest levels of nitrogen dioxide (NO_2).

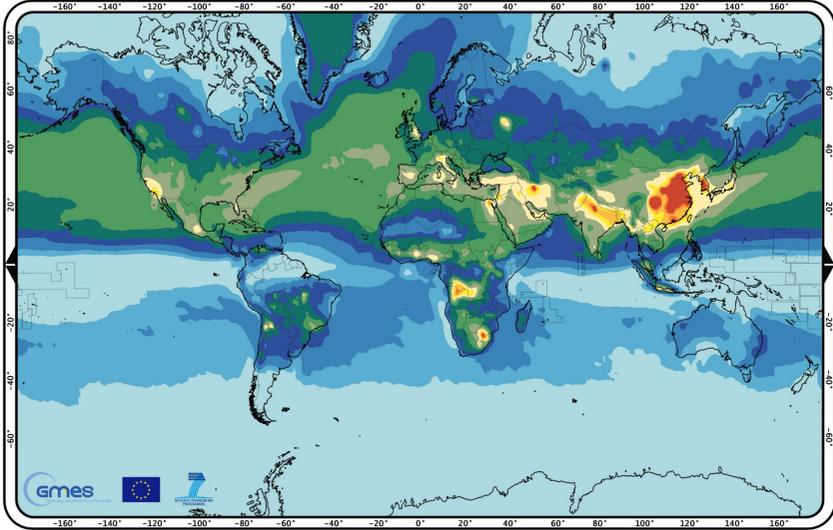
Practical advice. In general, when strong wind does not blow away polluted air, pollutants tend to stay close to the source of emission, spreading very slowly. This is the reason why windy towns are better than areas where polluted air tends to stagnate. Anyway, air is less polluted just a few kilometres away from urban areas. As mentioned at the beginning of the chapter, most pollutants are produced in the lowest layer of the atmosphere and extend up to 1 kilometre in height and more. Beyond this threshold, pollutants are less common to be found. Everybody knows that air is healthier in the mountains than in the plains.

The map. The *world map of air quality* shows reliable data issued by the European MACC Project and by the “Air Quality Index”. This is an excellent tool to assess the concentration of the pollutants described above according to fixed parameters. Now, you have got the right tool to identify air quality everywhere! It is up to you. You can decide to breathe excellent air or very bad air. What about the air of your ideal place in the world?

AIR QUALITY

EXCELLENT	
OPTIMAL	
VERY GOOD	
GOOD	
ALL RIGHT	
SATISFACTORY	
ALMOST SATISFACTORY	
IMPOVERISHED	
POOR	
VERY POOR	
BAD	
AWFUL	

WORLD MAP OF AIR QUALITY



Open the *World map of independent states* to see the names of the states

ON THE SECOND PART OF YOUR JOURNEY

Pecunia non olet
(Money does not smell)

(Gaius Svetonio), *De vita Caesarum*

After being acquainted and understanding several geo-physical phenomena on our planet, we are going to deal with a more material and less empirical issue. It might seem of minor importance at first glance, but it will enable you to get a wise, full and practical knowledge of reality as it is related to money. In everyday life, everybody has to pay the bills all over the world so it is vital to be aware of the most important economic factors that contribute to personal wealth such as wage and cost of living levels, tax burden etc. You will follow a very interesting route and you will learn very useful practical information so that you can enjoy a comfortable life in the place that you will consider as your personal Earthly Paradise!

Chapter 6

What is the cost of living in your Eden?

Let us start from the basic economic problem: cost of living. Idealism is fine but you have to face reality and its costs every day. It is necessary, therefore, for you, as a prospective resident abroad, to get an idea of how general costs compare to what you currently spend and to see if you could keep your standard of living in a different country, which might then really become your Earthly Paradise. This chapter tries to answer the following question: How much do you need to spend a month to live adequately in every country the world over?

The job of living. This is not a very easy task but let us give you some very sound advice to help you with your choice. In order to do this, it is important to analyse several economic parameters and to show the process leading to the data you will find on the World Map for Cost of Living. We will not take long! The following question serves as a useful starting point: What does “the average person” living in the Western World need to have at present? We have chosen “a western lifestyle” for the sake of simplicity. There may be a list of several possible answers to it but we started from this supposition: if you have a western lifestyle (or pseudo-western lifestyle), you need to have breakfast, lunch and dinner every day. This means that you have to do the shopping, maybe eat out once a week and buy new clothes and accessories (at least one a month, e.g. a pair of shoes, a coat, a scarf, a pair of jeans, using the mean monthly purchase). Besides, you need a mobile phone (at least 10 minutes of conversation a day on average), phone operator services, and, as a typical western consumer, monthly service fee to access the Internet. You also need a car or public transport to get around, so you need money to pay for your car fuel and maintenance or, alternatively, to get train or bus season tickets. Then, and this is the most important thing, you need a place to live. Let us consider the average person who has found his/her own Eden and moves to another country. At the beginning,

it is likely that he/she will rent a small flat in the suburbs, in order to minimise costs and, of course, he/she will need money to pay for his/her bills (electricity, gas, water). Finally, the average person we have considered so far as a representative sample, may like going out and drinking with friends at least once a week, or going to a club, to the movies or to the theatre. Anyway, what counts most is that the average person's standard of living in the different countries is the same so that you can make a comparison between costs of living, obtaining absolute values. Wherever you move, you will need a certain amount of money to live a decent life and, as goods and services have different prices in most countries, the total cost of them will vary from one country to another. The most expensive item will certainly be the rent of the house.

PPP and the cost of living. In International Economics, there is a parameter known as PPP, which is the acronym for Purchasing Power Parity and which is an attempt to work out how much currency will be needed to buy the same quantity of goods and services in different countries. It is based on a so-called "basket" of about 3,000 goods and services, whose prices are assessed every six months in each country. This large basket allows you to compare the costs of living in different countries. You can see that the cost of living is higher in the developed countries, whereas it is far cheaper in the rest of the nations of the world. You can even cut your expenses in half by moving to one of the cheapest places and always keep your standard of living.

Cities at opposite poles. Is the cost of living higher in the well-known big cities? Actually, some studies carried out by specialised organisations have shown that high cost of living has affected countries in a different way. According to the US research firm Mercer's classification (www.mercer.com), two African cities are among the top 10 most expensive cities in the world. They are Luanda, in Angola and N'Djamena in Chad. These towns are attracting an increasing number of people from western countries, looking for new business opportunities in key economic sectors such as mineral extraction, the energy sector, financial services, commercial airlines and the production trade. These businessmen are accustomed to high standards of living so that the Africans towns they visit have to supply

them goods and services of the same level. The most expensive cities in the world include: Tokyo and Osaka, in Japan, Moscow in the Russian Federation, Geneva and Zurich in Switzerland, Hong Kong in China, Sao Paulo in Brazil and Singapore. On the contrary, the cheapest city in the world is Karachi, in Pakistan and other cheapest cities are Tirana in Albania, Skopje in Macedonia, Sarajevo, in Bosnia and Herzegovina, Minsk in Belarus and Belfast in the UK. According to xpatulator's classification (www.xpatulator.com), the cheapest cities in the world also include: Sanaa, in Yemen, Nuku Alofa, in Tonga and Tripoli, in Libya. According to Mercer, the cost of living in Luanda, (the most expensive) is more than 3 times the cost of living in Karachi, (the cheapest). Another interesting website is www.numbeo.com, which allows you to compare not only the cost of living between different countries but also between several cities within a country. This is possible if you insert, by using a suitable basket of goods and services, your lifestyle. However, the classifications we refer to or the ones made by any other organisation do not take into account all the towns and cities in the world, they just analyse a sample of them, which is considered to be statistically significant. It is important to point out that a complete list of all the towns and cities in the world does not exist unfortunately.

The average cost of living. Anyway, maybe those who are looking for their own Eden are not going to move to a big city; in fact, they would rather stay away from bustling cities to enjoy the calm of the countryside. This is also the reason why the average cost of living refers to a whole country and not to a specific location, so that the reader can get a general idea of the monthly costs to bear in that country on average. In this way, it will be easier to make a comparison between the different costs of living in the different countries and to identify the cheapest places in the world.

Those who move. At present, more and more people are moving abroad, looking for a new life and most of them choose cheaper areas. There are retired people who decide to move to exotic countries, where life is cheaper so that they can improve their current standard of living and live a more comfortable life with the same money coming from their old-age pensions. People can also improve their standard of living thanks to other income,

coming, for example, from countries where wages are substantially higher than the average in the country of destination. This happens when you move to developing countries which are currently enjoying a strong economic boom, for example the one the USA experienced in the 1930s, after recovering from the Great Depression dated 1929, and that Europe went through starting from the mid-1950s. Otherwise, you could move to the so-called Third World countries (developing countries). However, you do not absolutely have to think that improving your standard of living is always the best thing to do. As a matter of fact, when you move abroad and meet different cultures you also learn new values of life and you may completely change your consumer habits! What you consider to be a “must” in your life now, could appear totally unnecessary, even immoral and useless to you tomorrow. Maybe you have focused on wealth accumulation so far then you realise that there are more important things in life. Different countries and cultures may open up your mind to new values. You may have heard the recent term “downshift”. It means to reduce the speed, rate or intensity and to simplify commitments in life. It is a way to have a simple and more fulfilling life where you, mostly, stop working for making money and live more. Several professionals are following this social trend in many industrialised countries: they work less so that they can enjoy more free time and spend it on nice and simple things. Robert Kiyosaki, an entrepreneur and writer, in one of his famous books says that prosperity does not depend on your income but on what you choose to do in your spare time. It is obvious that not everybody can change their lifestyle, especially the elderly who are reluctant to try new situations, as everybody knows, but never say never. On the contrary, a change in lifestyle is easier for relatively young people who are usually open-minded and, as they cannot rely on an old-age pension (or on any certain income) need to work to make a living. The workplace is just where you can get in touch with the uses and customs of a new place and quickly learn its different culture and values, which often are rich in simple things. Anyway, going back to our main topic, those who have to work for a living, not only have to know the amount of money they will need to survive, but also they need to know the income they can count on. Therefore, the next chapter will be very useful, as it will show you the wage levels in the different countries all over the world so that you can compare them with the data on the cost of living analysed in the current chapter. Your costs

and income should be clear then!

Differences between areas in the same country. There are areas which are characterised by different costs of living within a country; sometimes even marked difference are to be found. In big cities, capital cities and, in general, in the most densely populated areas the cost of living is more than 30% the national average. On the contrary, in small towns, villages and rural areas the cost of living is about 30% lower than the national average so that the percentage difference in cost of living between a big city and a small town could even be 60%.

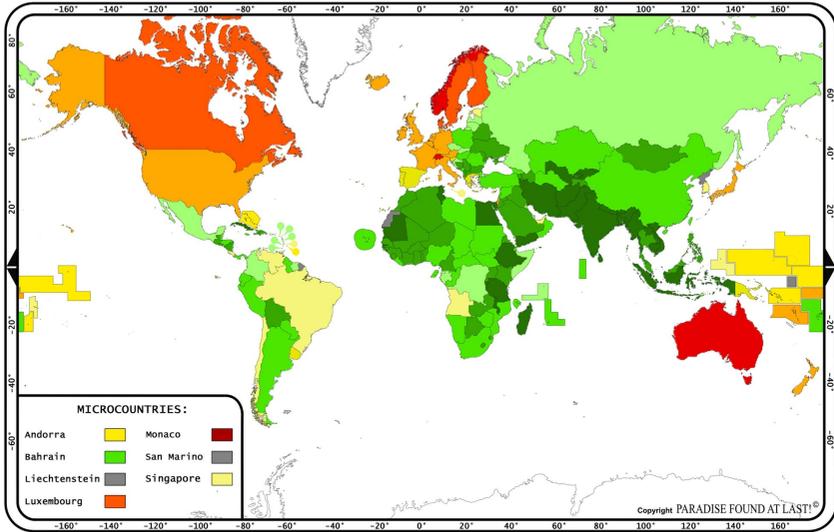
The map. The aim of the *world map for cost of living* is to show the average cost of living for every single country, without specifying the micro areas from which it is obtained. Pay attention to this figure. You will find out the amount of money you need a month to maintain an average western lifestyle. You will also see the differences in the cost of living between countries around the world and you will be able to choose the cost of living which is near your current or future financial resources. You can also see that there are big differences in costs of living the world over. Western citizens will note at once the difference in cost of living between the Industrialised Countries and the rest of the world. There are about fifty states in the world where you can live more than a half price life with respect to Europe, North America, Australia, New Zealand and Japan. The higher cost of living is to be found in the European States; North America has slightly lower values. If you want to find very low data, you have to look at South America, most parts of Asia, the Middle East and Africa.

COST OF LIVING

NATIONAL MONTHLY AVERAGE IN EUROS

FROM 280 TO 400 EUROS	
FROM 401 TO 500 EUROS	
FROM 501 TO 600 EUROS	
FROM 601 TO 700 EUROS	
FROM 701 TO 800 EUROS	
FROM 801 TO 1000 EUROS	
FROM 1001 TO 1200 EUROS	
FROM 1201 TO 1400 EUROS	
FROM 1401 TO 1600 EUROS	
FROM 4000 TO 4500 EUROS	
NOT AVAILABLE DATA	

WORLD MAP OF COST OF LIVING



[Open the World map of independent states to see the names of the states](#)

Chapter 7

Wage comparison

This chapter is for those who have to work for a living. However, even those who are going to move abroad and live on a guaranteed pension will benefit from learning the salary that is usually paid to workers in different countries around the world. This is a good way to get an idea of how that system/country works. The overall objective is to supply you with thorough information so that you can identify the best place to live in. Therefore, a wage comparison of different countries in the world has been made. What will your wage be if you move to one of the 196 Independent States in the World?

A very hard survey. As it was impossible to get reliable information about the wages received by every single category of workers, the wage drawn by one single job has been chosen as a reference point. Then you can compare it with any other groups of workers. The first question that comes to mind is: What kind of job is certainly done in all the countries in the world? After accurate analysis the job of a cashier in a department store, or in general, in a retailer's store has been chosen as a reference group. Everybody knows that the wage of this kind of cashier is relatively low, often near minimum wage all over the world. It can, therefore, be taken as a realistic example and compared with any other category of workers. Whatever your qualifications are and whatever job you get in the future, now you have a valid instrument which allows you to compare the wages of any type of job starting from the wage of a cashier in a department store or small shop. It is important to specify that the wage you will find here refers to the wage that a new recruit gains; therefore, it represents the minimum wage for that category of workers. Moreover, it is net wage, that is the net income of the worker less all taxes, in other words, the money the worker can actually spend. In order to get this useful information, which is not easily available for most of the countries, we had to gather various data and work for

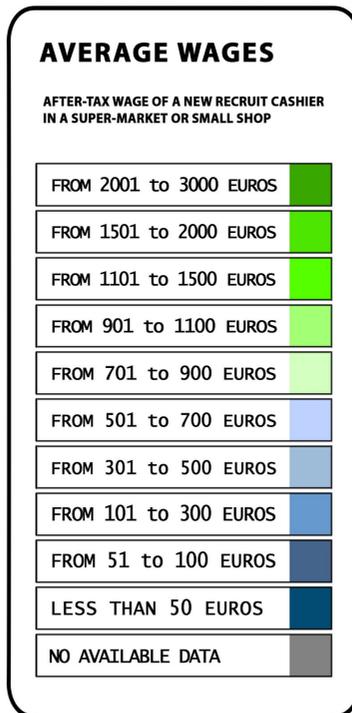
several months applying to foreign Embassies, Consulates and most Chambers of Commerce all over the world. It is important to stress that the help of the Ambassadors, Consuls and Employees of the offices we contacted was extremely important for the success of this research.

News from all over the world. Some interesting details have come to light during the enquiry. In the developed countries, specific categories of workers are covered by National Collective Agreements, with fixed wage levels for all workers. However, this does not occur in many other countries where, as a consequence, there are not fixed wages in the home territory. Let us have some examples. In Bulgaria's capital and main cities, wages are from 20% to 30% higher than the rest of the country. This also happens in Third –World countries (developing countries), where there is a great difference in wages between those who work in the well-developed capital city and those who work in poor rural areas. Congo Kinshasa (Democratic Republic of Congo) is another good example of this. A cashier of a department store earns about 200 Euros a month working in the capital city, but much less working in areas far away from it. When we asked if it was a before-tax or after-tax salary, the Italian Embassy answered: "Actually, in Congo Kinshasa, nobody pays any taxes!" This is not a surprising revelation in a country where annual per capita income (not monthly) is roughly 150 Euros. In Congo Kinshasa, if you find a job in the private sector, like in large-scale retail trade, you are very lucky. Anyway, there are other countries where you can live better even though some developed countries may still be a surprise to you. The Tbilisi Embassy says that a cashier in a department store may get an after-tax wage ranging from 300 to 400 Lari (from 140 to 180 Euros) working full-time, for 6 days a week in Georgia. Yet this wage does not take into account the length of service that many other countries recognise: this is quite unfair! On the contrary, there are some countries, like North Korea, where official data is unavailable as the system of government is unwilling to divulge even this kind of information. The Seoul Embassy (South Korea) says that the only information they get from North Korea comes from the refugees who manage to escape from the country, which is now governed by King Kim Jung, the new tyrant who has come to the throne after other two endless tyrannies. They say that the wage you can earn for any job there (therefore

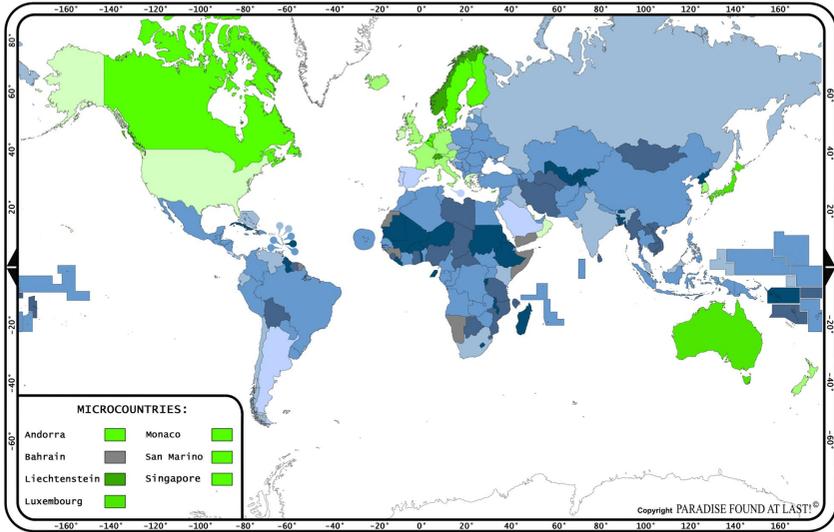
not just for a cashier), should be around 3.5 Euros a month. On the other hand, the monthly cost of living to survive in that country is estimated to be not lower than 70 Euros. It is hard to believe it but a North-Korean worker earns 20 times less than he/she needs to survive, according to this officious information. Therefore, a North-Korean person has to develop illegal economic activities which are parallel to the official ones run by his/her state. There is no official news for Libya as well. The Consulate General of Italy in Benghazi stated that labour laws do not provide for research organisations, let alone for cross-sectional studies. Workers directly bargain with prospective employers before accepting a job (as a cashier at the supermarket in this case). What really happens is a high turnover of staff in the absence of written formal contracts. As for retailing through independent shops such as small shops, their workers are usually the owner's relatives or some friends of theirs and they do not have a fixed wage. It is important to report something about South Africa, where violations of human rights have always been present in the past and despite Nelson Mandela's long government, racial discrimination still persists and it is reflected in employment too. Actually, there are marked differences in wages between racial groups. Blacks can only earn 23% of a white's wage. Better for half-breeds of South Africa, who can get more than blacks, but only 28% of whites' wages. Not too bad for Asian people, who earn 63% of whites' wages. If you think about the violent fights against apartheid and to Mandela's risky presidency which obtained remarkable, though not definitive improvements, we must regretfully admit that the results, at least for wage distribution, are really awful. Things are much better in the United Emirates, where the employer is expected to pay wage and extra money to the worker. Therefore, a cashier working in a supermarket not only gets after-tax 300 Euros but he/she is also paid for accommodation and transportation costs. In the Russian Federation, as for retailing through chain-shops, Co-partnership Agreements are very common between department store managers and co-workers (cashiers included), who must register for VAT as well. In Ukraine, a cashier earns the equivalent of 150 Euros a month, but with the alternate workweek schedule, working both on Saturday and on Sunday during the working week. Therefore, the wage refers to 14 working days a month. As for Brazil, there are much higher differences in wages between different categories of workers with respect to Italy. School teachers earn more than cashiers in Brazil, whereas there is just

a slight difference between these jobs in Italy. Brazil has also high levels of inequality between social classes, and people who do less qualified jobs are the most penalised. In spite of this, Brazilians are always happy.

The map. The *world map of average wages* shows the after-tax wage received by a new recruit cashier working in a department store or in a small shop. You can see, at a glance, that there is a strong difference in wages between African Countries, which are very low, (our cashier gets just a few tens of Euros a month) and some Western Countries such as Switzerland (our cashier gets 2,700 Euros) and Liechtenstein (our cashier gets 3,000 Euros). However, it is important to point out that wages must be compared with the cost of living in that particular country (see previous chapter). After this comparison, you will realise that many of these differences do not exist at all and, in some cases, they are reversed, so that a country which seemed to be absolutely negative to live in, can become a possible Eden. This is the proper way to understand the possibility of maintaining your present lifestyle and do the same job in another country.



WORLD MAP OF AVERAGE WAGES



[Open the World map of independent states to see the names of the states](#)

Chapter 8

Bitter idleness

A few years ago, searching for a job was challenging but fairly simple. Many companies searched for qualified workers who were even overpaid. Nowadays all this is a nostalgic bygone recollection. Since 2006, the world has been in a severe recession, causing deteriorating labour market conditions. The aim of this chapter is to illustrate global unemployment rates.

The 2 mistakes. It all started in the USA under a dishonest economic policy, which encouraged financial operations without any ethical principles and conforming to the so called “deregulation”. Subprime (second-chance) loans were created for borrowers with impaired credit history and reduced repayment capacity, who were not able to give anything as security for their loans. No bank would allow them to get a conventional mortgage. This was the first mistake. The issuing banks, in order to protect themselves from the risks of insolvency as dealing with subprime borrowers possibly on the edge of bankruptcy, securitised subprime loans. That means that banks decided to reduce their risk and started to sell spurious bonds to third parties, making “false and misleading” representations of the bonds’ true risks. A bond is a promise of the seller (e.g. government) to pay back, with interest, the money that was lent to it by buyers. Therefore, it usually offers lower risk but these bonds were at extremely high risk. Subprime borrowers did not manage to pay back their loans so the bond holders lost their interests together with the money they had lent. This was the second mistake. From 2000 to 2005, house sales prices peaked so, when subprime borrowers were negligent in making timely mortgage payments to the loan services, the lender (a bank) took possession of the property and sold it covering the loss. However, the so-called “housing bubble” started deflating and housing prices finally went down in the second half of 2006. Several major banks paying out subprime

mortgages were forced to shut down or went bankrupt. This is the reason why the whole financial system collapsed in the USA and, with it, its clients and those who had invested in American bonds. The primary markets in Asia such as Japan, Korea, Hong Kong (China) and Singapore, were the first to suffer a severe crisis from the American financial crash, followed by the emerging market economies, like China and India. As for secondary but surging markets, the crisis caused them to stop expanding, being closely linked to primary markets as suppliers of low-tech products or cheap labour. Since then, the American financial crisis has spread to Europe where it has gradually reduced production and increased unemployment. The collapse of the US subprime mortgage market had an adverse effect on the financial markets and banks all over the world, owing to globalisation.

Consequences of the crisis. The economic crisis is deep-seated and experts believe it will last for long time. Unemployment rates have increased in developed countries, where three quarters of workers have lost their job for the first time, mostly in the USA and Spain. However, according to a study carried out by Fmi and ILO, some countries have not particularly suffered from this unemployment crisis as they have followed the right policies. Norway is a good example, where the unemployment rate is the lowest of the OECD. There has also been an opposite trend for most of the emerging countries where, since 2010, there has been an increase in employment and therefore the unemployment rate has fallen. Unfortunately, unemployment has become a matter of life and death in the poorest countries, and this is certainly a threat for peace and security.

Okun's law. Unemployment clearly represents a negative factor for a country's economy. It means a loss of production as those who are not able to find a job, cannot produce. According to Okun's Law, for each 1%-point increase in the cyclical unemployment rate, the potential rate of GDP (Gross Domestic product) decreases by 2%. Unemployment may also intensify ethnic tensions and gender divisions, aggravating the problems that people are already facing. It is also true that unemployment generally affects minorities and most of all immigrant communities, and as a result, it may be an indirect cause of racism and racial discrimination. Moreover, unemployment rate varies significantly between different groups of the

populations. Younger workers have higher unemployment rates than older workers just as unqualified workers tend to have higher unemployment rates than qualified workers.

Inner conflicts. William Shakespeare wrote: “You take my life when you do take the means whereby I live”. Unemployment is a terrible social scourge involving the country as a whole but whose negative effects can devastate a single person. The consequences of being out of work are varied. Long-term unemployment causes some people to lose their skills, as there is an unlearning-by-not-doing effect. Some people may suffer psychological distress as well. Moreover, long-term unemployment is also associated with greater incidence of suicide. High levels of youth unemployment may cause severe damage when accompanied by a number of negative feelings such as low self-esteem and low morale, which may last for an extended period of time. Young women are generally affected by it. The long-term unemployed usually become discouraged, often lack motivation and are resigned to failure so they find it hard to look for a new job in the future. The connection between psychological suffering and motivational impairment has been successfully analysed by Robert Solow in 1995. When long-term unemployment occurs, people tend to withdraw from life, and their family life undergoes considerable stress too.

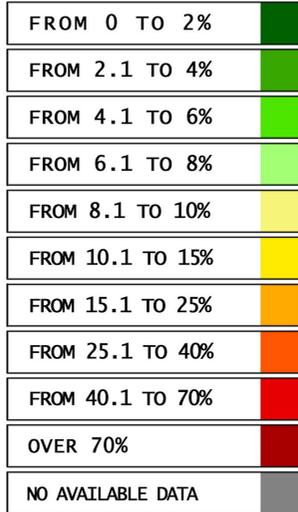
Common causes and solutions. Economists have found different explanations for unemployment. Firstly, there has been massive technological progress and robots, automation and software have replaced workers in the developed countries. Secondly, the minimum wage has an unemployment effect. In countries where National Collective Agreements have been introduced, employers cannot reduce the minimum wage as it is guaranteed by the law. This is the reason why there is a strong opposition to a statutory minimum wage in some countries. Thirdly, unemployment may be caused by the constant rate of extended unemployment benefits guaranteed to workers who become unemployed. This may discourage the unemployed from looking for a new job. Maybe the amount of the unemployment benefits should be gradually reduced and limited in time. Fourthly, employment protection policies may cause unemployment. It is unexpected, but according to economists, high employment protection is

linked to low job mobility and, therefore, to higher levels of unemployment. Since the mid-1990s, regulation of the labour market has undergone a transformation in Europe too, leading to a high flexibility. In this way, the chance of losing a job has turned to be a positive opportunity. As it is more difficult to find a job for less qualified personnel, as already mentioned, some countries have introduced training programs for unemployed people, in order to fight long-term unemployment. It is a great opportunity for people, who are not only able to improve their workforce skills, but also less likely to engage in criminal activities. Protectionism is another tactic against long-term unemployment that can give positive effects on productivity. Its purpose is to reduce as much as possible a country's imports and to promote home production of goods and services. As there are many different causes of unemployment, Governments dispose of several possible actions and solutions according to the reality of every single state.

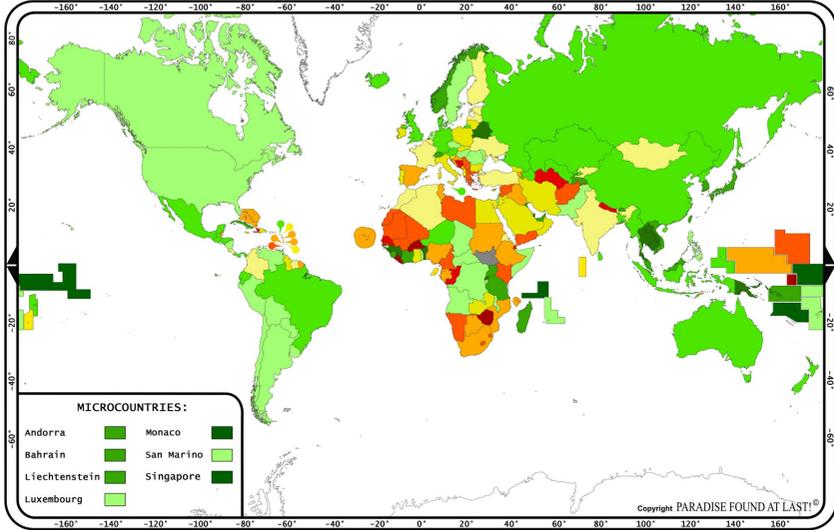
The map. Let us go back to the search of your Eden. Here you will find a map showing the unemployment rates in all the world's countries. In order to be counted as unemployed, people must be aged between 16 and 64, be able to work (but not presently working) and actively looking for a job. The *world map of unemployment* has been created using the latest data supplied by [ILO](#) and by [CIA](#). However, extreme caution should be used in interpreting the data. The map represents the actual unemployment rate, in other words, the percentage of people aged between 16 and 64 without a job, but you should also consider "underemployment". This is a phenomenon happening in many countries, which means being employed for a few hours a day and receiving a very low wage, which is insufficient to live on. Therefore, once you have checked the data referring to the countries you prefer, you should examine in depth their specific reality so that you can get a more complete picture of the labour market.

UNEMPLOYMENT

PERCENTAGE OF UNEMPLOYED POPULATION



WORLD MAP OF UNEMPLOYMENT



[Open the World map of independent states to see the names of the states](#)

Chapter 9

Inflation makes money worthless

Imagine you are standing in front of a greengrocer's and you have 10 Euros in your hands. You enter the shop and ask for 5 Kg/11 Lbs of tomatoes. Now, imagine you can travel in time and jump one year into the future. You are still in front of the same shop and you have the same amount of Euros in your hands. You enter the shop again and buy the same quantity and kind of tomatoes. However, when you leave the shop you realise you only have 4 Kg/9Lbs of tomatoes in your bag. This is inflation. Due to inflation, people become poorer and poorer and they do not even realise it! How fast does a country's currency depreciate globally? That is what you are going to learn right now.

History and correct definition of the term. The most accurate definition of what inflation exactly is, comes from the Austrian School of Economics. According to the late economist Mises, "The term inflation, as it has always been used everywhere and mostly in this country (that is Austria), refers to the increase in the coins and banknotes put into circulation and bank accounts. However, people tend to use the term inflation to speak of a specific phenomenon, which is a consequence of inflation, that is the tendency for prices and wages to go up sometimes unreasonably".

With inflation, a country's currency gradually loses its value and, consequently, its "purchasing power" falls. Too-high inflation destabilises economy; long-term inflation makes people poor and brings a whole country to its knees.

Main causes. There are many economic factors that contribute to inflation but the most important two are:

1. High and increasing levels of public debt. As a matter of fact, to

tame growing public debt and inflation, a State has to issue short-term bonds paying high interest rates. When the State has to pay back investors (original capital plus the accrued interests) on a large scale, it is obliged to put new currency into circulation over and over again and money loses its value.

2. Demand for goods and services exceeds existing supply. When production is at full capacity, firms need to pay their workers more (e.g. overtime pay) and also need to hire more workers so wages rise. Production costs may also rise when, owing to the scarcity of raw materials as their demand grows, their price increases.

Inflation in history. There were periods of great inflation in history too. While fighting the Persians, Alexander the Great (334-323 BC) took away huge quantities of precious metals from the cities he conquered and sent them to Greece, Macedonia and Epirus. This reduced the intrinsic value of the Persian Gold Daric (local currency) and the Greek Silver Drachma.

An even worse situation occurred two centuries before the fall of the Western Roman Empire, which was in 476 AD. Owing to an increase in military spending to defend the borders of the empire from barbarian attacks and to an increase in inner costs to maintain peace and integrate the new subjects to the Roman Empire, emperors were gradually forced to reduce the precious metal content in their currencies. In Modern History, the first episode of high inflation was caused by the Spanish colonisers who overexploited the gold they found in the New World. After plundering the Maya and Inca empires, they brought home enormous amounts of gold, silver and precious goods. This wealth was poured into European markets: precious goods and services were bought from other European countries to enrich the Spanish court and a lot of mercenaries were recruited to strengthen the Spanish army. All this brought high inflation to Europe. Again, after the American Independence War (1775-1783), the printing of massive amounts of paper banknotes resulted in inflation. Even today the phrase “not worth a continental”, which refers to the continental dollar (the American currency at that time), describes something of minimal value. However, the most famous, disturbing and powerful episode of widespread inflation happened shortly after the end of World War 1, during the

Weimar Republic from 1919 to 1933. The harsh reparation payments imposed against Germany by the London ultimatum led the mark to depreciate and to hyperinflation. People asked to be paid daily so they would not have their wages devalued a few days later and bought what they could at once. A wheelbarrow full of money, the equivalent of 100 billion-mark banknotes, would not even buy a loaf of bread. The cost of living index rose by 1500% from June to December in 1922. Hyperinflation and the economic stagnation of the period led to Hitler's rise to power and then to the advent of World War 2. Argentina went through hyperinflation too. At the end of the 1980s, the inflation rate was over 500% and price increases were unchecked. At present, inflation is still a major problem for Argentina, although the National Institute of Statistics and Census (INDEC) provides data which is much lower than reality.

The dynamics of inflation. Prices usually increase during the expansion phase of a business cycle and slow down during the recession period. However, historical data gathered from 1950 to 1980 shows that acceleration in prices is always higher than deceleration in recession periods. This is the reason why a continuous increase in prices of all goods and services should be expected for any country that you may consider in the long run. Economists say that a situation in which the rate of inflation is low and stable would be favourable for countries and that they should absolutely avoid inflation associated with economic stagnation or long periods of recession.

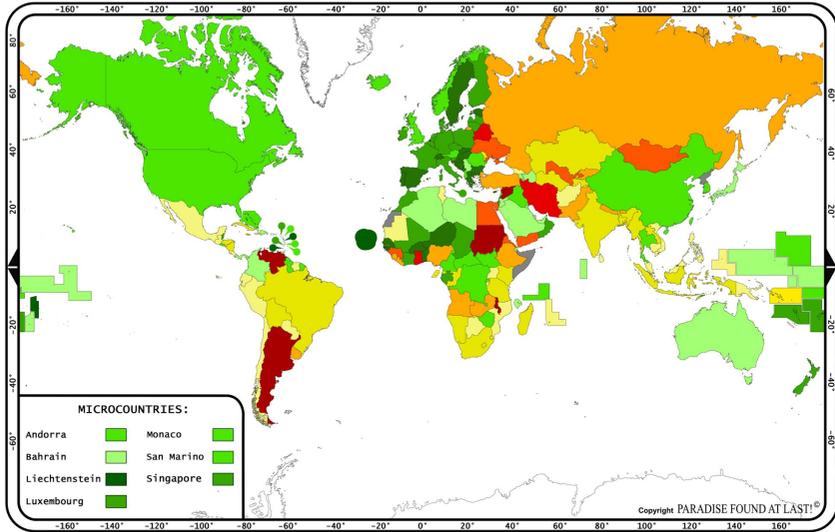
How to calculate the inflation rate. Inflation is calculated on the basis of all the goods and services consumed by all families in a country per year. They are represented by the so-called "basket". The annual increment (expressed as a percentage) of the general level of the prices in the basket is known as "inflation rate".

The map. The *world map of inflation* has been created using the data supplied by the World Bank and from the CIA. If you pay attention to this map, you can learn the annual increase or decrease in percentage of prices in every single country of the world.

INFLATION

FROM -3 TO 0%	
FROM 0.1 TO 1%	
FROM 1.1 TO 2%	
FROM 2.1 TO 3%	
FROM 3.1 TO 5%	
FROM 5.1 TO 7%	
FROM 7.1 TO 9%	
FROM 9.1 TO 13%	
FROM 13.1 TO 20%	
OVER 20%	
NO AVAILABLE DATA	

WORLD MAP OF INFLATION



[Open the World map of independent states to see the names of the states](#)

Chapter 10

Tax Burden

When in Rome, do as the Romans do. Taxes are not an exception. There is no international law fixing the taxes that each citizen has to pay. Each State decides for itself and will collect taxes in one way or another. In some countries, citizens are even forced to work only for six months a year in order to pay taxes imposed by the State. What is the tax rate in every single country? This chapter will supply you with the answer.

Nobody likes paying taxes. The word “tax” is unpleasant, together with the words tariff, levy, excise, duty and taxation. Even though there are some differences in meaning between these words, people usually dislike what they all have in common: you are obliged to give part of your money to your state or its branches. People often feel that they are treated unfairly. Sometimes they do not understand why they have to pay taxes. Many think that they are paying too much and that countries have introduced too many new taxes on too many things. They also think that people other than themselves do not pay their fair share and as a result they have to pay more. Think about the countries with high levels of tax evasion and corruption. People are bothered by that! If you complain about the tax burden imposed on you as a person, you may be right, but things should be different from a collective point of view, because the higher the taxes the higher the state revenue, which should be distributed for the well-being of the whole community. But how does a state use the money collected from taxes? Not that people would be happy to pay taxes even if they were used fairly but at least people would consider their tax system to be valid. There is a joke about taxes which dates back to the early 1970s and says: “I think that taxes should be paid with a smile. I tried to do it, but they did want money”.

Why taxes have to be paid. A country is just like a big block of flats. It is

true that nobody likes paying expenses for upkeep and management of common properties to the administrator. However, what would it be like without proper collaboration? A civilised country has got an articulate tax system. If you pay taxes, you are civil; if you do not pay them you show disrespect for others and it is considered a crime. By paying taxes, each citizen helps towards the costs for common services such as health, security, education and environment. If the tax system is fair, you pay for the good of the community, and you are part of it. Yet a lot of people think they are paying too much in taxes. Italy, for instance, is one of the countries with the highest tax rate. There is a hilarious joke about taxes nowadays in Italy. It says that the actual Government has introduced a very easy form to make a tax return, in just two stages:

1. How much do you earn?
2. Send it to us.

Unbelievable but real taxes. There are so many taxes that a doubt can come to mind: are we being made fun of by the rulers of our country? There is a tax imposed on all goods or services, and sometimes it is strange. In Italy, for example, there is a tax on the shade. If the awning of a public place sticks out and covers public property, you have to pay a tax on occupation of public property. In the USA, people have to pay a tax on tattoos instead. The Chinese Government encourages unhealthy practices in order to collect more taxes. As there is already a tax on tobacco in China, the Government has started a series of incentives to increase the consumption of cigarettes. The employees working in the Hubei province, situated in the central part of China, have been forced to consume at least 250,000 cigarette packets collectively a year in order to promote business.

Effects of global crisis. Owing to the terrible global economic crisis, fiscal revenue, that is the money collected by governments as a result of taxes, has decreased in the most developed countries of the world. This is the reason why income taxes have gone up again in many states and mostly in Europe. Not only are individuals hard hit by the taxman but also firms.

During the past 15 years, corporations enjoyed tax incentives to encourage

the economical growth but now they are going to see a tax increase to swell the state coffers. In particular, European countries are increasing corporate income tax and value-added tax (VAT) rate.

Go easy on tax. An economic analysis of the last 30 years suggests, however, that any time tax pressure is reduced, economies thrive. This is what has happened in the USA and the UK lately. New Zealand decreased taxes by 36% in 1984 and this favourably affected both growth and employment. Austria reduced taxes by 20% in 1988 and, as a result, state revenue increased by 65% and the government even balanced the budget.

Tax Haven countries. Robert Mundell, a Canadian economist who was awarded the Nobel Prize in Economics for his analysis of fiscal policy, states that not only countries compete for goods and services but also for tax policy. As a matter of fact, states with lighter tax burden attract more capital investments. Some countries have exacerbated this concept; they are the so-called “Tax Haven” countries. “Tax Haven” refers to a country offering very low tax laws for foreign business and individuals. It is a device that allows you to hide amounts of money from the authorities of your country and to remain anonymous. Large multinationals find it convenient to move to “Tax Havens” as taxes are very low or even non-existent and their banking secrecy allows tax authorities to ignore any transaction. These corporations are called “Offshore”, which literally means “at a distance from the shore or outside the country”. In the USA, during the policy of Protectionism when gambling was forbidden, some bold traders decided to open some floating gambling houses within big boats, which were kept just outside territorial waters. In this way, what was considered to be illegal became legal. Individuals may fly to “Tax Havens” too in order to evade or pay lower taxes or to elude creditors, and sometimes to avoid paying money to ex-partners when they break-up. However, “Tax Havens” also attract the business of criminals who move illegally earned income swiftly and efficiently. It is the so called “dirty money” which may come from arms or drugs trafficking.

Uncertainty among the Governments. Should “Tax Havens” be put down or kept? People should realise that what is an advantage for firms and

individuals, is a disadvantage for the state of origin. This kind of activity should be blocked from an ethical point of view, but there is a lot at stake. The turnover is impressive. This “industry” runs over 60% of the global flow of capital. If tax havens were abolished, criminal organisations would find themselves in troubles, but at the same time, several firms that act legally would have to pay more taxes and, as a result, there would be less circulation of money and that would reduce global economic development. Moreover, the major world’s Stock Exchanges would stop dealing with loads of money, even though considered to be “dirty”. Ethics finds it hard to win.

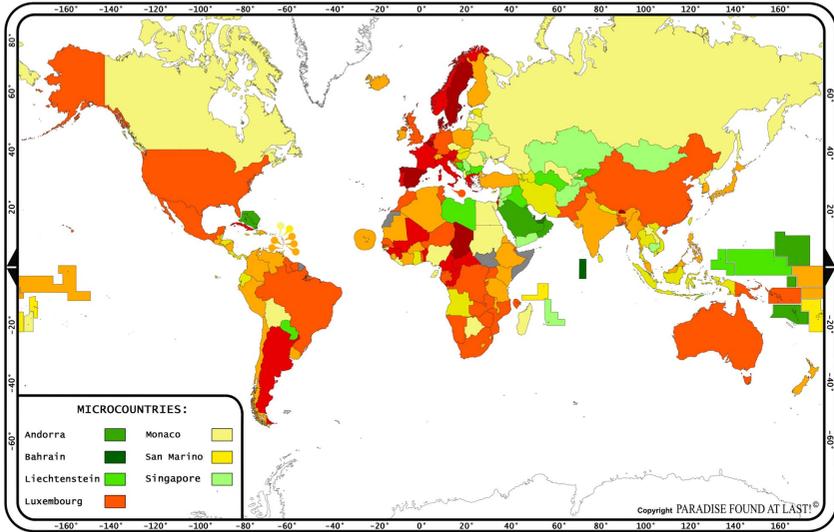
The map. This chapter points out how much citizens have to pay in taxes in every single country by means of the *world map of taxation*. Each country has been given a number, ranging from 1 to 10. 1 represents the countries where taxation is absent and 10 the places with the highest taxation in the world. In particular, three factors have been taken into account:

1. Individual Income Tax Rate, that is the percentage you pay on your wage.
2. Company Income Tax Rate, levied on the profits of a Company.
3. VAT (Value Added Tax), which is imposed on goods and services and paid by the final consumer on purchase.

TAXATION

ABSENT	
EXTREMELY LOW	
VERY LOW	
LOW	
MID-LOW	
AVERAGE	
MID-HIGH	
HIGH	
VERY HIGH	
EXTREMELY HIGH	
NO AVAILABLE DATA	

WORLD MAP OF TAXATION



[Open the World map of independent states to see the names of the states](#)

Chapter 11

Doing business overseas

An increasing number of people move overseas for business opportunities owing to the great financial crisis which has hit the Western world over the last few years. If you wish to go into business abroad, first of all you need a spirit of enterprise, a good dose of creativity, enough capital to make the initial investment but, most of all, you need the basic skills. Just like swimming. You do not start by jumping in the deep end of the pool. There is also another important question to consider before reaching out to any international market: is it easy or difficult to start up a business there? If you follow this approach, you will avoid moving to a place where paperwork may wear you out before even getting started!

A new opportunity. If you are planning to set up a business abroad but you have not decided the kind of products or services yet, we can show you some growing business markets. Just consider the fact that, nowadays, a rising number of enterprises, in their zeal to cut administrative expenses, prefer to delegate some services to outside firms, which are specialised in the job needed. Thanks to this, there is an increasing demand for advertising agencies at present. An advertising agency deals with a lot of functions including selling advertising space, promotional activities, marketing through traditional media (TV, radio, print) and through new media (websites, social networks, e-commerce, web TV). Their businesses are profitable with local websites, portals and apps (software applications for smartphones and tablets) related to specific territories, as Google AdSense and other big social networks have a global monopoly.

Other possibilities. There is also growing demand for distribution outlets, which allow you to supply customers with the top brands but at far lower prices. That is what consumers are looking for today. Outlets can sell a wide range of products so market studies and research should help you to

measure market demand and competition for your company's products and services. Another important point to consider is site location as it is critical to the success of a business. Proximity to sites that draw large crowds such as shopping centres is desirable. Moreover, the opening of a chocolate store is an emerging market. Almost everybody loves the flavour of different kinds of chocolate so such a business could be globally successful.

Those who easily succeeded. Many people have succeeded in doing business overseas, with enthusiasm and determined zeal, although work was tough. Two young Italian men named Francis and Andrew, realised that their interest in new technologies could lead them to business success. They attended a course in Communication Technologies and Marketing, where they studied creativity, discovery and innovation among other things, and then moved to Prague (Czech Republic). These two creative thinkers invented MyPrague, a successful agency combining services to customers with tourism and new ways to use technology, welcomed by the Prague City Tourism. Now it is part of the official web portal for the capital city. After creating new successful applications, at present, MyPrague runs an online magazine which, is being issued in English, Spanish and Italian, providing information and advice on how to make the best use of the opportunities Prague can offer. Besides, it runs a website specifically designed to show all the important events taking place in the city. Being a bold entrepreneur is vital when doing business abroad but remember to choose one of the countries with the best business opportunities. The Czech Republic is a good example.

Also those who found it harder. Now we are going to tell you what you may experience if you choose a country where the opportunity to do business is low. Mr Pierre Cornet-Vernet, a French chef, took almost one year to open Paradis, a confectionery store in Rio De Janeiro's Copacabana neighbourhood, in Brazil. "It's like a game." he says. "You need a document, but to get it you need to hand in other seven documents. And

for each of these seven documents there's a different demand". Mr Cornet-Vernet had to hire a lawyer and an accounting specialist in order to find his way through Brazil's bureaucracy. He also had big worries with taxes. "I sell

different kinds of sweets and each of these products is under a different tax”.

Moreover, to make things even harder and more expensive, he had to register his store and factory, which are located in the same district, as different businesses. Last, but not least, a chocolate machine he imported to double his production has been kept in customs for a long time and he does not know when it will be cleared. In Brazil, 40% of start-up businesses close within two years owing to all these regulations, laws, taxes and paperwork.

Scientific method. What you need most when you decide to do business overseas is confidence, no matter the kind of business you wish to start up. Nobody likes wasting time and money. This is the reason why we would like to supply you with some useful information so that you can identify the best countries for doing business. The World Bank Group carried out an exhaustive research on every single country and their economies, evaluating their business regulation to understand how close they are to the best global practices. Each country has been given a score. The higher the score the more efficient the business environment and the stronger the legal institutions. In fact, when you start-up a business abroad, you need the support of a transparent and well-regulated jurisdiction to protect your business and limit your risks.

The classification, created by the World Bank Group and inserted in the Doing Business Report, takes into account the following key factors:

- Efficiency of practices and strength of regulation for starting up a business;
- Quality of such regulation;
- Efficiency of bureaucracy and rules of Governance facilitating entrepreneurship;
- Best procedures, time and costs to register for starting up a business;
- Validity of the regulation regarding the development of local

entrepreneurship;

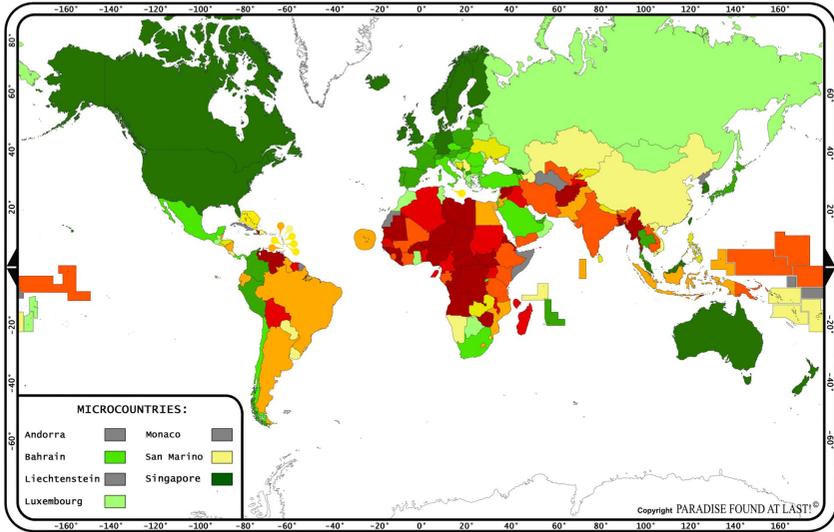
- Efficiency of regulatory processes for starting up small and medium-size businesses;
- Presence and efficiency of tax incentives;
- Presence of financial incentives, ease of dealing with construction permits, getting electricity and water connections and all the services required to start a business.

The map. The *world map ease of doing business* has been created according to all these parameters and it shows the countries where it is easier to start up and run a business. The Map is very clear: from Singapore to South Korea, you can see that more and more businesses are moving from the Western Countries to Asia. It is also important to stress that African countries have improved considerably over the last few years; however, Chad, South Sudan, Central African Republic, Libya and Eritrea were ranked as the worst countries in which to set up a business. This is the African paradox. In contrast, Tajikistan, Benin, Togo, Cote d'Ivoire, Senegal, Trinidad and Tobago, Congo Kinshasa, Azerbaijan, Ireland and United Arab Emirates are among the economies that have moved up the most in the World Bank's annual Doing Business report. All together, these 10 nations implemented 40 regulatory reforms making it easier to do business. The US is still ranked among the top 10 but it seems to be suffering from the ascent of Asia. The US has been ranked seventh but in 2006 it was ranked third and since then, it has been declining, year after year. It is worth noting that the economies ranking high in the World Bank's annual Doing Business Report are the ones in which the Governments have adopted simplified procedures improving the development of private businesses. These regulations are easy, certain and transparent.

EASE OF DOING BUSINESS

EXTREMELY HIGH	
VERY HIGH	
HIGH	
MID-HIGH	
AVERAGE	
MID-LOW	
LOW	
VERY LOW	
EXTREMELY LOW	
NULL	
NO AVAILABLE DATA	

WORLD MAP OF EASE OF DOING BUSINESS



Open the *World map of independent states* to see the names of the states

Chapter 12

Energy self-sufficiency

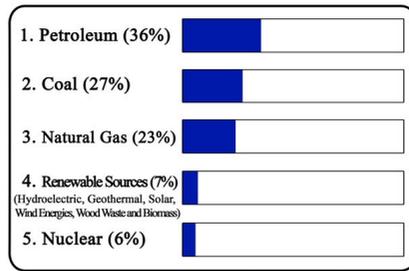
Energy is vital to all human activities: think, for example, of fishermen in Tasmania exploiting wind power to move their sailing boats, or people in towns and cities using the amount of energy released by burning fossil fuels to drive their cars. Energy is essential for a country's social and economic well-being and its great availability gives a large number of people the opportunity to live comfortable lives. Nowadays, people cannot live without battery-operated equipment using chemical energy. Over the last few decades, there has been an increase in the number of electrical household appliances that families commonly use in everyday life. As more countries develop their economies, energy demand rises: both in developed and developing countries the average family has at least a television set, a washing machine, a fridge, a dishwasher, a personal computer as well as other electrical devices. Natural gas, like methane, or coal are often used directly to heat homes. Modern economies that want to grow and improve their living standards should secure strong energy supply. Actually, the countries that are not able to meet their energy requirements usually buy energy from other states that are able to overproduce it. However, depending on other nations for energy is never positive for a country's stability. In fact, it is dangerous as it may create a permanent dependency. What happens if an energy supplier stops supplying a country? How would that country manage without the energy imports it needs? There would be socio-economic repercussions and it would wreak havoc on the country's sense of security. This is the reason why every single country should rely on their own resources to produce the energy they need and it would also be important to develop strategic planning to provide medium-term and long-term perspectives. However, it is difficult for a country to be self-sufficient in energy. In fact, a country usually consumes more energy than it produces. What are the countries that are not able to generate the energy they need? What are the countries that are totally self-sufficient in energy?

This chapter explores this topic.

Electricity: the most important energy source. Electricity is perhaps the most versatile and direct form of energy. It can be easily transported even thousands of kilometres and it can be transformed into almost every other type of energy. Electricity can very easily be converted into motion (kinetic energy) by an electric motor but it can also be turned into light or heat energy, think about light bulbs or electric heaters. This is known as Joule's law. A key limitation of electric power is that it cannot be stored. In fact, bulk electric energy storage is impossible. This is the reason why international electricity distribution networks are interconnected in order to cope with peaks in energy consumption. Currently, not only do we need electricity for its many and varied uses, but we also need fuels (mostly fossil fuels) for road transport. It will probably be different only when a new and definitive system, able to directly use electricity for vehicle propulsion, is found. It is well known that fossil fuel reserves are finite and that it is only a matter of when they run out, not if. Electricity is and will always be the most important form that human beings can use. At present, electrical energy is not found in nature and it must be manufactured. In the 19th Century, the first power plants were built when water power (hydroelectric plants) was used as primary source of energy. Then other sources followed to produce electrical energy: fossil fuels (petroleum, carbonaceous rock, natural gas), nuclear, wind, geothermal and solar energies, renewable fuels such as biogas, wood waste and biomass. Other forms of ocean energy are technically available always to generate electrical energy nowadays. They include tidal and wave energy or salinity gradient energy, which is called "reverse osmosis".

Renewable and nonrenewable sources. Some of the primary sources of energy, just mentioned above, are renewable such as the natural flow of water in rivers for hydroelectric plants or the sun's rays for solar and photovoltaic plants. In contrast, others are non-renewable and will have an end one day such as petroleum, uranium (converted to a fuel and used in nuclear power plants), natural gas and coal.

Globally today's primary sources of energy used to generate electricity are the following:



In particular:

- Petroleum.** Petroleum (commonly called “Oil”) has accompanied mankind for ages and the Greek term “*naphtha*” refers to its flammable part. Oil products were valued as weapons of war in ancient times. Homer says that “endless fireballs” were thrown against the Greek ships during the well-known Trojan War described in the Iliad. Consequently, petroleum has been known since historic times, mostly in the Middle East. Today it is the world’s major energy source, accounting for 36% of all energy consumed. What is petroleum? Petroleum forms naturally on the ocean floor and owes its origin to the decomposition of marine organisms and plants growing there. The sediments of decaying organic matter become thicker and heavier until they settle at the bottom of the ocean. As more and more sediment layers accumulate, the bottom layers experience greater pressure and temperature so the few remains of the dead organisms are broken down into simpler substances. These are made up of carbon and hydrogen which are chemicals known as hydrocarbons. Crude oil and natural gas are composed of these two elements. Oil wells can range in depth from a few tens to several thousands of metres. Most of the world’s easily accessed oil is in the Middle East, a politically unstable region. Saudi Arabia has the world’s largest oil reserves in the world, followed by Iran, Iraq, Kuwait, the United Arab Emirates (UAE), Venezuela and The Russian Federation. The possibility of having direct access to oil reserves can cause military conflicts as it happened in World War 2 (hidden agenda) and in the Gulf War (key factor). This because it is a usable energy that can be easily transported. It is one of the most important raw

materials in the world as it is used for the commonest motor vehicles (cars, trucks, trains, ships, airplanes), for a wide range of industrial chemicals and for the production of plastic. However, oil reserves are not unlimited. According to field studies carried out by petroleum engineers, oil production reached its peak in 2012 and then global oil production started to decrease. This is the Hubbert Peak Theory, developed by Marion King Hubbert, an American geologist who worked at the Shell Oil Research laboratories. This means that crude oil production has stopped growing, has flattened and has started declining since then. In other words, we have consumed one-half of the world's total known oil reserves and we have started using the second half. According to some statistics carried out by BP, the world's second largest oil company, assuming the same oil extraction rates, oil is expected to run out by 2044. According to Exxon Mobil, the world's largest oil company, oil will finish in 2050. Therefore, before running out of oil, humankind should start using other energy sources at lower costs and on a large scale. This also because plastic products cannot be degraded and when the environment cannot neutralise harmful by-products pollution means habitat destruction. Anyway, as things are, a sustained and continuous increase in crude oil prices should be expected in the short run as its price depends on the market supply and demand, just like any other goods. If its supply decreases and its demand keeps on growing, prices will inevitably go up even though sometimes crude oil price drops as a result of political maneuvering to destabilise some countries. However, in general, if oil price increases, producers rise their profits. Standard practice is that a group of producers mutually agrees to limit their production to control prices. This kind of agreement is called a cartel. OPEC is an example of it. A steady increase in prices will negatively affect global economies. Oil is used to generate electricity, to run vehicles for carrying people and goods but it is also used to plough, till and sow fields, to pump water and irrigate the land and for many other activities. As oil reserves decrease, there will be an increase in the costs of these activities.

2. **Coal.** Coal is the second global energy source representing about 27% of the total energy consumption. Coal mines are usually to be found 200 metres (656 feet) below the ground, in tunnels that are densely full of coal dust. Coal miners work in hot areas (temperature is over 30°C /86°F) and under emergency conditions. Still today, mining is one of the world's most dangerous jobs as coal produces gas that can cause explosions. More than 5000 miners die from coal mining accidents in China every year. Despite the issue of safety in coal mines, coal is a very cheap raw material as it is found in huge amounts almost everywhere in the world. This implies that there are not socio-political conflicts linked to its availability, as it happens for oil and, to some extent for natural gas. Therefore, coal is not subject to price volatility. The costs of generating electricity with coal-plants are much the same as with nuclear and cheaper than with natural gas. Global coal reserves are located in more than 100 countries; the largest coal deposits are in the USA, followed by the Russian Federation, China, Australia, India, Germany, Ukraine, Kazakhstan, South Africa and Serbia. Other countries have high reserves too. According to data supplied by the World Energy Conference, the energy that can be produced with the world's current coal reserves represents 67.5% of the total energy which may be generated with the other forms of fossil fuel reserves. It is estimated that the present coal deposits, at the current consumption rates, will last for over 150 years.
3. **Gas.** Natural gas (methane, ethane, propane, butane and pentane) is the third energy source used by mankind at present and represents 23% of total energy consumption. Natural gas, like oil and coal, comes from both land plants and water organic matter at depths beneath Earth's crust or ocean floor. Natural gas is either found mixed in oil or it is released from coal but it can also be found on its own too. It is one of the main energy source used to generate electricity in power stations and it is also widely used as a fuel for heating systems, for cars and for many other private and business purposes. Natural gas is the cleanest of all the fossil fuels but that does not make it renewable on its own. Emissions of

carbon dioxide (CO₂) released from methane are 2.5 times lower than coal. This means that it offers a lot of environmental benefits over other sources of energy, particularly other fossil fuels. The major difficulty in the use of natural gas is transportation and even though natural gas conventional pipelines are cheap, they are impractical across oceans. Moreover, it needs to be compressed and stowed on special gas ships called gas tankers, but it is expensive and creates security risks. Natural gas is also compressed and supplied in gas bottles when it is carried to rural areas without gas ducts. The main problem with natural gas is that the largest known deposits are concentrated in few countries, which are also politically instable so it is risky for countries to import it. The Russian Federation has the world's largest natural gas reserves. Other states with significant but decreasing reserves are Iran, Qatar, Saudi Arabia, Turkmenistan, United Arab Emirates (UAE), Nigeria, Venezuela, Algeria and Iraq. The positive thing is that new deposits are being discovered every year. Proven global reserves of natural gas are expected to last about 60 years at current consumption rates, but it is also estimated that, with higher investments and, as technology advances, with new methods of extracting, other deposits could be used and they could last 130 years.

4. **Renewable energy sources.** Renewable energy sources are the best energy sources and countries should concentrate on strengthening them. There are several of them and, used both individually or jointly, they appear to be the most efficient and effective solutions for sustainable development, without causing further environmental damage. Renewable resources can grow repeatedly and never run out within a person's lifespan. Moreover, the key characteristic of many renewable energy sources is that they can offer clean energy, as they do not release any toxic waste for the environment. Their use gives us hope for a brighter future as it improves the quality of life and can play an important role in the development of the so-called "green economy" revolution. Currently, they are merely considered to be alternative sources of energy for other traditional forms of fossil fuels. Just 7% of global

energy use comes from renewable energy sources, 85% of which is hydroelectric power. However, there are many other forms of renewable resources that may be properly implemented.

- **Water energy.** Beyond hydroelectric energy, which exploits the gravitational force of falling water in hydrographic basins, several techniques are being studied to generate electricity even from marine water. Marine energy uses the movement of water from tides, waves, ocean currents and also salinity gradients. Moreover, Ocean Thermal Energy Conversion (OTEC) is a process that is able to produce electricity by exploiting the difference in temperature between surface waters (usually warmer) and deep ocean water.
- **Solar Energy.** More and more people are beginning to use solar energy, which is even totally free! The energy we get from the sun's rays can be exploited in two ways: through photovoltaic systems and through solar thermal systems. Photovoltaic systems can be used on a large scale to generate electricity but they also have a big advantage – electricity can be produced on a very small scale, that is on the site where it is used. This is what is known as microgeneration or distributed generation. In fact, electricity can be generated in small domestic systems for a single home or communities to meet their needs and this allows people to save a portion of electricity which is usually lost through transmission. The European Photovoltaic Industry Association ([EPIA](#)) says that solar energy can cover 10 thousand times global energy needs. As for the so-called solar thermal systems, they use the sun directly to heat large amounts of water or other liquid for domestic or industrial heating.
- **Wind energy.** In some parts of the world, the wind speed is higher than in others. Actually, the wind speed over oceans is more than double that over land. This is the reason why Samsø, a Danish island, started a wind power

project in 1997 achieving self-sufficiency in sustainable energy within 10 years. With its 11 onshore and 10 offshore wind turbines, Samsø has become 100% powered by sustainable sources of energy. Denmark is in the forefront for this. Today it produces around 20% of its electricity by exploiting this endless source and this percentage is continually rising. Wind energy is surely a strategic sector but high wind turbines spoil the landscape, so something should be done to ensure that they could be successfully integrated into it.

- **Earth energy.** Geothermal energy is a kind of energy found under the Earth, which is concentrated in regions of high volcanic activity. It uses hot water from deep inside the earth and converts it into electric energy. Geothermal energy is the energy stored in the form of heat beneath Earth's surface (the so-called geothermal gradient), which is due to the thermal energy released from the natural decay of radioactive elements such as uranium, thorium and potassium. These are contained deep within Earth.
- **Biomass energy.** In recent years, considerable attention has been drawn on other possible energy sources developed from organic materials, which are different from fossil fuels. It is the energy that can be generated from wood waste and biomass to produce biofuels, biogas and vegetable oils. However, electricity from renewable organic materials is not an easy path to follow. Is it right to use trees to generate electricity? Today many people are buying large plots of land just to grow trees for biomass. Using organic materials for energy sounds good in theory but should we use food crops for food or fuel? Many people hope that Governments will stop financing this kind of project that does not reduce "greenhouse gas" at all (first of all carbon dioxide) with respect to other traditional non renewable energy sources.

5. **Nuclear energy.** Currently, about 400 nuclear power reactors in operation are providing 6% of the world's electricity production. It is estimated that nuclear energy costs as much as coal energy. Most nuclear power plants burn Uranium-235 as fuel in their chain reaction. This isotope is a tiny part and it is exactly present at the concentration of 0.7% in uranium, as the hardly fissile Uranium-238 is the most prevalent isotope in natural uranium. Uranium-238 is extracted through uranium mining at high costs and its reserves are clearly finite, therefore it is a non-renewable source like petroleum, coal and natural gas. Few nations have large Uranium-238 resources containing the useful isotope Uranium-235. Australia has 30% of the world's reserves, whereas Kazakhstan, ranking second, has 12%. Then there are the Russian Federation, South Africa, Canada, USA, Brazil, Namibia, Niger and Ukraine, where around 90% of total reserves are concentrated. There would be large amounts of uranium all over the world but the problem is its high extraction costs. We are running out of the much easily available resources of uranium and when extraction cost of uranium are prohibitive, it will not be profitable any more. Moreover, enrichment of uranium is needed to increase the Uranium-235 content, the fissile isotope and centrifugal processes costs a lot as well. At current consumption rates, but at increasing extraction costs, the number of years that available Uranium-235 reserves are expected to last range from 45 to 75. However, after the recent Fukushima nuclear disaster occurred in Japan in 2011, many Governments have taken action to stop building new nuclear power plants and, in the USA, energy from renewable sources exceeded nuclear energy production in that year. This is important news considering that US has traditionally supported nuclear power.

Present situation. Humanity uses a great deal of energy. World consumption of primary energy nearly doubled from 1980 to 2008. Just think that if all the energy used by mankind were turned into oil, 23,500 tons of oil would be burnt per minute today. It is worth noting that 18% of the inhabitants of our planet living in the developed countries consume half

of this energy, whereas the remaining 82% of the inhabitants of the developing countries use the other half. It is also important to point out that China and India quintupled their primary energy consumption, from 1980 to 2008; Brazil and African countries doubled theirs, whereas Europe increased its energy production by 25%. On the contrary, the countries of the Former Soviet Union decreased their energy consumption by 13% from 1992 to 2008.

Future situation. By 2040, Earth's population is expected to increase from 7 to 9 billion, and global economy is assumed to grow at an average rate of 3.5%. Consequently, there will be an ever-growing energy demand. Mobility will play a leading role. Oil consumption is projected to increase in the emerging economies mostly owing to the increasing demand in cars and trucks, whereas it is expected to decrease in the developed countries due to the progressive introduction of hybrid or electric cars. Global coal and natural gas consumption is expected to increase significantly too. Also by 2040, the renewable energy share in global energy production is estimated to grow at least by 20% mostly thanks to national and international support, which are expected to quintuple.

“Greenhouse gas” emissions are dangerous. One of the big issues facing today's energy production concerns the growing “greenhouse gas” emissions, with dramatic effects on air pollution and global warming mostly in the long run. Research carried out by Daniel Rowland at Oxford University and published in Nature Geoscience, says that if greenhouse gas emissions continue at current rates and do not decrease significantly, by 2050, global mean annual temperatures could rise from 1.4°C/35°F to 3°C/37°F compared with the 1960-90 average. Greenhouse gas emissions should be drastically stopped and renewable energy sources should be expanded. If human beings keep on producing energy using fossil fuels, the emissions of “greenhouse gas” (mostly carbon dioxide) will increase the heat in the atmosphere with increasingly worse effects. Global warming will accelerate the melting of glaciers and the frequency and severity of a variety of factors associated with drought. Global warming will lead to very dangerous climate changes. Unless we start to behave differently towards the environment, temperature could increase by 6°C/43°F and this will be a

threat to the survival of humanity.

The crux of the matter. Is this situation tolerable? Can we keep on consuming energy at our current rate? Unfortunately, the answer is not positive but there are two different possible negative answers:

- Probably not, even though 1,000 million people in the world will still be starving to death and other 2,000 million people will still be living under extreme poverty conditions, as many people unconsciously wish.
- The present situation is not tolerable, if we want all the inhabitants of our planet to live a respectable life, whatever you consider a respectable life to be.

It would be good if Chinese people could continue to use their bicycles but things have considerably changed and, as a totally clean form of energy which can be available to everybody has not yet been invented, it would be wiser if everybody could cycle not only Chinese, who use their bicycles much less nowadays. We are in a tight situation so renewable energy sources and energy saving can really help.

Working together. As for policies and measures to reduce greenhouse gas emissions in the atmosphere, it is worth praising the UK, which is working hard to cut its greenhouse gas emissions progressively, even by 80%, in the next forty years. Moreover, it has committed itself, together with other European countries, to allow the European Union to reach a reduction in greenhouse gas emissions by 20% by 2020 with respect to emission levels in 1990. The UK will help towards the success of this European project by cutting 34% of its own greenhouse gas emissions and, to be able to do this, 30% of its electricity will be produced through renewable energy sources. The production of renewable energy is a great challenge for every single state for the next decades. Renewable energy sources are the best for many reasons. Firstly, their use does not compromise natural resources for future generations as they are sources of power that quickly replenish themselves. Secondly, most renewable energy sources produce little to no global warming emissions. Thirdly, their production will reduce or cancel a

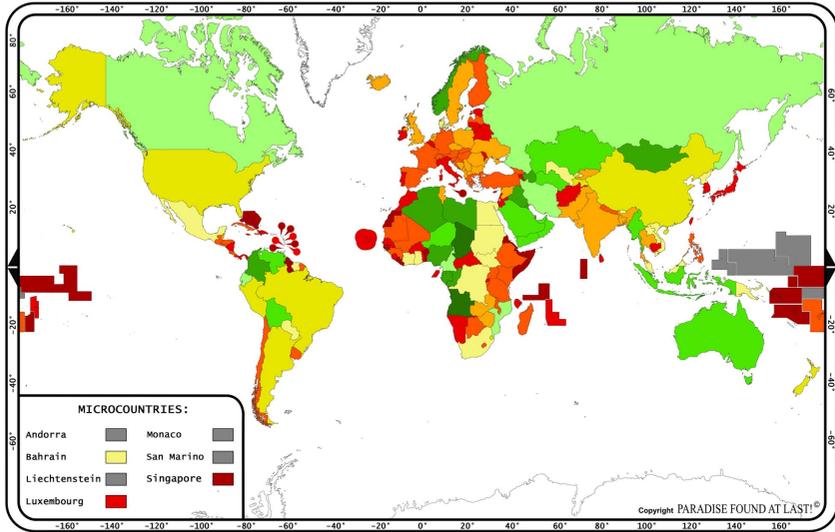
country's risky dependency on other countries for energy imports. Fourthly, their use will allow every single country to reduce the use of oil, methane, solid fluids and fissile materials. Finally, every country aims at saving energy by making a more rational use of it (passive systems and energy saving techniques) such as passive house wall systems significantly reduce air leaks. Active energy saving should be taken into account as well by monitoring energy consumption and reducing non-essential energy expenses. Reducing waste or recycling overly worn or out-of-date items can help save energy and natural resources as well. There are some intelligent energy saving behaviours that you can do at home every day. For example, you can turn the television off when not watching it. You can walk, cycle or use public means of transport more often. If you manage to reduce your energy consumption, you can contribute significantly to the country's objectives. Many people dislike this topic but it is worth dealing with things that are important in life, after all, we are human beings!

The map. Since 1980, the EIA, which stands for *Energy Information Administration* and is from the US Government, has been collecting and processing data concerning the energy that is produced and consumed around the world. Thanks to this organisation, the *world map of energy self-sufficiency* has been created. This map enables you to know to what extent, for the time being, every single state depends upon other nations for their energy supply or, on the contrary, if a state is energy self-sufficient as it manages to generate all the energy it needs. Besides, the map will also let you know the countries which, not only can be self-sufficient in energy, but also can export substantial amounts of it having energy surplus, making profits. If you are searching for an Eden with a stable economy at present and future, it will be very useful for you to know whether it is able to be self-sufficient in energy.

ENERGY SELF-SUFFICIENCY

ENERGY PRODUCTION IS 10 TIMES OVER ENERGY CONSUMPTION	
ENERGY PRODUCTION IS 4 TIMES OVER ENERGY CONSUMPTION	
ENERGY PRODUCTION IS 2 TIMES OVER ENERGY CONSUMPTION	
ENERGY PRODUCTION IS SLIGHTLY OVER ENERGY CONSUMPTION	
ENERGY INDEPENDENCE	
LIGHT DEPENDENCE ON FOREIGN ENERGY	
HIGH DEPENDENCE ON FOREIGN ENERGY	
VERY HIGH DEPENDENCE ON FOREIGN ENERGY	
EXTREMELY HIGH DEPENDENCE ON FOREIGN ENERGY	
ABSOLUTE DEPENDENCE	
NO AVAILABLE DATA	

WORLD MAP OF ENERGY SELF-SUFFICIENCY



[Open the World map of independent states to see the names of the states](#)

ON THE THIRD PART OF YOUR JOURNEY

In your body, mind and soul

Two important parts of your journey searching for your own Eden have already been accomplished. You have been through the entangled meanders of our planet and have analysed venal but essential topics on economy. Now you are about to start the third part of your journey, getting to the heart of social problems, the mix of joy and sorrow related to being part of a community. It is another way of travelling. Now you are going to walk the path of your soul, your body tingling with excitement and your mind chewing over the meaning of life. It is of a more private, thoughtful and quieter journey. It will not be an easy trip. You may feel bitter or discontent as you realise that mankind has often betrayed its social objectives and that our society is centered around issues of selfishness rather than of altruism. However, there are still some parts of the world which are free from any shade of greed and that are somehow peaceful and uncontaminated. Just follow your heart; it will be an exciting experience.

Chapter 13

War Warning!

Your own Eden is an ideal place on Earth although it is always part of this imperfect world. Many breaks of this journey will be extremely bitter but they are a must. The third part of your journey starts with a chapter which aims to show you the level of risk associated with global armed conflicts. War is the most brutal expression of mankind and represents the most disturbing sign of man's inhumanity towards man. Wars have always existed from the very beginning of mankind but they have increasingly become more violent since humans have been organising themselves politically, fragmenting into numerous nations, acquiring devastating weapons of mass destructions.

A real pacifist. Albert Einstein, who developed the two theories on Relativity (General and Restricted), experienced the terrible, fratricidal World War 1, where tens of millions of people died. The famous German scientist did not have nationalistic feelings. He was a philanthropist and hated wars. Einstein was a typical pacifist and thought that, in order to stop any war on Earth, all the states should create a supranational, judicial and legislative organisation able to settle all the conflicts that might arise among them. Each state should be obliged to respect every order issued by this authority, to invoke its decision in every controversy, to accept its judgments unreservedly and to carry out every measure it might impose on them for the execution of its decrees. Einstein wanted any conflict to be stopped at once and he thought that this was the first step towards the birth of a global government. Even though he was not a psychologist, he felt sad thinking that bad feelings come naturally to human beings and that people may take pleasure in hating or destroying other people. This disposition may lurk in the hidden recesses of our minds for long periods of time and emerge only under exceptional circumstances. However, it is quite easy to fan hatred and create a collective psychosis. This is what the ruling classes

usually do in their craving for power and together with those who have economic profits, such as manufacturers and firearm sellers. They consider war as a way to follow up their interests and strengthen their authority. Einstein did not know why the ruling class could manage to subjugate a country. His reasoning was based on indisputable truth. Cruel leaders have always attracted apparently normal people and made them favourable to the madness of war. Throughout the course of history, there have always been destructive leaders suffering from a severe personality disturbance, who managed to get the crowds to follow them through propaganda. Just think about Caligula, Nero, Genghis Khan, Tamerlane, Hitler and Stalin. Their violence was able to persuade even educated people, who loved their families and friends, to engage in horrible activities. It is well known that several officials embracing The National Socialist Ideology, who used to be really lovely people, loving husbands and fathers in their everyday life, were, at the same time, able to plan coldly the massacre of innocent people. They showed a double personality.

An exchange of letters between Einstein and Freud. In 1932, Einstein wrote a letter to Sigmund Freud, the famous Austrian psychoanalyst, considering him to be an expert in human psyche and instincts. He asked him a direct question: “Is it possible to control human mental evolution so that people are able to resist the psychoses of hate and destructiveness?”. Einstein hoped Freud would suggest some educational methods that could eliminate these obstacles. Freud answered by writing about the dynamics of human behaviour that lead to violence stressing that human instincts are of two kinds: those that conserve and unify (called “erotic instincts”) and those that destroy and kill (called “aggressive instincts”). Life and death instincts coexist in human beings. According to Freud, the studies on the human mind suggest that the tendency to aggression cannot be eliminated, but destructive behaviour can be distorted into a more acceptable and less threatening form, so that it will not culminate in feelings of war. As the destructive instinct is what drives people to kill, its opposite (erotic instinct) may be an indirect way to eliminate it. Emotional ties should involve either love and identification towards the beloved object, creating that feeling of community on which human society is founded. Finally, Freud said that any form of cultural development can help against war.

Wars again and again and again... Looking back at humanity's history, you can see a succession of violent conflicts. Some were fought by the great powers of the time, such as the Seven-Year War or the two World Wars. Others involved only a few states, like the Arab-Israeli conflict or the first Gulf War. There were also wars where only two countries participated, like the Ethiopian war. It is worth noting that not all wars are fought by national armies. In fact, there are wars where national armies fight against terrorist attacks or there may be conflicts to repress a civil war or armed struggles occurring between communities, towns or tribes. However, any war, fought for whatever reason (cultural, religious, ethnic conflicts or the control of territory or natural resources), causes immeasurable death and destruction, together with illness and horror. This is what war is and nothing more.

From the above mentioned, it can be inferred that there are different kinds of wars on Earth today. Regardless of any classification, Francois Fénelon, a French, Roman Catholic theologian, poet and writer said: "All wars are civil wars as all men are brothers".

What about good wars? You may think that the Roman occupation of the Mediterranean countries giving rise to the precious "Pax Romana", was a good thing. French Kings, who created a wealthy, large and united France, may be considered good as well. It might seem that warfare is sometimes the right way to have the eternal peace people long for. As a matter of fact, strong central governments, at least apparently, were able to create some large units within which further conflicts were made impossible. This is what some distinguished citizens think. Yet, if you consider the matter of things carefully, you will realise that wars do not usually obtain a long-lasting peace. If the units are created by force or compulsion, they will soon break up, mostly because of the insufficient cohesion of their parts. The conflicts within these apparent unifications are very often the cause of new violence. What is left of the Roman Empire that conquered territories by greater force? Just the Italic Peninsula, which is only a twentieth of its greatest extent. What is left of the French Empire, that, under Napoleon's control, conquered most of Europe? Both the Emperor and The Empire were destroyed and lasted only a short time. Even Alexander the Great's

conquests were temporary and his empire declined shortly after his death. What is built with the use of force is not based on a firm footing and cannot last long.

Peace is the only path to follow. There were also people who disliked war. The early 20th Century saw the deeds of Mohandas Karamchand Gandhi, a great man who considered violence to be a vile act. He used to say: “Victory attained by violence is tantamount to a defeat for it is momentary”. Gandhi and other people who developed a nonviolent method of social action have taught modern democracies the importance of finding peaceful solutions to any controversy that might arise between them. In the last few decades, some countries have met important goals. Now some operate in a partially demilitarised state and do not have compulsory military services but voluntary professional armies. You may ask career military officers, who earn high wages, the following question: “Is it possible to obtain peace by holding weapons in your hand? Hardly anyone is expected to say yes. So, what about eliminating the army? At present, it may seem impossible, but if you work for it, it may happen in the future”!

Costa Rica. An example to follow. Costa Rica, a country situated in Central America, abolished the army forces in 1948. This is a peaceful country, who decided to build a culture of peace. Costa Rica has been a worldwide example in turning its military expenditures into useful projects, mostly for Health and Education. Thanks to this, in spite of being still considered a developing country, it has one of the highest rates of literacy in the world and its life expectancy levels are comparable to those of developed countries. It is a model state in its geographical area. In this country, “the culture of peace” is taught at school and put into practice every day. Costa Rica’s streets, squares and monuments are not dedicated to generals of the army or to battles, but to principles that guide social life and progress. Peace Park, Democracy Square, Culture Square and Social Security Roundabout are just some examples of this kind of philosophy. Local people are proud of this choice and every country should do the same thing. The SUM association, asked some questions to Mrs Coll, a cultural attaché at the Embassy of Costa Rica. She was asked: “Nowadays, states say that you need an army in order to defend a country. How does your

country defend itself against the supposed danger of invasion?” She answered: “The fact that we don’t have an army is our strength. An army isn’t a defense but it opens the door to aggressions. All wars end with a peace agreement, but some people have to die before. It’s better a bad agreement than a good argument”. Another question: “What do young Costa Rican people think about their demilitarisation?” She answered: “Our army is formed by school teachers. They teach young people to be proud of living in a country without an army. On National Holiday’s Day, our traditional parade is made by students and not by armed forces”.

Costa Rica’s southern neighbour, the Republic of Panama, followed this example and abolished its army too. That is why the border between these states is the safest in the world.

Hope for the future. Not only did Costa Rica and Panama abolish their army and military expenses, but also Haiti made this choice and other ten countries are on the way to renounce their army. Barbados, Kiribati, Mauritius, St. Kitts and Nevis, St. Vincent and Grenadine, Tuvalu and Vanuatu together with Grenada, Dominica and St. Lucy Islands, have only metropolitan police. Solomon Islands have never had armed forces and other nine states have given up their army, even though they have a military agreement with other states, to be helped if they are in trouble. Some countries have worked and are still working on projects to create a peaceful world. In 1945, The United Nations (UN) was created, with the main aim to save succeeding generations from the scourge of war. The UN has carried out wonderful projects in order to preserve peace all over the world. There is still much to do in that direction, but it is a good starting point for a better future. Therefore, following Einstein’s thinking, mankind should create a more powerful and efficient global organization than today’s UN, with a supreme Court of Justice able to stop any kind of conflicts that may develop between countries by means of clear regulations accepted by every country.

One day, Sigmund Freud, thinking about the atrocities that a war can cause, wondered why it was not banned by the general consent of the world’s countries. We hope that it will happen sooner or later.

Reasons for today's wars. Unfortunately, today there are many wars and conflicts all around the globe: nations fighting one another but also groups fighting within the same nation. Today's most international armed conflicts are classified as civil wars, domestic or internecine warfare, and sometimes are merely considered police actions. The most dangerous and politically unstable areas, for ongoing armed conflicts or at high risk of war, are to be found in several African countries and in the Middle East. There is a good reason for that. There are many ongoing wars in the world as many countries were created by international adjudication to provide benefits to the leading world powers. Think about what has happened in Ukraine lately. The US, trying to act secretly, has planned and carried out a classic armed coup d'état, ousting the elected government by means of force and replacing it with a puppet government, of declared national-socialist ideology, exposing Europe to the danger of Nazism again. The truth is that, in any past or future war, Great Powers' economic interests always play a leading role. A lot of countries are politically instable in the world, and especially in Africa, because of their long years of colonial domination. They were just exploited by the superpowers so they did not learn how to rule themselves. Then they conquered their right to Independence but probably too suddenly; they also have high levels of corruption and extreme poverty. The Western World should have taught the former colonised developing countries how to be more self-sufficient, but it could not or even did not want to help. Consequently, Africa's poorest countries are still in a state of dereliction.

It is also important to highlight that religion causes most of the conflicts in the world at present, just as it did in the past. The 30 Years' War, The Crusades, the Arab, or more in general, Muslim conquests are just some examples. Religion has always divided and not united mankind. People have never been able to pursue tolerance and ecumenism.

Moreover, several conflicts or disorders come from social demands such as fights against poverty, against a ten-year tyranny, widespread corruption, faulty or rigged elections. Civil wars are not fought by soldiers but by "normal" people, fighting for themselves, for their extended families and for their ethnic group. They just fight for their ideals.

Currently, there is also the scourge of terrorism. More and more wars are and will be fought in its name or against it, but, remember, that any war enriches “sly” politicians. In wartime, governments use propaganda to persuade people to support the war. It means spreading ideas and opinions which are very often false, just to get people to think what that given government wants them to think. It has always been like that and it is the same today. There is always a tyrant to fight, a country to democratise. History teaches that wars are largely failures. We should not be mesmerised by those who want outbreaks of new wars so that they can make profits. Peace should be the only way to follow.

Warmongering countries through arms exports The truth is that we hope to live in peace. We want the world to be more peaceful for ourselves and for others. However, there are deceitful countries that aim at destroying the world of peace that other nations are trying to accomplish. In these warmongering countries, profit has become the most important value and capitalism is considered to be “common sense”. As the weapon trade is big business, weapons are no longer seen as an instrument to kill people, but as a way of making huge sums of money. Below you will find the top 20 weapon exporting countries. These weapons will inevitably be used in wars. No matter which.

Thanks to the SIPRI, which is the abbreviation for *Stockholm International Peace Research Institute*, a list of countries that export the greatest quantity of weapons has been produced. In many cases, these countries consider themselves as pacifists!

The 20 major warmongering arms exporting countries in the world are:

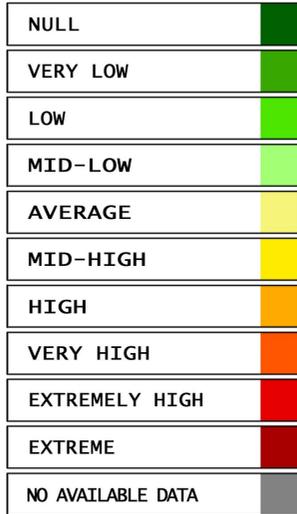
1. USA
2. The Russian Federation
3. China
4. Germany
5. France
6. United Kingdom

7. Spain
8. Italy
9. Ukraine
10. Israel
11. Sweden
12. The Netherlands
13. Canada
14. Switzerland
15. South Korea
16. Norway
17. Turkey
18. South Africa
19. Belarus
20. Australia

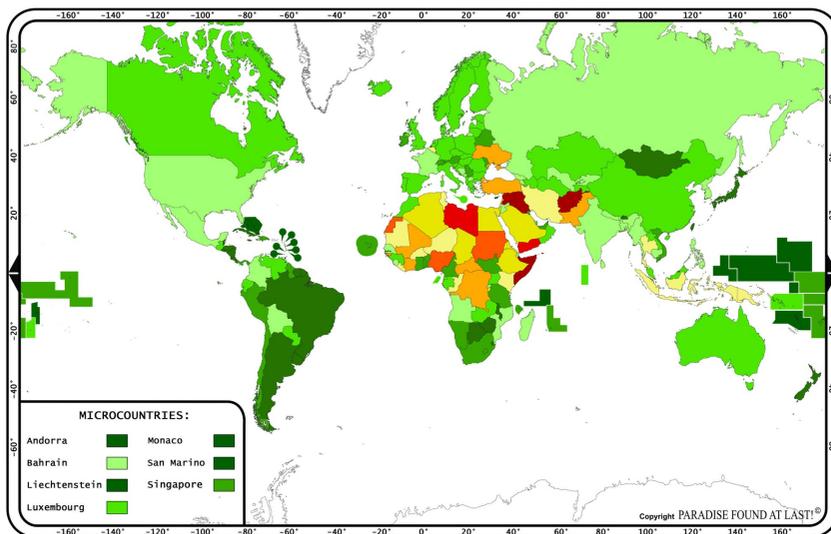
The map. Do you imagine your Eden as a place where peace reigns? Nobody would like to move to a place and find themselves in the middle of a war. This chapter aims at showing you the level of risk of armed conflicts for each single country in the world. The *world map of wars* presents a general picture related to the location of such conflicts and their degree of intensity.

WARS

RISK OF AN ARMED CONFLICT



WORLD MAP OF WARS



[Open the World map of independent states to see the names of the states](#)

Chapter 14

The world of thieves and assassins

The Bible is one of the oldest books in the world and tells the story of the most violent episode that might happen to a human family. Cain attacked Abel, through rivalry he took his anger out on his brother and killed him. This was a real crime. Then the first murder, which was archaeologically proven, happened about 50 thousand years ago during the Stone Age. The victim was a Neanderthal man, who was found in a cave in what is modern-day northeastern Iraq. He was killed with an arrow, the ones flying long distances, deep in his chest. Therefore, crime, which is one of the factors that most affects life in the Third Millennium, dates back to ancient times and it has existed since the first man appeared on earth. In modern societies, violence is so dominant that many people live with the fear of being burgled, robbed, assaulted or even murdered. Today people are living in anguish due to widespread violence and do not feel safe even when they are at home. They are frightened that the bad things they usually read in the newspaper or often see on TV might happen to them. The “bad news” include the hijacking of a scheduled flight, armed robberies, rapes and other episodes of violence. You may sense violent individuals who tend to steal and rob inhabit the entire planet. Fortunately, not everywhere things are so bad. This chapter will inform you that there are even countries where the whole society is against injustice and all forms of violence.

Areas of widespread delinquency. It is well known that criminals tend to act undisturbed in populous areas. Both misdemeanours such as housebreaking or street crime like bag snatching, and felonies are likely to occur in places with a high population of potential victims. The growth of the world’s population over the past decades is a factor that leads to the increase in crime concentration, even though it is not its main or only cause.

The criminologist. Why do people commit crimes and what is the psychology behind it? Criminal behaviour has always been studied. There are many factors that can contribute to crime. In many countries, individuals get involved in crime owing to their social background. Desperate people living below the poverty line and, most of all, without a job, are more likely to turn to crime to satisfy basic living necessities. Criminals often have a poor educational background or poor parental discipline so they tend to follow the examples of evil-doers. Sometimes they are opportunistic individuals or deprived members of society. Compulsive gambling, gambling or drug addiction, etc., are bad habits that can ruin finances, so people may be tempted to steal or commit crimes to pay their debts. In other cases, people may be obsessively looking for immediate, easy, short-term pleasure and money to satisfy their lust for power. In order to pursue their goals, they are open to commit a crime, even kill without remorse. There are also individuals who find great pleasure in committing a crime. These are compulsive behaviours belonging to psychopathic killers. Stanton Samenow, a psychologist and criminologist said: "I saw crime as being almost a normal, if not excusable, reaction to the grinding poverty, instability and despair that pervaded the criminal's lives". However, after expanding on the subject, he changed his mind. "Criminals choose to commit crimes", he concluded. "Crime is caused by the way the person thinks, not by his/her environment". He also added: "Behaviour is largely a product of thinking. Everything people do is preceded, accompanied and followed by thinking". Therefore, rather than considering criminals as victims, Samenow concluded that "They were victimisers who had freely chosen their way of life. Human beings can choose the course they want to take, even under difficult circumstances. Every day, millions of people struggle against social injustice and poverty, or they may live in dysfunctional families but they do not become criminals. Crime is within the mind of human beings and it is not caused by social conditions". This outstanding psychologist may be right, considering that, under similar circumstances, some people become criminals and some people do not. Consequently, assuming that criminals choose to commit a crime, the other part of society should prevent them from doing it, and help them to act correctly. Justified violence increases the likelihood that it will be imitated. Criminal behaviour can never be excused.

Steps to take. It is important to reduce poverty and social injustice and inequalities but, as mentioned above, this is not sufficient to fight criminality. If criminals have the seed of evil inside, it is difficult to cure them but, at least, their symptoms should be eased. Social interventions could reduce their aggressive behaviour in order to prevent criminals from further harming others. At the same time, offenders should be heavily punished and isolated from civil society, giving them what they deserve. Some governments have taken a number of measures to prevent crime and help citizens. For example, selling alcohol to anyone under the age of 18 is illegal in many countries or police patrols have been intensified but something more has to be done. The modern world needs a civil, cultural and moral regeneration so that people can be proud of their territories and cities again. It is vital to make districts more pleasant to live in and all citizens should play an active role taking part in civic and civil society. The cities with a lower violent rate usually bring considerable benefits to society through important public works, such as the reconstruction of historic buildings and the creation of social services. Moreover, clear and strong projects involving young people should be carried out to develop what is nowadays called “active” citizenship. By encouraging citizens to build a sense of community, an atmosphere of respect will be created and nobody will destroy other people’s belongings.

We are all responsible. Nowadays, violence and rudeness are quite the norm. Not a long time ago, a woman was punched to death by a young man who fled from the scene immediately. It happened in an underground station in Rome. A row had broken out between the two of them in front of the ticket-machine. A closed-circuit camera filmed the whole scene, showing ordinary people passing by and paying no attention to the woman lying on the ground dying. Nobody helped her. Unfortunately, the culprit ran away but the witnesses should be charged with failure to offer assistance. Their inaction in this case borders on criminal indifference. This kind of behaviour is unacceptable; it is passive aggression. Why this “deliberate” indifference? Fear of retaliation? Social Psychology should take this matter further. What if it happened to you? Or to someone close to you? Fortunately, there are also good citizens willing to help others who overcome negative stereotypes. Educational programs can be a powerful

tool. School and families play an essential role in preparing young people to become responsible caring adults. Many parents too often delegate the education of their children to the schools, but teachers cannot solve all of society's educational problems. However, teachers should not tolerate violent and challenging behaviour at school but should take steps towards making it bully free. Bullying is a serious problem, which can negatively impact mental health and well-being. In the United Kingdom, for example, many crimes are committed by school-aged offenders who usually take a weapon to school, such as a gun or knife. Extreme violence is a common occurrence in the USA, a country of great legal tradition, where you can easily obtain a weapon.

Murders in the world. Murder is perhaps the most serious criminal offence that can be committed. Its rate is stable over the last few years or even decreasing in many countries around the world. The exceptions are mainly some Caribbean and central-southern American countries, namely Belize, Honduras, Guatemala, Jamaica and Venezuela. In these countries, there is a significant increase in the murder rate, which is already high, and this may be due to the increase in organised criminal activities, drugs trafficking and gang violence. In Columbia, the murder rate continues to be very high, even though it is stable. Things seem to have improved a little in Ecuador and Brazil. Just to give you an idea of the gravity of the Latin-American situation, think about the fact that, only in 2005, youth gangs in El Salvador, Honduras and Guatemala killed about 15,000 people. Mexico City's Mayor, to reduce the criminal activity and violence in the district of Tepito, decided to give an Xbox videogame console to anyone surrendering a high-calibre gun (higher than 9mm) to the police. Nobody still knows whether this method can cut down violence; however, it is certain that, on this program's first day, 17 guns were handed in, preventing 17 hypothetical dangers. The situation is worrying not only in Latin America, but also in the black continent. The highest murder rates are mainly to be found in the central-southern regions of the country, where murders are committed with machetes as well.

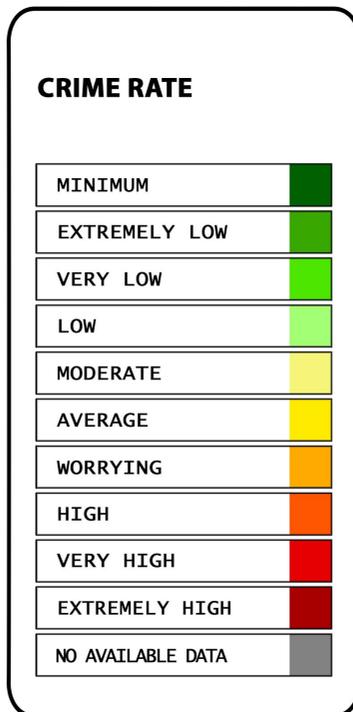
Carjacking and lightning kidnapping. Carjacking has become one of the most prevalent crimes in many parts of the world. It is the theft of a car by

means of force, violence or intimidation. It is a real nightmare for the victim, who, while driving or waiting for a red traffic light to turn green, is stopped by the attackers with an excuse and “persuaded” to give them the car keys and to walk. This crime mainly occurs in a dozen of African regions: Togo, Burkina Faso, Kenya, Burundi, Zambia, Zimbabwe, Mozambique, Malawi, South Africa, Swaziland and Lesotho. Similar episodes usually happen in Pakistan and Papua New Guinea as well as in Belize, Ecuador and Venezuela. Moreover, there has been an increase in the number of “lightning kidnapping”, a less violent kind of crime, which mainly occurs in cities and tourist locations. The victims are usually abducted at gunpoint while walking in the street, taken to an ATM and forced to withdraw the maximum daily amount of cash. The kidnapping lasts for just a few hours.

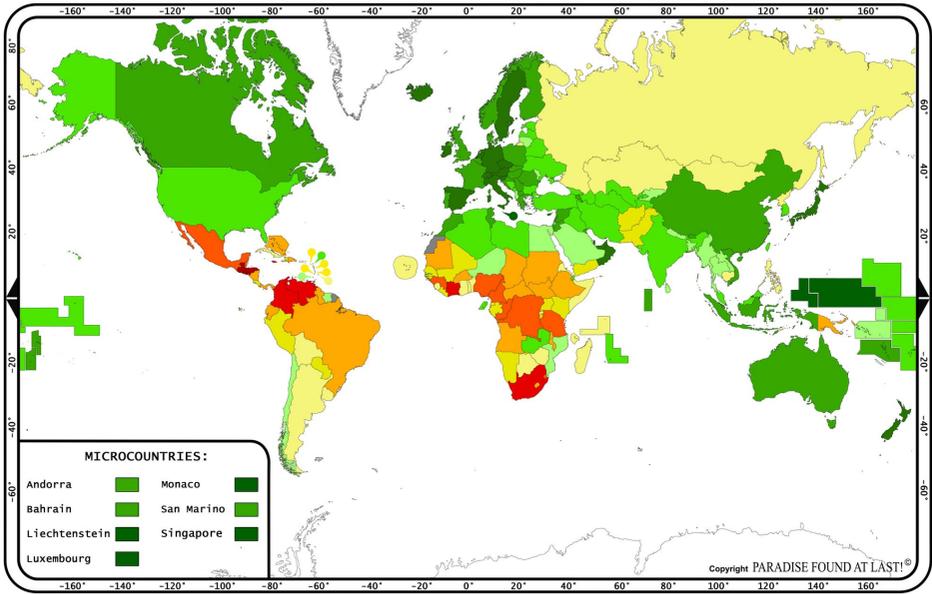
What you should not do. How can people live in such violent places and protect themselves and the people they love? Some people activate archaic instincts at an unconscious level and their fear of becoming the prey of other people make them use violence to regulate social relationships, thinking that it is an acceptable means of making things right. The logic is inexorable: more private citizens buy guns. However, it has been shown that the murder rate is higher in countries where you are allowed to buy firearms. Most murders are frequently due to a sudden bout of anger. In a fit of madness, a neighbour, a wife, a mother-in-law, or that driver honking at another driver, can be killed. At any time, if questioned about the murderer, acquaintances will say that he/she was a really good person and that he/she had never shown signs of being unbalanced before. There has been an increase in the percentage of violence in countries where firearms can be easily bought.

The map. The crimes mentioned above are not to be found in all countries. However, moving abroad without knowing the crime rate of the place you have chosen to live in would be very superficial. The *world map of criminality*, purpose-built for this book, displays the crime rate for each single country. Different types of crimes that may be committed in every country, from petty crime like bag-snatching and pick-pocketing to more serious crimes where violence may result in physical injury or even death,

have been taken into account. The percentage of crimes committed in a country is an essential element to consider when choosing your ideal place on Earth. This is the reason why accurate data has been selected to show the real crime situation in every single state. It is likely that your Earthly Paradise is a place with a low crime rate and you will easily identify the right country thanks to this map. However, if the place you have always considered your Eden were located in an area with a very high crime rate, here is some advice: move to rural areas! It seems that rural crime rates are lower than urban crime rates.



WORLD MAP OF CRIMINALITY



Open the *World map of independent states* to see the names of the states

Chapter 15

Corruption and corruptors

The climax of a political corruption trial comes when the prosecutor shouts at a witness, who is a famous politician:

“You accepted ten thousand Euro bribes to fix this case, is that not true?”

The politician looks out of the window, lost in a daydream. He seems not to have heard the question.

The prosecutor asks him the same question again, in a loud voice: “You took ten thousand Euro bribes to fix this case, is that not true?”

The politician still does not answer the question.

Then the judge turns to the politician and he says politely: “Would you mind answering the question?”

“Oh, sorry!” the politician says looking at the judge with a surprised expression. “I thought he was talking to you.”

Corruption is an evil problem and this is no laughing matter. It is like a cancer invading every branch of society. It grows irrationally and therefore has devastating consequences for the entire social fabric. It pollutes and gradually kills a state. If it is not cured, it will spread and destroy the whole economy!

A single case of bribery may seem insignificant, but widespread corruption causes more damage than an earthquake! It is a contagious negative behaviour pattern and an insidious trend. Its world generates distrust. If you live in a country where corruption levels are high, you have to come to terms with your conscience and with other people's. This chapter reveals corruption levels around the world.

Origin of the term. The term “corruption” comes from the Latin word “*corruptio*” and means “moral decay”, “the act or effect of making

somebody change from moral to immoral standard of behaviour”. Therefore, it refers to dishonest or illegal behaviour especially of people in authority in a state. As ethical principles vary from culture to culture, the set of criteria to evaluate corruption change in different social and temporal contexts. However, everybody agrees that with corruption, any society loses its sense of justice and, as a result, the concept of state does not exist. Even in those countries where corruption in public sector is widespread and part of everyday life, it should not be considered as something acceptable.

Who is to blame? Sly politicians, unscrupulous speculators, spongers on society, impostors, dishonest, uncivil and conceited people are to blame. Corruptors are usually powerful people belonging to the high sphere of a state, such as government officials or police officers. The pattern of corruption can be said to exist whenever a power-holder, who is charged with political-administrative, executive or judicial functions wants to increase his/her personal profits or social power, or needs to cover up some illegal activities or behaviours. Corruption includes either the behaviours of people misusing their powers to get money or favours and those of people receiving undue advantages by paying bribes in exchange for something very valuable. Sometimes, for the sake of peace, “ordinary” citizens are complicit in committing some abuse.

Justice should be clean and independent. Judicial organs, Administrative Tribunals and Justice itself play an important role in fighting corruption and promoting clean governance. It is essential that these institutions are integrated in a democratic system of the state they belong to. However, judicial independence is necessary so that judges might perform their functions properly. They should be able to act impartially, without considering the position or reputation of any person they may judge.

Corruption is one of the most important indicators of the well functioning of the judicial system in a country. If it is corrupt, it cannot be trusted, citizens’ rights will be denied and people obliged to live in an unstable situation.

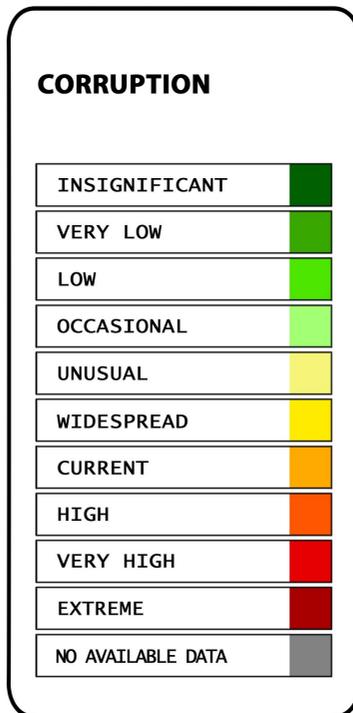
Global situation. Corruption is widespread around the world but its most

devastating effects are to be seen in the developing countries, as it is a major obstacle in the process of their economic, political and social growth. A developing country has often weaker administration and political institutions with respect to a developed country so corruption may become part of the whole system. Even though developing countries are endowed with natural resources, their economic development is poor and this is mostly due to the corruption of their ruling class. Corruption entraps entire countries, leaving millions of people in poverty. Despite some progress on anti-corruption laws over the last ten years, today's results show that more has to be done before significant improvement can be seen in the life of the poorest countries in the world.

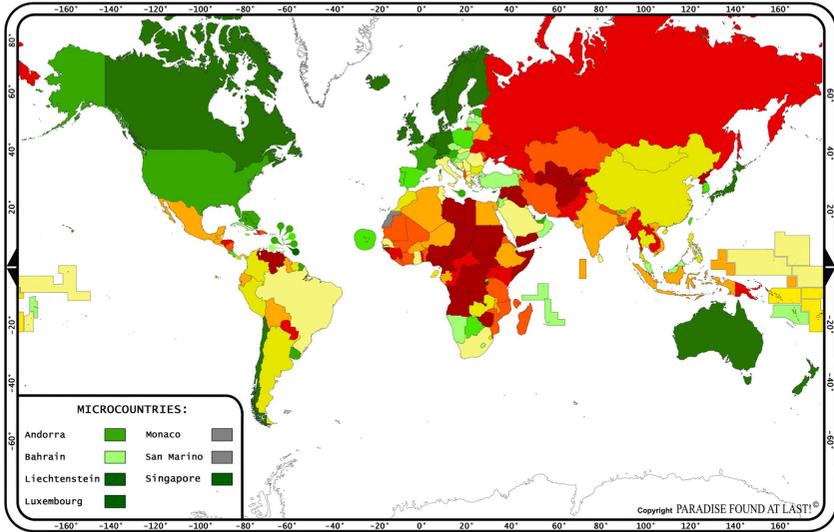
The right way to fight it. Corruption tends to lose its attractiveness when perpetrators of unethical activities are forced to leave the social circle they want to be part of. This is the reason why it is very difficult that people become engaged in corrupt acts in the most virtuous countries. Those who have been invested with powers - at any level - know that they must not go beyond certain limits. They are also well paid so as not to "fall into temptation". Moreover, people that have power in the most virtuous countries work in teams that share a common purpose. Not only team spirit can be superior to the performance of a single individual but it is also a good model to prevent individuals' acts of corruption. This is the proper way to fight it.

The map. Thanks to data collection and processing programs based on short-medium term carried out by the World Bank, it was possible to get information about the levels of corruption around the world. The *world map of corruption* has been created through the data supplied by the important "Worldwide Governance Indicator Project", showing the perceived levels of public sector corruption in every single country. Companies and private people often rely on this kind of information as well, so that they can choose the most profitable countries where corruption does not reduce the real amount of bank capital. In fact, corruption like criminality, impedes economic growth by discouraging foreign and domestic investments.

In the search for your Eden, you can then decide the maximum tolerable level of corruption. Each country has been evaluated according to corruption in public sector. The assessment ranges from “Insignificant” (minimum level of corruption), to “Extreme” (maximum level of corruption). Remember that the well functioning of justice largely depends on these indicators. Human rights are not recognised or guaranteed in non-transparent countries. Corruption is widespread in countries where legislative and judicial powers are weak.



WORLD MAP OF CORRUPTION



[Open the World map of independent states to see the names of the states](#)

Chapter 16

Starving People

Many travellers would rather see beautiful places. They love luxuriant vegetation, important monuments, satisfactory living conditions, clean towns and all mod cons. When you find yourself in places where people live in extremely dire conditions, you just cannot come to terms and are appalled. You may like to do something about it, but it is not easy. If you live and have always lived in the world's wealthiest countries, never facing malnutrition, with an abundance of food on your table that you can even afford to waste, it is hard to believe that a large portion of the global population is suffering from severe malnutrition. Many travellers, bewildered after visiting such places, and seeing human suffering and degradation, tend to complain to their travel advisors that they should have been well informed beforehand. As a matter of fact, tourist operators often do not have an intimate knowledge of the world's countries. They simply send holidaymakers to well-organised tourist haunts. However, these "artificial spaces" do not correspond to the typical life of the country where they are located.

After reading this chapter, you will be aware of the countries which are most affected by hunger and malnutrition.

Effects of malnutrition. A malnourished person lives an awful life. If the state of malnutrition is long lasting, an adult can even lose half his/her body weight. First, all fat deposits are consumed, then the muscles. Without proper nutrients, the human body becomes weak and prone to diseases and to a psychological state of depression. Aside from a shortage of food, there is also micronutrient deficiency, a lack of essential vitamins and minerals. The most common forms of micronutrient malnutrition are vitamin A, iron, zinc and iodine deficiency. This can lead to fragile bones with an increased risk of breaking them. The stomach and intestine cease working properly. The immune system is weakened and, as the capacity of the body

to fight infections is compromised, malnutrition increases the risk of infectious diseases and premature aging. These people die of hunger. Women are often weaker than men. They play an essential social and biological role in the creation and well-being of families and communities and should therefore be particularly protected. Even though they have a slenderer constitution and need less energetic diets, they need an equal or a greater amount of certain nutrients than men do so they should eat higher quality food. During pregnancy, women need about 300 extra calories a day, whereas breastfeeding women need to take in even 500 calories per day. Moreover, under-nutrition in a mother jeopardises children's survival and health. The problem of malnourished children can begin before a child is even born. Not only is it a major risk factor for child death but the micronutrient deficiency can also affect cognitive and motor development of a child, causing serious diseases such as learning disabilities, mental retardation and blindness. Children are the most visible victims of under-nutrition: this is the most critical period of their life for growth and development. Undernourished children suffer up to 160 days of illness a year and are also vulnerable to diarrhea, malaria, pneumonia and/or measles, diseases that easily lead them to death.

First, Second, Third and Fourth World. “*World Hunger*” refers to the Third World, a sort of “*no man's land*” considered off-limits to wealthy countries. These countries belong to the industrialised world, with capitalistic market economy, which is generally referred to as First World. The term Second World, refers to the communist nations, the so-called “*Real Socialism*”, basically disappearing from the scene, where production is planned by the state. As far as the Third World is concerned, it is characterised by ever-increasing poverty, national debt and population. Third world countries are not necessarily without any natural resources, but for many years, they have experienced exploitation and colonial oppression by the richest countries. Some third world regions go through extreme weather events such as droughts, floods, storms, famine and endemic diseases. Some of the Third World countries have relatively improved to the extent that the term Fourth World has been coined referring to the poorest, and underdeveloped countries in the world where no progress whatsoever has been made, and are still living in great squalor and

deprivation such as Ethiopia, Chad, Tanzania and Bangladesh. Currently it is estimated that one third of the world's population is undernourished, and a part of it is starving. In contrast, the majority of people in the wealthy western world are over-nourished. Obesity is a growing problem in developed countries. The so-called civilised world is responsible for the unequal distribution of wealth in the world. Many people throw away food that is still good enough to eat. The leftovers from restaurants, hospitals, barracks, markets and department stores could be gathered and distributed to those in need. World hunger is not an unavoidable disease.

Can you change your mind? In developed countries, public opinion often considers world hunger as a negative effect of unavoidable situations, which are typical of the poorest countries. There are usually two different kinds of attitudes: resignation and indifference or pity and charity. They both have harmful effects. Social and economic structural aspects linking the global South to the global North, colonialism and subjection are never questioned. From a geographical point of view, world hunger and underdevelopment are mostly to be found in the equatorial zone circling the Earth between the Tropic of Cancer and the Tropic of Capricorn. However, it is important to note that the Southern United States and Australia do not suffer from hunger at all, whereas some temperate areas such as Central/Southern Latin American regions are affected by hunger as much as some equatorial and tropical countries. Mankind's history teaches that several areas, which are underdeveloped today, were once very rich and the cradle of civilisation. Think about the Aztecs, Maya and Inca Empires or the Khmer Empire ruled by Angkor in Cambodia. People should think and recognise the real factors responsible for the economic backwardness of the Third World. Uninformed people may think that one of the main causes of hunger and poverty in the underdeveloped countries is the large number of babies born. Considering high birth rate as a cause of hunger is wrong. Higher population growth rates are a product of hunger, not its cause. Consider what has happened in the western world. Agriculture based economies with low-income families tend to have a large number of children. However, with economic development, birth rates gradually decline. This rule is valid for any kind of population and culture.

The real cause of undernourishment. In developed countries, a family usually spends from 20% to 25% of its monthly income on food, and the remainder is spent for clothes, transportation, housing, entertainment, hobbies and holidays. In developing countries, families spend up to 80% of total household income on food. In the industrialised world, if family income decreases, people rarely become malnourished, whereas, in the Third World, it means hunger. The World Bank carried out a survey in 2005, showing that about 1,354 billion people are living on less than \$1.25 a day. What if you had to live on a dollar a day? You would starve anywhere! Poverty, therefore, is the primary cause of world hunger and whenever the precarious balance is upset, the consequences are terrible. When poor countries are hit by wars or civil conflicts or when they are affected by natural disasters or climate changes, their already negative situation becomes tragic, with no hope for the future.

Ways to fight hunger. If poverty is the main cause of hunger, the first goal is to eliminate it so that everybody can have access to adequate food. Is it possible for our world to produce enough food for all human beings? Actually, the world produces enough food to feed everyone. Agriculture can do that, but on one condition that people “agree” to eat only cereals, legumes, vegetables, fruit and not meat. The problem is that about half of total cereal production on Earth is used for breeding animals that will then be consumed as meat, eggs and milk in developed countries. As you know, food is converted into energy by the human body and the energy contained in our food is measured in calories. One calorie of animal origin equals 7 calories of cereals. In the world, therefore, it can be estimated that there is enough vegetarian food able to supply each inhabitant of the planet with at least 2,700 calories a day. As you will see in the chapter about longevity, human beings need from 1,200 to 2,000 calories a day to live a longer and healthier life. To summarise, if the huge quantity of cereals used to breed animals were, at least, mainly given to human beings, the world’s population would be nourished.



Therefore, everybody could eat

However, just thinking that people in western countries can stop eating meat and give cereals to developing countries is a pipe dream. When western people realise that their health problems are due to their diet, something may change. As a matter of fact, people in western countries tend to consume too much sugar and high-fat food and there is growing awareness that this diet may underlie many of the typical chronic diseases that have developed in these countries, such as cardiovascular diseases, colon and rectal cancer, kidney stones, varicose veins and so on. People should change their dietary pattern both in quantity and quality. Overnutrition or undernutrition are always part of malnutrition. Undernourishment should be considered as a global problem, resulting from the unequal distribution of the resources on our planet. The problem is not that we have too little food; it is what we do with the food we have. If the world's wealth were distributed evenly, every human being would have an even share. However, the poorest countries have this big problem: the majority of poor people do not have enough money to buy food. They could work the land as food comes from the soil, but first you have to buy or rent it. Governments, therefore, either individually or collectively, should immediately carry out appropriate projects, as high mortality and disease resulting from undernutrition have short-term and long-term consequences. Just like genetic disorders, they can be passed on from parents to children.

During the latest conference held by the Food and Agricultural Organization of the United Nations (FAO), there has been a lot of talking about world hunger. Governments should make some important strategic choices. Firstly, they should invest more on agriculture. Secondly, they should develop assistance projects. Thirdly, they should stimulate those economic activities that lead to an increase in government revenue. Moreover, military, ethnical and social conflicts should be stabilised as they hinder any economic development. As for the massive amount of debt that developing countries incurred towards developed countries, it was crucial for industrialisation. Sometimes a chorus of voices request for outright debt “forgiveness”. Even partial cancellation of some debts could improve the situation.

Global numbers. Currently it is estimated that undernourished people globally are about one thousand million. If you consider that the world’s population is made up of about 7 billion people, it means that one person in seven is undernourished. Around 98% of undernourished people live in underdeveloped or developing nations. Two thirds of them live in seven countries, which are Bangladesh, China, Ethiopia, Indonesia, Pakistan, Congo Kinshasa and India. The latter, despite the economic development of some areas, has one of the highest malnutrition rates in the world. In particular, in the state of Madhya Pradesh, malnutrition is very serious. India also accounts for the highest number of people suffering from hunger in the world: more than 200 million people! This is impressive, but can be partly explained by its huge population, which counts over one billion people.

The South-American case. In 2003, the former Brazilian President Lula introduced the “Zero Hunger” project with the aim to eradicate hunger and extreme poverty in Brazil. Professor Graziano da Silva, who was a Lula’s Minister at that time and then the Head of FAO, is very satisfied with the results obtained so far. He says: “By 2025, Latin America will be the first developing continent to be “hunger-free”. This is a strong statement, but the results are encouraging indeed. He thinks that a solid political choice is essential and that governments should realise that it is better to fight hunger from an economic point of view. The cost associated with

hunger and child undernourishment ranges from 6% to 10% of the gross domestic production (GDP), whereas the cost linked to the elimination of these plagues ranges from 2% to 4% of GDP, depending on the country. This is due to the fact that malnutrition causes a series of diseases that are very expensive for a state. Therefore, they should be prevented!

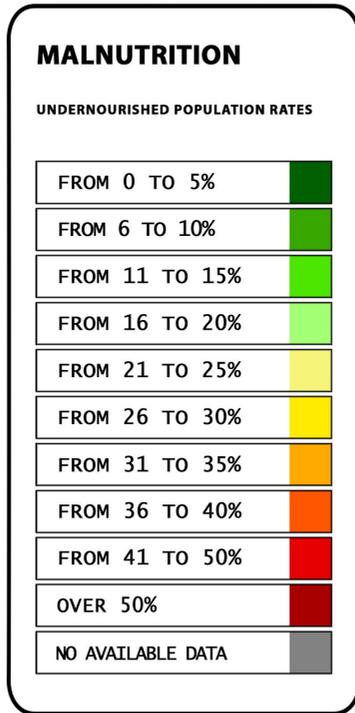
The Millennium development goals. In 2000, at the General Assembly of the United Nations (UN), all 191 member states agreed to honour specific commitments essential for human beings. The development goals articulated on that occasion were expected to be achieved by 2015. They aimed to halve poverty in the world and to reduce the inequalities that divide the world between North and South in health, food, education, access to resources, respect of human rights and to ensure sustainable development. These commitments are known as “The Millennium Development Goals”. Many of them were achieved by some countries; other countries did not even manage to achieve one of them.

Good news. In 2010, the number of undernourished people decreased for the first time over the last 15 years. It was certainly heartening news, but still far away from reaching the first of the eight Millennium goals agreement by the 191 member states of the United Nations, namely to halve malnutrition by 2015. This encouraging result was due to many factors but mostly to the power of China and India’s emerging economies. In these countries, however, the number of undernourished people is still quite high.

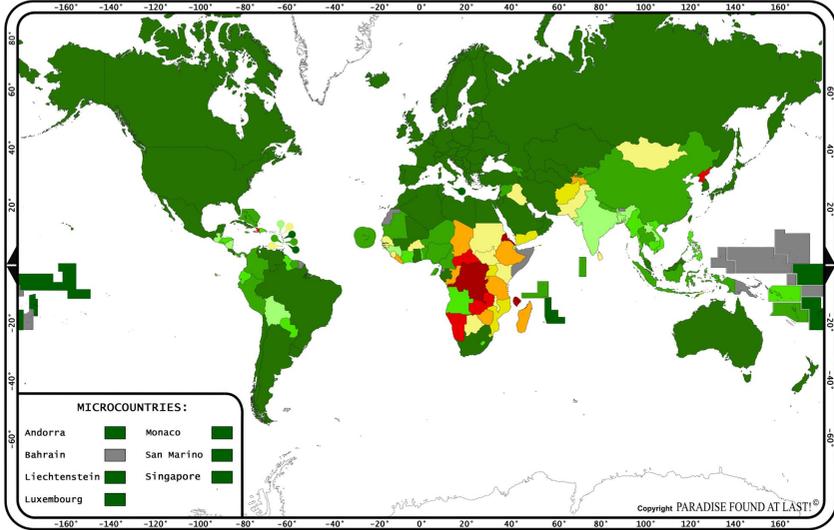
Conclusions. You are searching for your Eden on a planet where joy and sorrow interact. Everybody, as global citizens, have to take personal responsibility for their decisions and actions. Even though this is not a duty, considerations of humanity and fellowship should prevail. After visiting a far-flung country, you should not complain to your travel advisor but you should acknowledge the human degradation you have encountered and become involved. You could do some small important things to help!

The map. Thanks to the database on global malnutrition collected by the WHO, it is possible to create the *world map of malnutrition*. If you study it

Carefully, you will understand where this plague is mostly to be found. Actually, the map shows the rates of malnourished people in every single country.



WORLD MAP OF MALNUTRITION



[Open the World map of independent states to see the names of the states](#)

Chapter 17

Ungrateful country, thou shalt not possess my ashes

“Ungrateful country, thou shalt (you will) not possess my ashes”. This is the epitaph that Scipio the African, the great Roman general who defeated Hannibal, ordered to be engraved on his tomb, as he did not want his bones to go back to Rome, after his motherland had humiliated and forced him into exile.

This chapter aims at showing you the countries from which people migrate today. Sometimes people even run away from their homeland because of unacceptable living conditions.

As already mentioned, at present there are around 7 billion people on Earth. If the world’s population were reduced to a village of 1,000 inhabitants with all races the same size in relation to each other as they are today, the village would look something like the following:

- 605 Asians
- 140 Africans
- 135 Americans
- 115 Europeans
- 5 inhabitants of Oceania.

As you can see, the great majority of the 7 billion inhabitants of the planet are made up of Asians. The United Nation Population Fund ([UNFPA](#)) estimated that world’s population will be 8 billion in 2025 and that, at current rates, it will cross the threshold of 9 billion in 2040. The world’s population has an explosive growth but not everywhere. Some countries,

especially in Central and Eastern Europe, have a declining population as the birth rate has fallen below the death rate. On the contrary, in South African regions, a decrease in population is the result of the high number of deaths due to HIV. There is also a reduction in the number of Russian citizens and Japan is expected to decrease its population in the next ten years. Most demographers say that the world's population will peak to 9 billion and then, starting from 2040, it will gradually decrease owing to the general practice of birth control. It has always been a difficult task to monitor the growth or the reduction of the global population, as people have often left their countries of origin and moved into other countries searching for new and better places to settle and raise their children. Migration has been a constant factor in the history of mankind, as it is today and will always be.

Main reasons for migrating. Sometimes migration affects entire populations who are forced to leave their homeland due to wars or to political, racial or religious conflicts. In this case, they are referred to as displaced peoples and when they are accepted elsewhere, they are called refugees. There may be cases where an entire population decides to migrate because of a sudden impact, such as an earthquake, a flood, protracted drought or a severe demographic phenomenon resulting in famine. People, however, usually migrate as they are not satisfied with their place of origin. They often follow a particular career path, especially young men who leave for a better quality of life.

It is important to know that the great majority of those moving to other countries have higher levels of education, the so-called "brain drain migration". Statistics show that just a small part of emigrants is illiterate and with poor education. Therefore, those who tend to look down on immigrants should reason on that. You could be living in a country where many discontented workers move abroad for better opportunities.

Positive and negative migration. Overseas labour force can be positive both for the economies of the countries of destination and for the countries of origin. As a matter of fact, some production sectors in immigration countries are highly dependent on foreign labour. As for the country of

origin, there are two advantages. Firstly, foreign workers can send money back to their homeland. This is a very important source of income for the developing countries. Actually, that was estimated an amount of about \$414 billion in 2009. The main countries receiving workers' remittances are India, China, Mexico, The Philippines and Poland. Secondly, overseas workers acquire professional skills they could never obtain in their homeland and when (or if!) they go back to their country of origin, they will be able to find better jobs. In contrast, when the flow of migrants is excessive, there are disadvantages for the countries involved. On the one hand, there will be social and labour market problems in the country of destination as there will be a flourishing black market and exploitation. Consequently, conflicts with local workers are likely to occur, which may even degenerate into armed conflicts. On the other hand, in the country of origin, there will be a lack in the supply of young and skilled labour force, which will hinder social and economic growth.

Accept or Refuse? When large and continuous flows of immigrants occur, the governments of the receiving countries have the difficult task to decide whether they will continue to accept these people unconditionally or whether they will take actions to repatriate them. A state, which is willing to accept immigrants, has also the responsibility to ensure that they will be integrated, and this is never an easy task. What is important to understand, is that immigrants are simply and naturally in need of living in a new country as well as of keeping their culture and traditions. Immigrants should bear in mind that the receiving country has its own laws, ways and customs that they should respect and accept. On the other hand, immigrants should be granted equality of rights with regard to work, education, family, and respect for their culture and religion. Everybody's rights must be respected. National laws must always prevail on the traditions of the country of origin. These are basic human rights. Our planet has become a global village and rights and duties must be equally divided!

Illegal immigration. The reality of the world today is that many more countries drastically reduce or refuse admission to immigrants than countries that do not restrict legal immigration. Either rich or poor

countries may decide not to accept immigrants. Actually, there are a number of wealthy states that are able to accept immigrants but they do not want to. In both cases, the frontiers are closed.

Barriers to the free movement of citizens have always caused troubles in the end. Before placing strong restrictions on the free circulation of people between northern Africa and France, it was easy for individuals to move to and from those countries, so migrant flows could balance each other. People would leave to find a job and would go back to their homeland when appropriate conditions occur. However, in the late 1970s, customs barriers were closed in North Africa so that people could not migrate to France. Unexpectedly an opposite effect occurred. People were in urgent need to leave so they migrated to France all the same, but as they feared not to be able to go back to their beloved, they moved with their entire families!

Another important thing to take into account is that when a country bans immigration, people have no option but to become “illegal immigrants” and this has serious challenges and dangers. They often run the risk of dying. Once they are in a new country, they find it difficult to find a regular job and accommodation. Therefore, they are often taken advantage of by the people they work for or they are forced to accept illegal jobs and live in terrible conditions. This is the reason why there is a strong relationship between illegal immigrants and criminal organisations.

Effects of migrations. Migration has always been a part of the human experience and has been an important way for people to survive. People have migrated to settle continents. The primitive races of mankind started migrating to search for land that is more fertile or to hunt more wild animals and birds. The first Homo sapiens originated in Africa but then moved around the world. Then people continued to migrate throughout history and sometimes with great intensity. Think about the Greeks, who colonised southern Italy or the Romans, who conquered great part of Europe, or again, the Barbarians, who settled in central-northern Europe coming from Asia.

Europeans, on their part, started migrating since 1500, namely, after the

great geographical discoveries. They occupied the American continent, making their first settlements on the coasts, then advancing to the mainland and heading west, reaching the Pacific Ocean and then the Far West, for the so-called “gold rush”.

Afterwards, the second half of the 19th century saw explosive growth in the European population associated with shortage of food due to a great famine that broke out in some states. As a result, people moved to look for jobs and a better life. It was such a massive migration phenomenon where the European population spread out over entire continents and settled in North and South America, Australia and New Zealand. It was estimated that a total of 60 million people migrated from Europe. Moreover, the industrial revolution, which happened at different times in the single European countries, generated migratory movements within the continent itself. Entire communities migrated from pre-industrial areas to industrialised regions. In particular, some strong migration originated from Italy, Spain, Austria, Hungary and Poland, heading mainly towards France, Germany, Belgium and Switzerland. After World War II, the situation changed completely. Some states were in great need of overseas workers like Germany, so there was a gradual increase in flows of migrants even coming from remote parts of the world, mostly from Turkey. On the contrary, Gorbachev’s policy of “*perestrojka*” (meaning restructuring) program launched in the former Soviet Union, the Eastern Bloc collapse and the fall of the Berlin Wall, caused a series of conflicts. The most important were those in the former Soviet Union, Yugoslavia and Czechoslovakia, in Poland and in Albania. All these conflicts triggered a significant flow of migration heading towards the western European countries and mostly, as usual, towards Germany. These flows were partly motivated by personal aspirations to improve people’s economic conditions, but they were mainly caused by the need to escape from violent ethnic conflicts.

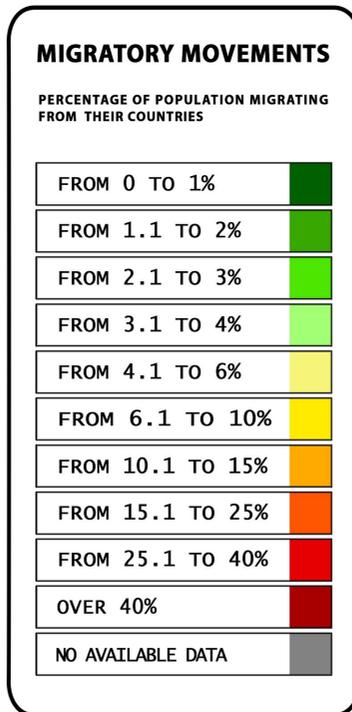
Refugees. Refugees are those who are forced to leave their homeland owing to wars, violence and persecutions and they need to be taken into special account. These destitute and oppressed people especially deserve help so that they can be allowed to leave their country of origin and find great hospitality in a new land. Their condition is taken into great consideration

internationally even though it is difficult to deal with. When refugee migrations take place, they tend to cause big problems and tension to the receiving countries. There are usually mass exodus' numbering into hundreds of thousands of refugees. Trouble is likely to occur when the receiving country is a poor nation as it will not be able to manage the situation on its own. Currently, there are a total of 15 million refugees and most of them are given hospitality by the southern states of the planet. The United Nations High Commissioner for Refugees (UNHCR) is one of the international organisations providing these homeless people with protection. As a matter of fact, international organisations always attempt to encourage Governments to prioritise human rights as part of their foreign policy, in particular towards refugees. Unfortunately, these efforts tend to be ignored and not all Governments are willing to implement concrete proposals.

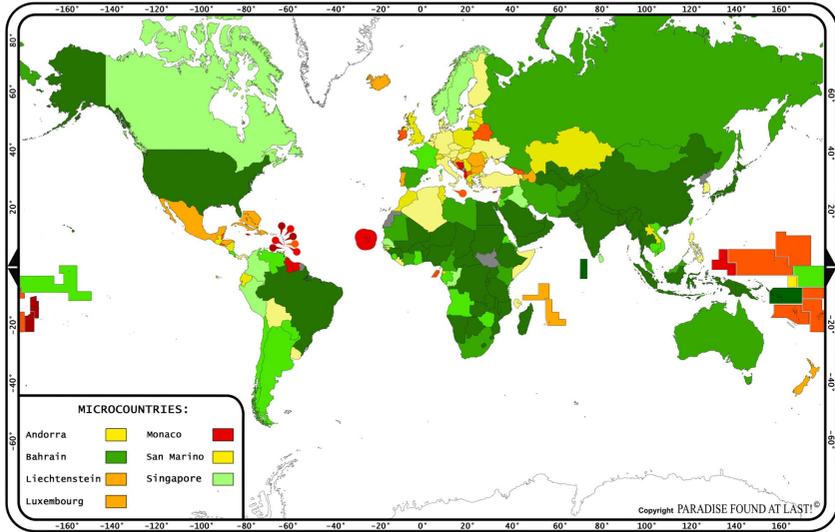
Where flows of migrants prevail currently. It may seem strange but most migrant flows from developing countries do not head towards northern developed countries, but towards other developing countries or to newly industrialised countries. This is where major tensions are to be found. If we use the term "*North*" to refer to developed countries and the term "*South*" to refer to developing countries, we can say that one third of global migrants move from North towards North, one third move from South to South and one third from South to North. Asian and African migration flows, which started in the late decades of the 20thC, heading both towards European countries and towards North America and Australia, are increasing. These migrants are mainly looking for a job. Another very active migration flow comes from North Africa; thousands of people are moving towards Europe owing to religious and civil conflicts. Moreover, there is a constant flow of migrants from the poorest countries of Eastern Europe towards the most developed ones in Western Europe. Finally, it is important to state that people tend to leave mostly from islands, which many consider to be paradise. The percentage of island population migrating is over 40%.

The map. At present, the total population of migrants across the world is 215 million people, including voluntary or forced migration. This figure

may appear to be low if you compare it with the total global population, which is around 7 billion. However, as migrants tend to move to a relatively low number of destinations, they represent a quite high percentage of the population of every single receiving country. By carefully consulting the *world map of migratory movements*, it is possible to understand from what countries migrants tend to leave most. The map shows the percentage of population migrating from their countries.



WORLD MAP OF MIGRATORY MOVEMENTS



[Open the World map of independent states to see the names of the states](#)

Chapter 18

Male and Female smokers

Smoking is one of the oldest and commonest social habits. It is a vice which is rather widespread but not uniformly distributed worldwide. Subsequently, alcohol consumption and drug abuse will be examined. These are all deep-seated habits which are harmful for your health and have negative social implications. If you do not smoke, you may choose countries with the lowest smoking rates. If you do smoke, you may choose a place where people, like you, love this unhealthy bad habit.

Changes of habits. “Smoking or non-smoking?”. This was the question you were asked when booking your seats on a flight when smoking was still allowed in public places. From the second half of the 1990s, smoking on planes became much more difficult, and today it is completely forbidden. The old question has been replaced with the following: “Window or aisle?” Smokers are not allowed to smoke inside public places in an increasing number of countries. Moreover, some countries, like the USA, have several hotel rooms for non-smokers only. There are also countries or regions where smoking is not even allowed in some outdoor areas such as stadiums, beaches or specific zones in public gardens. These smoking restrictions have surely increased the number of smokers who have quit. Many smokers, however, find it hard to give up smoking because of the physical addiction to nicotine.

Some of the History of Tobacco. When and how did smoking start? We know that the Bronze Age was a smoking culture, as some smoking pipes were found on archaeological sites dating back to that period. Smoking has its origin in magical rites for propitiatory purposes. Mankind used to communicate with mystical beings in an altered state of consciousness brought on by smoking. The Aztecs had rites and ceremonies where smoking was also involved. As a matter of fact, high priests used to inhale

smoke from herbal mixtures through a pipe, exploiting their stimulant power to produce altered awareness. However, the history of tobacco is officially associated with the discovery of America. After the second voyage of Christopher Columbus, Roman Pace, who was a monk, decided to stay in Haiti and started observing and describing Indians who were accustomed to smoking the leaves of the tobacco plant. Subsequently, Jean Nicot, the French Ambassador to Portugal, sent the leaves and the seeds of this plant to the French Court. King Francis I and Queen Catherine de Medici of France named the plant “Nicotine herb” after the Ambassador’s name to express their gratitude. He told them the excellent therapeutic properties of tobacco and promoted it as a cure for asthma and other respiratory system diseases (Yes, it is true!), ulcers and sores. Tobacco was also extolled as a very effectual remedy for snake bites, colds, headaches, and even the plague. Since then, the use of tobacco use has rapidly spread throughout Europe. There were some, though, who protested against this new trend. The first real enemy of tobacco was King James I of England who understood that smoking was both dangerous to human health and a vulgar habit. He promulgated a rule which prohibited smoking and imposed a heavy tax on tobacco cultivation. The rulers of other states such as Russia, Persia and Turkey tried to solve the problem by mutilating or by sentencing tobacco users to death. When French doctors realised that smoking was a harmful vice, governments had already monopolised tobacco and it had become a business. It was too late to eliminate it. As it very often happens even today, big political-economic interests may clash with the well-being of ordinary people, but the former usually prevail over the latter. After the Crimean War, tobacco consumption received an enormous boost. The popularity of pipe smoking declined as a pipe was not ideal for trench conditions whereas cigarettes were much more convenient when a soldier may have had to move at a moment’s notice. The world of tobacco, therefore, dramatically changed in 1856, when war veterans went back home with hand-rolled cigarettes made by Muslim soldiers. Cigarette smoking rapidly spread throughout Europe whereas pipe smoking, snuffing and chewing tobacco became less popular. During the two World Wars smoking became more popular than ever before, because tobacco companies began advertising beautiful women and famous actors with a cigarette in their hands. The first scientific studies on smoke toxicity started in the early 1990s, and in England, a law prohibiting the sale of tobacco to anyone under the age of

16 had already come into force. At the end of World War II, there was scientific evidence that smokers were more likely to develop lung cancer than non-smokers. In the first two decades of the 20th century, the connection between smoking and cardiovascular diseases had already been shown. Over the last few years, there have been many issues both against the tobacco industry and smokers due to the health risks associated with smoking (even passive smoking) and several diseases affecting various organs of the human body. Many legal actions have been taken against cigarette companies, which have been ordered to pay billions of dollars in damage. Moreover, severe laws have been passed to reduce the effects of passive smoking.

Some figures. There are around 1,3 billion heavy smokers in the world. Men smokers are about 1 billion; the rest is made up by women, most of whom live in countries with high standards of living. However, while in developed countries the number of smokers is decreasing, it is increasing in developing countries, where tobacco consumption has increased by 67% since 1970. Moreover, China is increasingly a target market for multinational tobacco companies, where 300 million smokers consume 1,880 billion cigarettes a year. Nowadays, more than one smoker in four is Chinese in the world, with a constantly rising number of habitual smokers in that country.

The harmful effects of smoking. Smoking can seriously damage your health. Quitting gradually reduces the risk of developing smoking-related diseases and ten years after quitting smoking your risk of lung cancer is similar to that of those who have never smoked. As a matter of fact, lung cancer is mainly associated with smoking. It is estimated that the risk of dying from lung cancer is 22 times higher among men smokers and about 12 times higher among women smokers, in comparison to non-smokers. However, cigarette smoking also raises the risk of many other kinds of cancers such as cancer of the lips, oral cavity, pharynx, larynx, oesophagus, pancreas, cervix, urinary system and kidney. According to WHO, smoking is the primary cause of easily preventable death, which is globally responsible for the death of 5 million people. Some German research regarding the effects of banning smoking in public areas revealed that within a year of a

partial ban on smoking in some public areas in Germany, hospital admissions for angina pectoris and heart attack decreased by 13% and by 8% respectively.

Recreational Drug. The desire for smoking is linked to the feelings of pleasure and relaxation that a cigarette produces. Yet tobacco is highly addictive, particularly when smoked. How long does it take from the first puff of a cigarette to experience the symptoms of nicotine addiction? Some Canadian research showed that many smokers already inhale tobacco deep into their lungs and smoke the cigarette to the filter tip within the first three months. Within five months at the most, several smokers feel the urgent need to light up another cigarette. After 18 months, people become regular, daily smokers and find it hard not to smoke for even a day.

Smoking films. Smoking scenes in films are the most successful advertising for cigarette companies. It all started in the 1930s, 40s and 50s, when American tobacco companies were afraid of losing customers due to studies on lung cancer. Hollywood stars such as Clark Gable, Gary Cooper, Spencer Tracy, Cary Grant, John Wayne, Humphrey Bogart, and many others were paid to be involved in hidden advertising for cigarette promotion. They were paid fortunes to play their part with a cigarette on their lips. Actresses were sensual and sexy holding a cigarette and actors adopted virile poses while smoking on the screen. The cinema audiences were smoking too and often the same brands of cigarettes, imitating the actors' behaviour. This form of hidden advertising is still present today and its psychological aspect is powerful. Smoking scenes in films nullify any anti-smoking campaign highlighting the harmful effects of tobacco. The main characters in a film do not die of lung cancer or cardiovascular diseases.

Glitzy Packaging. Nowadays, new cigarette packets, which have lighter colours, distinctive drawings and words like "smooth" or "light" written on them, have been put on the market in order to attract new consumers, and mostly new female smokers. Tobacco companies endeavour to give their cigarettes a new brand imagery so that some cigarettes can be considered less harmful than others purely on the basis of packaging. Many smokers

are misled by colours and pack design into thinking that they may choose “safer” cigarettes. However, all cigarette brands are harmful. Although advertising restrictions increase, tobacco companies view packaging as an important element in cigarette marketing which is a sort of lofty advertisement that has always been associated with smoking, considered as a symbol of social freedom.

Giving up smoking. A practical way to give up smoking painlessly does not exist. Whether you like it or not, smokers have a double addiction. First of all, regular use of tobacco leads to a physical addiction caused by some substances in it, mostly nicotine. Second, there is also a psychological dependence linked to the ritual of obtaining, handling, lighting and smoking a cigarette and to the feeling that it is of great benefit in stressful situations. It goes without saying that willingness and strength are essential for quitting. However, some people have a genetic predisposition to this bad habit, so they may find it more difficult to stop smoking.

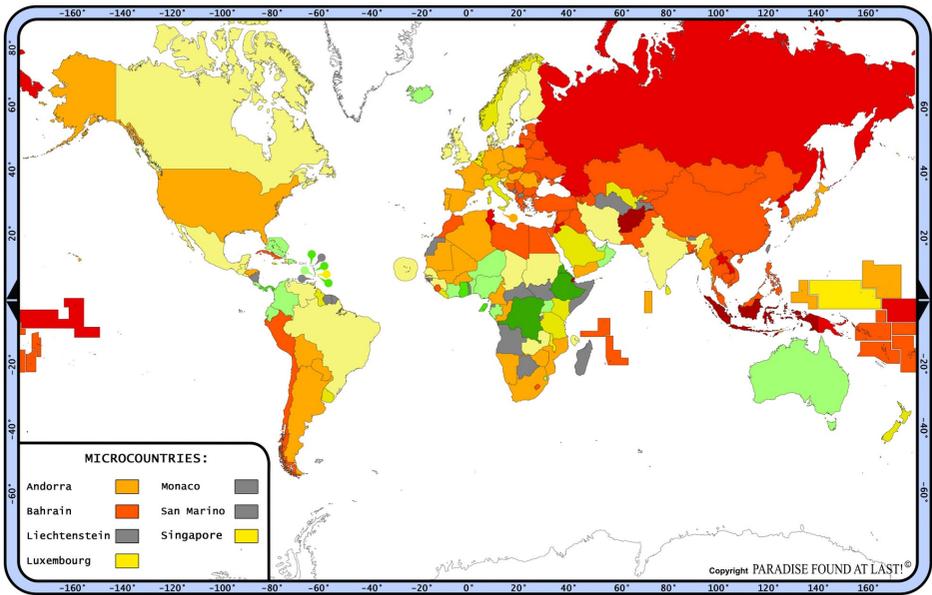
The map. Smokers make up a minority in the world. Actually, they have always been, even though in recent times the percentage of smokers has declined. Presently, there are 1,3 billion smokers out of a total of around 7 billion people. Male smokers are 1 billion but there is a gradual increase in female smokers in many countries, as a mistaken sign of emancipation. The data supplied by WHO has allowed us to create a double map; the data is separately shown for men and women. The *world map of male smokers* and the *world map of female smokers* show the percentages of adult males and females who regularly smoke. Non-smoking readers may appreciate low smoking rate areas. In contrast, “confirmed” smokers, who want to smoke in their earthly Paradise, may prefer the highest smoking rate areas “just to be in good company”. Everybody is free to choose as they like.

MALE SMOKERS

CIGARETTE, CIGAR AND PIPE
SMOKING RATES IN MALE POPULATION
AGED 16 AND OVER

FROM 0 TO 5%	
FROM 6 TO 10%	
FROM 11 TO 15%	
FROM 16 TO 20%	
FROM 21 TO 25%	
FROM 26 TO 30%	
FROM 31 TO 40%	
FROM 41 TO 55%	
FROM 56 TO 70%	
OVER 70%	
NO AVAILABLE DATA	

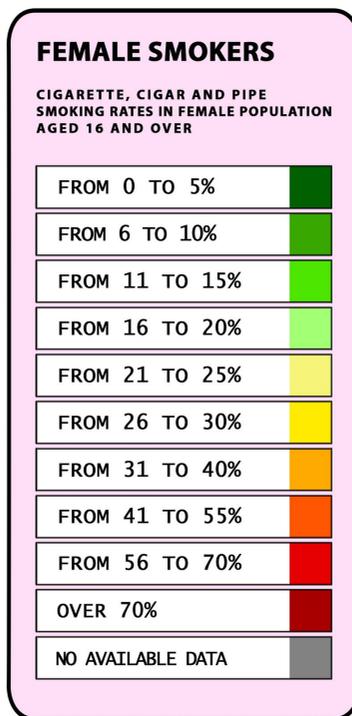
WORLD MAP OF MALE SMOKERS



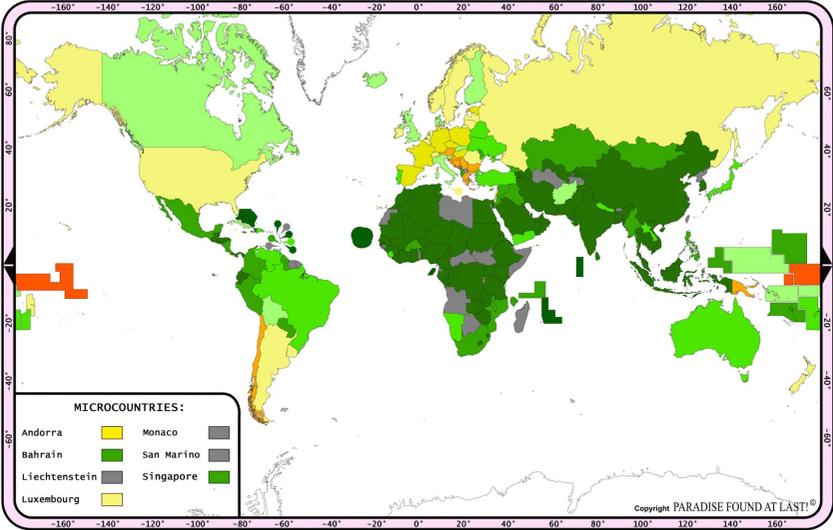
Open the *World map of independent states* to see the names of the states

There is a gradual increase in female smokers in many countries, maybe as a mistaken sign of emancipation.

In the past, women could not smoke as smoking was considered to be an improper habit. Then, as they got the chance to do so, the percentage of female smokers has consistently increased. Although fewer women smoke in comparison to men, their smoking rates are approaching that of male smokers.



WORLD MAP OF FEMALE SMOKERS



[Open the World map of independent states to see the names of the states](#)

Chapter 19

Nasdrovie, Prosit, Cheers!

In many states, alcohol abuse is such a widespread phenomenon that it seems to be a normal part of everyday life. These countries have high death rates from cirrhosis of the liver, to drink-drive deaths and to domestic violence. Alcoholism has a very strong social impact even affecting non-drinkers. Nations that suffer from heavy alcohol use are about fifteen in all. Here the majority of people, both men and women, are addicted. Alcohol influences their existence. These people could probably do good things for their countries if they were sober.

How alcohol affects the body. A glass of wine on the table. You hold it to your nose, sniff it, and then raise it to your lips. Some sips and the glass is empty. When you drink wine, beer or other alcoholic drinks, small amounts of alcohol are rapidly absorbed in the mouth. Most of the remaining alcohol enters the stomach and small intestine, where small blood vessels carry it to the bloodstream. Then it flows throughout the body and reaches the liver, where it is metabolised. Alcohol is the general name for ethanol, also called ethyl alcohol. As it avoids the digestive process in the stomach and intestine, the liver, whose main function is to purify blood, is the main organ where alcohol is broken down. The liver takes about two hours to process the amount of alcohol contained in a standard glass of wine that is 150 ml/5.07oz, as the rate per hour is about 15gr/0.5ounce. Whenever alcohol consumption proceeds at a faster rate than it is metabolised, alcohol accumulates in the body, causing cells to shrink and may even cross the hematoencephalic barrier. The hematoencephalic barrier was discovered about 100 years ago, when scientific evidence showed that if blue dye was injected into the bloodstream of an animal, all its tissues, except the brain and the spinal cord, would turn blue. Therefore, it was thought that a blood-brain-barrier existed, which prevented the dye from entering the brain. This barrier

protects the brain from “foreign” substances in the blood that may injure it. However, the quantity of alcohol that the liver cannot metabolise is able to cross that barrier and to damage the brain. Within minutes, alcohol enters the brain and numbs its nerve cells. Inhibitions and everyday tensions appear to be released, which may have beneficial effects on social interaction and give apparent emotional well-being. After this stage, alcohol affects the brain and central nervous system. People start having problems with their balance, judgment, coordination, and also with communication. Slurred words, memory lapses and clouded vision are all outward signs of heavy drinking. At this stage of alcohol intoxication, some people may become depressed and experience nausea and vomiting. After that, physical pain decreases very slowly, whereas mental torpor persists for long.

Negative effects of alcohol abuse. Continued excessive alcohol consumption can have devastating effects on the body as it can affect almost every cell, organ and tissue. In particular, drinking too much alcohol can lead to serious disturbances including brain damage, loss of memory, gastritis, ulcer, hypertension and hepatitis. Besides, in the long run, cirrhosis of the liver can be expected, which can lead to cancer and heart attack. Small blood vessel bleedings may also occur, which are responsible for the swelling face and the red nose that heavy drinkers usually have. There may also be other symptoms such as poor appetite, weight loss and feeling extremely weak. After long-term alcohol abuse, which is about 10 years for women and 20 for men, alcohol produces dependence due to cellular alterations and the typical behaviour of addiction appears. At this point, alcoholics may show aggressive behaviours. After a few hours of not drinking, alcohol withdrawal symptoms occur. They are characterised by anxiety and irritability, tremors – hands are usually affected, but also the tongue and face with involvement of the eyebrows – sweating, muscle cramps, tachycardia, hypertension and, later, epileptic seizures may occur. These symptoms usually happen in the morning, as during sleep a person cannot drink. The most severe reaction after stopping alcohol for a few days is “*Delirium Tremens*”. The symptoms are agitation, restlessness, excitement, confusion, disorientation, hallucinations, seeing or feeling things that are not there – usually insects – or other strange phenomena. They can only be calmed by drinking alcoholic beverages. This is the reason

why alcoholics need to drink every day and are not able to stop or reduce alcohol consumption, even if they try. Alcohol is a drug. From a medical standpoint, addiction is a disease that is always considered severe and difficult to cure. Alcoholics are ill people and so they must be helped by family, friends and institutions.

Positive health benefits. Moderate alcohol consumption may provide some health benefits. Several scientific research show that adequate daily alcohol intake may reduce the risk of cardiovascular diseases. Some studies point out that “moderate drinking” is associated with lower risk of coronary heart diseases, as small amounts of alcohol would raise levels of High Density Lipoprotein (HDL), the so-called “good” cholesterol, protecting the cardiovascular system. However, more studies on alcohol consumption are needed to confirm these results.

Yet, it is important to highlight that men and women are differently affected by alcohol and that health benefits from alcohol have not been found for women. Remember, therefore, that if you are a woman, alcoholic beverages are bad for your health and for your waistline. Drinking even small amounts of alcohol in pregnancy can be harmful to your fetus. Besides, breastfeeding women should be aware that, after alcohol intake, there would be higher alcohol levels in breast milk than in the mother’s blood. Other study findings say that even moderate alcohol intake can cause high blood pressure for both men and women. This is the reason why doctors advise hypertensive patients against drinking alcohol. In contrast, low levels of alcohol may have positive effects on inactive men, but no significant effect has been found in men reporting regular aerobic exercise such as jogging. The definition of “moderate alcohol consumption” considered by these studies depends on genetic predisposition. It is important to take a test to identify your alcohol consumption threshold, above which alcohol is harmful to you. If you do not take this test, not even light moderate alcohol intake is advisable. It is likely that a doctor will tell healthy men with safe levels of drinking and who are not at risk of developing alcoholism, that they can keep on drinking moderate quantities of alcohol. Some scientists think that polyphenols, which are contained in high concentration in red wine, may inhibit a substance in the process that

leads to the hardening of arteries. However, epidemiological analysis show that this pattern is true for all types of beverages. Therefore, there is no scientific evidence that wine is healthier than other alcoholic beverages. Moderate alcohol consumption in these studies on health effects of alcohol is defined as up to 340ml/12oz of light beer or 150ml/5oz of wine or 40ml/1.5oz of spirit per day. Be careful not to exceed these limits. It has been shown that these quantities of alcohol in women and double quantities in men may have negative effects on cardiovascular diseases and may also lead to a dramatic increase in the risk of cirrhosis - liver cancer - or even colon cancer.

Do not cheat. It goes without saying that health benefits from moderate alcohol intake are obtained if you drink small amounts of it over a week and not the same quantity in one night!

Several doctors do not recommend moderate alcohol consumption as they think it is not good for any kind of patients. Some groups of people may benefit from moderate alcohol intake, but doctors say that the risk of developing an addiction is too high and that risk factors for cardiovascular diseases may be lowered safely with other proven ways, which are without negative side effects. To sum up, it is better not to drink alcohol at all, but if you want to drink it, you should consume it in moderation. In any case, it should never be considered as a medicine, although it is relaxing.

Those who want to stop drinking. If you are really concerned about the role alcohol plays in your life and you want to stop drinking, you should also consider changing your eating habits. Healthy food, like salad, fresh fruit, legumes and whole-grain rice, whole-grain bread and whole-grain pasta, is recommended. You should drastically reduce eating meat and processed foods, white bread and white pasta included. Poor quality food stimulates consumption of alcoholic drinks. There is a negative relationship between meat consumption and alcohol abuse. Actually, it is rare to see a vegetarian drinking alcohol!

New consumers: women and youth. Alcoholism, in the past, had a male/female ratio of 4/1. This difference, however, is decreasing as more

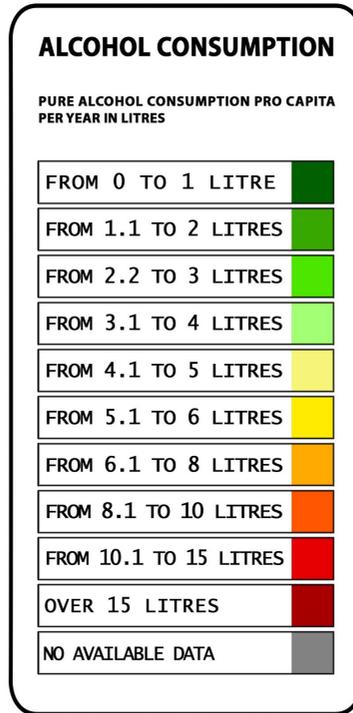
and more women are drinking. At the same time, there is an increase in alcoholic drinks among young people, both boys and girls. Statistics say that binge drinking is associated with higher car accidents. Some countries have raised the legal drinking age in order to tackle harmful drinking. The results are comforting. Other countries, like France, introduced a ban on selling alcohol at motorway service stations. In general, statistics say that drink-drive deaths have fallen sharply in countries with strict drink driving penalties.

Global drinking. Presently, alcoholic drinks are the most common luxury goods in the so-called “modern world”. Despite alcohol abuse can cause social problems, alcoholic drink consumption is tolerated or even encouraged. There are cultures where drinking is integrated into eating habits and social customs so alcohol consumption is encouraged. Drinking is often considered a cultural “norm”, so “heavy” drinkers are sometimes considered as virile and strong men. Alcohol consumption is associated with social activities such as celebrations, special occasions and meals. Bacchus, the Olympian god of wine, was so popular among gods and mortals that many festivals were held in his honour. However, a “great” god should have also taken into account the negative effects of alcohol abuse! According to the “Daily Yomiuri”, there has been an increase in alcohol acute poisoning in Japan lately. This is mainly due to the practice of “ikkinomi”, which means “down-in-one”, which is downing an entire drink without stopping to take a breath, very often at the encouragement of people cheering at the drinker. Ikkinomi is dangerous as alcohol is consumed at a faster rate than the body can handle and with harmful consequences for the body. They say it is for real men but some studies on heavy male drinkers show that they tend to become “less” virile. Alcohol can dramatically lower testosterone levels – the male sex hormone – leading to loss of libido. Reduced activity of hormones may include growth of male breasts. If you drink to feel more masculine, you must stop drinking for the same reason!

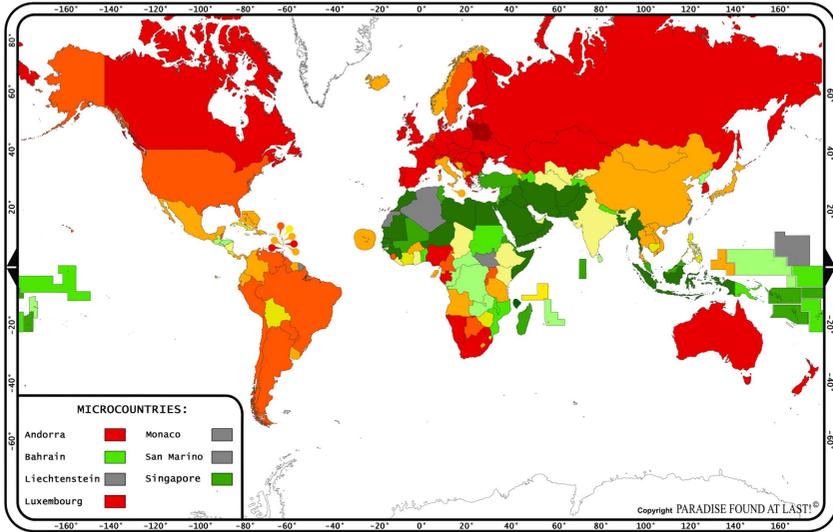
Highest and lowest consumption rates. The highest alcohol consumption is to be found in the former Soviet bloc countries. In particular, Belarus and Moldova are the biggest drinkers in the world with 17.5 and 16.8 litres

of pure alcohol consumption respectively per capita a year. In contrast, there are several countries where alcohol consumption is null or very low. In fact, alcohol consumption is forbidden in Islamic countries for religious reasons. Saudi Arabia is a Muslim country in which Islamic law is strictly enforced: alcohol is also prohibited to foreigners and non-Muslims.

The map. In the *world map of alcohol consumption*, you will find average values for drinking habits referring to every single nation. The data are supplied by the WHO. The map shows the litres of pure alcohol that are consumed, on average, by each person per year. Obviously, you may find teetotalers or alcoholics in every country. However, the data reflect the actual situation you will find if you move to a given country.



WORLD MAP OF ALCOHOL CONSUMPTION



[Open the World map of independent states to see the names of the states](#)

Chapter 20

Dangerous trips

The world of narcotics is one of the worst evils of our times. Drug users and pushers who sell it illegally are part of it, but drug trafficking is a more complex illicit trade involving several people and criminal organisations that generates huge amounts of unregulated money. Money is the main reason for engaging in such a criminal activity and money laundering is the method by which criminals disguise the illegal origin of their profits. A country where drug abuse and drug-trafficking are widespread affects the life of every single person. This does mean that you will be involved with drugs but you could become a potential victim of its negative consequences. It is essential to know a country's involvement so that you can be aware of the situation if you eventually decide to move there. This is why you must examine the facts in search for your Eden.

Daddy, what's drugs? "It is something which seems to be good at first, but then it turns out to be bad", my father told me when I was 5. This simple answer was appropriate for such a little boy. Thanks to these words, when I grew up, I was never curious to experiment any kind of drug. Family education plays an important role in shaping children's personalities and moral development. Therefore, early prevention, training on the negative effects of drugs and on unsuitable behaviour that may increase the risk of becoming addicted have a great impact on children and should enhance protective factors. It is essential to know what drugs actually are. Drugs are chemical substances, liquids or food that are able to alter brain function. Drug users become estranged from the non-addicted world, blotting out reality and replacing it with a twisted distorted perception. The main reason people use drugs is to change the way they feel and be the person they want to be. They want to feel stronger or they want to escape from the problems they have in their everyday life. Adolescents tend to be attracted by tobacco, alcohol and drug use and abuse. As a matter of fact,

adolescence is a delicate transitional period between ages 12 and 18, when a child develops into an adult. For them it involves crucial difficult decisions to achieve personal identity. Parents should be present and closely monitor their adolescents' behaviour so that they feel protected and not left to themselves. If parents do not provide guidance and support, "others" will unscrupulously do so. Who is likely to influence poorly monitored teenagers? Adolescence is a time when peers play an increasingly important role in the lives of young people. Peers influence may lead youths to reject their family values. Peer groups have very strict rules and a moral code so teenagers will be inclined to conform to their behavioural patterns. Peer influence may result in youths choosing the same clothes and lifestyle and changing the way they talk or the words they use. Youths want to be liked; they do not want to reveal their weaknesses so that they integrate in the group. To conform they may feel compelled to imitate delinquent attitudes and behaviours. It is not always an easy task for parents to know what it is going on in their children's minds as they tend to isolate themselves and not to communicate as though they are total strangers. Sometimes their behaviour is a result of poor parental management. When children are raised in a home where parents love each and thus create a loving family culture, they are much more likely to be responsible and outgoing adolescents!

How kids act. When kids are caught smoking marijuana or hashish, often they are not severely punished by police or parents as, they say; just a joint can do no harm. The only problem with a joint is that one spliff follows another, and then another and one becomes a drug-addict. Nowadays, children are raised in permissive families where they experience too much freedom. Parents and teachers appear to have lost their authority and youths tend to be left on their own or with bad advisors causing multiple negative consequences in our society. Without good support, entire families collapse. Drug users need plenty of money, as illegal drugs are expensive so they will become thieves and steal possessions or cash, or they will start to push drugs to get money to buy drugs. What could you tell a parent whose child has become a drug-addict? Is it right that parents should fight to help that child stop using drugs? Parents must fight but sometimes with little or no results. Being loving parents, however, may help to give back their

dignity and self-respect.

The logic of drug. People use illegal drugs to experience a pleasant dreamlike state of peacefulness and contentment. However, in return drugs have harmful effects on the body and the nervous system. In particular, psychoactive drugs can directly affect the functioning of neurotransmitters altering the transmission of nervous impulses and causing long-term, perhaps permanent, damage to brain areas, which persists after quitting the use of drugs. As for the body, drugs can cause irreversible damage to several organs and, in some cases, can put you at a higher risk for cancer or other serious diseases. If drug abusers need increased amounts of drug to feel its effects, it means that they have developed an addiction as the body and the brain need these impulses otherwise they suffer unpleasant effects. Then they will find themselves increasingly relying on it, and will use it more frequently. Gradually using drugs becomes more and more important until they cannot do without them. Physical addiction occurs when the body is unable to function properly without drugs and suffers withdrawal symptoms. Psychological addiction is even more insidious. There is a craving or compulsion to use drugs. In the past, it was thought that drug users kept on using drugs due to physical addiction and the onset of withdrawal symptoms. Today, however, it has been ascertained that even after drug users have stopped using drugs for weeks or months, the craving for it still remains, even when withdrawal symptoms have disappeared. Drug craving and the impulse to consume drugs can persist long after detoxification. Drugs change people's brain. Jim Morrison, the famous Doors' singer, said that; "Buying drugs is like buying a ticket to a fantastic world, but the price of this ticket is life". He was absolutely right, but he did not apply it to himself as he died of a heroin overdose.

Drugs or not drugs? Various substances affect the human body by altering its physical and mental state. The most common drugs include caffeine, nicotine, alcohol, THC, amphetamine, cocaine and heroin. Actually, not all of them are considered as real drugs everywhere, but all of them can lead to addiction, namely to the condition characterised by compulsive drug seeking and use. However, caffeine, nicotine and alcohol are not considered as real drugs whereas the other substances above mentioned are. Why?

First, there are cultural reasons. The former drugs have been used for ages and have influenced the development of modern societies in one way or another. Caffeine, nicotine and alcohol consumption is considered legal in most cases, but there is a growing trend in discouraging their consumption as harmful effects are being discovered. As for THC, it is a substance that is likely to be legalised sooner or later. THC is found in cannabis and this is considered to be a light drug. This is the reason why it is going to be legalised in many countries for free use just like caffeine, nicotine, alcohol and for different kinds of psychotropic drugs. As for drugs, each culture has its own “legal” drugs, stigmatising others. Bolivia has grown coca, a hallucinatory plant from which cocaine is obtained, for more than three thousand years. In South America, it is quite normal to chew coca leaves or drink coca tea to soothe vertigo, which may occur at high altitudes in the Andes, or to help digestion or to stop hunger and tiredness. After chewing coca, you are more energetic, less tired and you can work better. If you walk down Pisac, a little village located in the heart of the Peruvian Andes near Cuzco, and browse about in the typical street market, you will meet the indigenous women who are of heavy build and wearing bowler hats – the so-called “*Cholitas*” – squatted down under the 6 or 7 layers of their traditional skirts and chewing coca leaves. Their little children aged 3 or 4 chew coca leaves by their side too. Coca is part of their culture and identity. In contrast, almost the totality of the world’s countries consider coca leaves as illegal substances after the 1961 “Single Convention on Narcotic Drugs” held at the UN. Bolivian people say they need coca just to get up, feel euphoric and more active.

Actually, it is poison. All drugs are mainly poisons. Some are less strong than others are but they are always poisons. There would need hundreds of cups of coffee for their caffeine content to kill a person, but just a few grains of arsenic would kill. Many people accept the risk and use poisonous substances. Getting used to them as they persuade themselves that “it does not hurt”, and say that this is the “only bad habit” they have. These are just excuses! The most harmful and widespread illegal substances are; heroin, which comes from the opium poppy, cocaine, which comes from coca leaves and amphetamine, which is a synthetic compound made in a laboratory. Their consumption causes an extremely high number of deaths,

due to severe brain and body damage.

Heroin. It is extracted from the opium poppy and it is the most harmful drug as it can cause the most significant health problems. It is also the most addictive drug. Drug addicts say that heroin withdrawal symptoms are “unbearable”. Its use leads to social exclusion as drug users tend to withdraw spontaneously from the community. Once a person has become a drug-addict, his/her first goal in life is seeking and then using the drug. It is usually injected, inhaled or smoked even more times a day altering the drug user’s brain.

Cocaine. Cocaine is made from the leaves of coca plant. It is a powerful stimulant affecting some brain areas and causing pleasant feelings that may alter the perception of yourself or of reality. This is the reason why cocaine addicts often cause fatal car accidents. Continued use of cocaine creates tolerance. This means that higher doses and more frequent use of cocaine is needed so that the brain can register the same level of pleasure experienced during initial use. Cocaine is the most popular drug used in the entertainment industry where the famous “white powder” is sniffed. It is a very dangerous drug, which can lead to a fatal overdose. A person can overdose on even a small amount of cocaine due to poor quality. The use of cocaine in the “crack” form is often associated with very aggressive behaviour.

Amphetamines. They are other strong stimulating drugs that are synthetically produced in a laboratory. They act in a very similar way to adrenaline – their molecular structures are alike – and, consequently, they tend to increase blood pressure, heart rate and body temperature. They stimulate the brain giving it more energy and apparent clarity. However, amphetamines may cause side effects such as tremors, anxiety, brain damage, cardiovascular diseases and strokes.

Cannabis. This chapter aims to examine cannabis use, a drug that is spreading among youths and older people in many countries around the world. The UN estimated that almost 200 million people consume it regularly. Being considered a light drug, there is increasing pressure to get it

legalised like caffeine, nicotine and alcohol. Cannabis is also known as “Indian hemp” and mainly produces marijuana and hashish, which have a different THC content. Actually, THC is found in hemp and it is the chemical responsible for the state of altered perception that characterises marijuana and hashish intoxication. Have you ever heard of ganja, weed, dope, pot and grass? These are all street names for marijuana, which is a mix of flowers, stems and leaves derived from the hemp plant cannabis. On the contrary, hashish is made from resin extracted from the pollen of the flower to which other substances are added as a glue, like animal fats. Cannabis is usually smoked but it can also be added to food and eaten or consumed in the form of a tea.

Addiction or not addiction? Cannabis drugs are classified as light drugs and they are said to be non-addictive. This means that they do not have withdrawal symptoms when drug use is stopped, which are often associated with sleeplessness, mood alterations and appetite changes. Is cannabis addictive? The question has been debated for a long time. Several clinical studies, after gathering data and testing, have shown that only a small percentage of cannabis users, which is 3%, can develop an addiction.

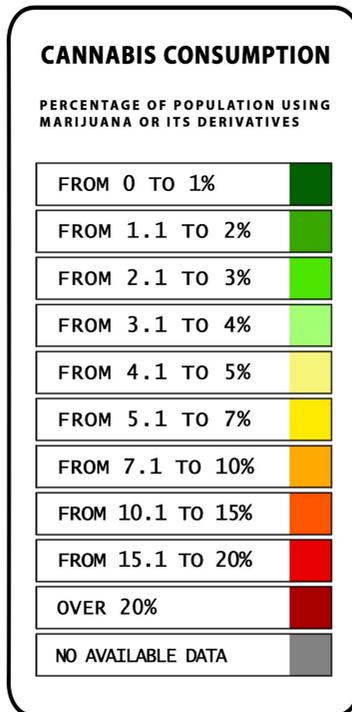
Positive effects. People consume cannabis to experience pleasant sensations. Within a few minutes after inhaling it, THC enters the brain. It causes the user to feel good, relaxed, euphoric and cheerful. Moreover, time seems to pass very slowly, colours and sounds seem to be more intense; it reduces a user’s inhibitions and people find it easier to communicate. There are also physical effects: an individual’s heart starts beating more rapidly, the heart rate, in some cases, may even double; blood vessels in the eyes expand, making the eyes look red; the user’s mouth feels dry and he/she may become very hungry or thirsty. These symptoms may last up to three hours. Greater levels of cannabis are associated with strong alterations in sensory perceptions and hallucinogenic effects, including auditory and visual illusions perceived both with open and closed eyes: drug users visit another world.

Negative effects. There are adverse health effects of cannabis use. Habitual heavy cannabis consumption can cause damage to the body and brain,

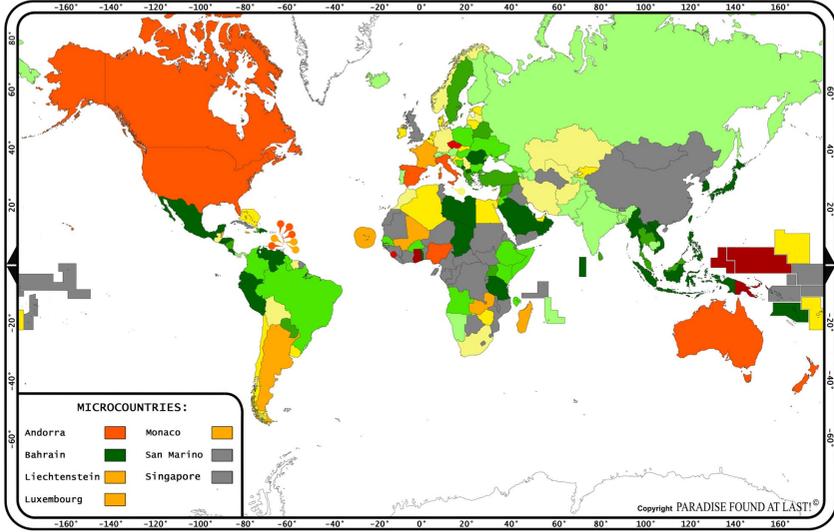
which is higher for people who start using cannabis in their teens as it may lead to neurobiological changes that can affect adult brain functions and behaviour. They include dullness, attention and memory problems, sluggishness, anxiety and depression, paranoid persecution mania, irritability, panic attacks, phobias, visual illusions, temporal and spatial disorientation and a loss of the sense of personal identity. Recent studies have shown that the impairment of working memory is not due to neuron but to astrocyte damage. Astrocytes are cells belonging to the central nervous system, which are responsible for learning and thinking. However, the brain is not the only organ to be seriously damaged. Marijuana use causes an enlarged liver in 60% of heavy smokers and an enlarged spleen in 70% of them. Bronchial lesions are also to be found. Marijuana smoke contains from 50 to 70% more carcinogenic hydrocarbons than tobacco. This condition, together with THC weakening the immune system, may double or triplicate the risk of developing infectious diseases, lung cancer or cancer of any tissue making up the respiratory system. Drug users do not seem to pay attention to their health but, at least, they should think about procreation as their irresponsible behaviour can damage their children's health. As a matter of fact, THC affects the nuclear membrane – DNA and RNA – and, consequently, will interfere with the development of a fetus, which may cause abnormal brain development in the newborn baby. It is, therefore, essential that people are aware that there is a close relationship between cannabis use and body and brain damage both for users and for their children. The idea that smoking a joint is an acceptable habit in life must be shattered. Actually, cannabis is not the worst drug in the world and there is no evidence that cannabis overdose cases have occurred. THC has very low toxicity level and it cannot be absorbed in very large amounts, which would cause a dangerous overdose.

The map. Even though there is a lot of talk about drugs, no detailed set of data is available for all the world's countries. An overview of the most common drugs is not possible either. Fortunately, cannabis use data refers to 150 out of 196 countries in the world and, even though this number seems to be in contrast to the logic of this book, this topic has been dealt with all the same as youth cannabis consumption is really a worrying and widespread phenomenon. The *world map of cannabis consumption*, which

has been created by using the data supplied by the United Nations Office on Drugs and Crime ([UNODC](#)), shows the percentage of the population using marijuana or other drugs regularly coming from the same plant. Thanks to this map, you can estimate the world's population drug use in the entertainment industry. Papua New Guinea has the highest drug consumption rate in the world. Here, about 30% of adults use marijuana. The reader is free to interpret this data as he/she likes.



WORLD MAP OF CANNABIS CONSUMPTION



[Open the World map of independent states to see the names of the states](#)

Chapter 21

I'm done!

Suicide is the terrible act of intentionally causing one's own death. Undoubtedly, those who decide to kill themselves must lead a very unhappy life. Have you ever wondered which countries in the world have the highest suicide rates, or which nations have the lowest or why suicide rates are higher in some countries than in others? This chapter aims to answer these questions. It is generally assumed that nations with high suicide rates have higher unhappiness levels whereas low suicide rates are full of happy inhabitants. There is always an association between suicide and happiness within a geographical area but, as we will see, this should not be taken for granted. A deeper analysis of the situation suggests that it is not so clear-cut and distinctions have to be made.

Evidence. Suicides occur everywhere and at all ages, but some evidence helps us better understand this awful phenomenon. Studies have found that men are more likely to commit suicide than women. Suicides tend to occur more in the summer than in the winter and are more likely in peacetime than in wartime; more on holidays rather than on working days. Many people sink into despair when their busy and frantic daily routine stops abruptly. In such critical situations, people tend to relax and look introspectively and may feel a heavy heart, an emptiness and even think that life is no longer worth living. A major cause of suicide is depression, which is characterised by the onset of psychological problems.

How many people commit suicide? Few are aware that more than 800,000 people die from suicide every year. To help you understand the magnitude of the problem, just think that suicide claims more lives than war and murder put together. In other words, more people die at their own hands than at other people's. It seems to be illogical so let us try to explain why so many people decide to kill themselves deliberately.

Why. Suicide is the most extreme self-injurious act occurring in psychological states of acute distress and trigger off depression, which is its major risk factor. When an individual has low self esteem associated with lack of interest in normal daily activities, family and employment, he/she may express negative thoughts of death and suicide. Depression is, therefore, the primary source of suicide. Depression can be caused by several factors including unhappy relationships or the sudden end of a relationship, conflicts with parents - factor in teen suicides - and bereavement, mostly among the elderly. A serious, chronic and painful physical disease can play an important role in about 20% of suicides among the elderly. Moreover, engaging in actions that cause a person to feel guilty can lead to shame causing depression. For example, events of inappropriate behaviour or financial losses, when people can no longer maintain the same standard of living for themselves and their families. As for youths, it is important to highlight that the pain or the fear of failing to meet parents' expectations may be a cause of depression. Many youths commit suicide due to a bad school report! Other causes may include a relationship break-up, having a chronic disease, negative body image, social status, having being the victim of violence or having being ridiculed, social exclusion and long-term bullying. Suicidal behaviour is usually the result of a number of factors that have interacted. It could sound strange but globally suicide is the first leading cause of death among youths aged between 15 and 29. Moreover, some people commit suicide as an act of protest against others, the Government, family, friends or, more in general, towards a certain kind of reality. There may often be hidden messages against others in suicides.

Income. Globally, the highest rates of suicide are to be found in low-and middle-income countries. About 75% of total suicides occur in the poorest countries where people prefer to die rather than living in such deprived conditions. In particular, youths aged 25 to 29 and elderly women have higher suicide rates than their counterpart living in high-income countries. As for the latter, higher unemployment rates represent a risk factor. The current economic crisis that has hit the Western World over the last few years is responsible for many suicides. For example, since 2010, suicide rates have increased by 36% in Greece. However, even those who have access to steady, high-paid jobs may sometimes be at risk. In this case, the

kind of employment makes a difference. Physicians and mostly psychiatrists, anaesthetists and ophthalmologists are traditionally at a greater risk of committing suicide than other working groups. Stress in medical practices puts a nervous strain on the body and, if associated with other risk factors, may lead to suicide.

American data. The USA is a nation with slightly higher suicide rates than the global average. Here suicide rates are strongly influenced by high alcohol consumption. As a matter of fact, heavy alcohol consumption can worsen certain symptoms of depression like mood swings, which can reduce self-control, strongly related to suicidal behaviour. In the USA, about 30% of those attempting suicide have drunk alcohol before doing so and about half of these are addicted to alcohol while doing it. Alcoholics, and mainly those experiencing compulsive episodes, often have a deep feeling of guilt during periods of abstinence so they are likely to commit suicide even when they are sober. There is evidence that 10% of alcoholic patients have committed suicide in the USA. It is a critical issue in hospital care as suicide attempts represent about 20% of emergencies and 10% of total hospitalisations.

The ratio male/female. Men are nearly three times more likely to commit suicide than women. This should make us think, as it is proverbial to say that women have greater strength of mind and are actually often stronger than men. The same data also shows that men have a greater responsibility towards their families. However, hard facts show that when a man attempts suicide, he is more likely to succeed than a woman who often fails, as she does not usually use decisive suicide means. Globally, therefore, male suicide rates are higher than female suicide rates, even though male suicide attempts are roughly equivalent to female. The fact is that it is not easy to kill oneself and only 10% of suicide attempts actually result in deaths. This means that only 1 person in 10 achieves his/her goal. As mentioned above, the ratio of male to female suicides is 3:1 but it is even higher in some countries such as Ukraine, Georgia, Cape Verde, Russian Federation, Armenia, Czech Republic, Cyprus, Belarus, Costa Rica, Moldova and South Africa. Here the ratio of male to female suicides is 5:1. It is 6:1 in Barbados, Estonia, Romania, Panama and Lithuania; it is 7:1 in Slovakia

and Latvia; it is 8:1 in Poland and Morocco; it is 9:1 in Belize. It is even 15:1 in Malta! There are only 5 nations in the world where female suicide rates are higher than male. They are Pakistan, China, Bangladesh, Indonesia and Iraq. Living conditions for women are still terrible in some parts of the world; this data confirms that.

The common methods of suicide. There are various ways of committing suicide but globally the most common methods are sleeping pill overdose, hanging and gunshot. Sometimes, but not always, the method chosen may be related to the cause. A depressed person often prefers relatively painless methods like drug poisoning whereas people affected by psychosis tend to choose more “spectacular” ways such as hanging, jumping from high places or slitting wrists.

Suicide prevention. Emotional stability is the best defence. People who are happily married or with a stable relationship are less likely to commit suicide. In contrast, people who live alone and are single have a significantly higher suicide rate. Suicide attempts among separated, divorced or widowed people are higher. So keeping a healthy relationship strong reduces the risk of suicide. However, generally speaking, youths are more vulnerable; actually, suicide is the leading cause of death among young people. The tendency to commit suicide dramatically decreases for approximately a couple of decades as they mature. However, when people turn 50, emotional fragility reappears and depression may return leading to suicide. It is obvious that suicide is never an impulsive act. Few people may decide to kill themselves in a fit of madness unless they are affected by severe psychiatric disorders or living in extreme conditions. The idea of suicide usually develops gradually and grows in one’s mind. It is the culmination of a long and complex reasoning, which involves decisions, hesitations, and decisions in contrast to the ones taken before. The WHO launched the Mental Health Action Plan 2013-2020 where the member states of the United Nations have committed themselves to working towards the global target of reducing suicide rates by 10% by 2020. National strategies for prevention will be introduced. Firstly, easy access to instruments people might use to commit suicide will be more difficult to find. Secondly, the Media will be strongly advised against providing

sensational coverage of suicide; the language to be used in suicide stories should not be too explicit and any detailed description of the method used to attempt or commit suicide should be avoided. Thirdly, health providers and the community should work together in order to identify in advance and improve the management of mental health problems due to drug abuse. In addition to this, people who have survived suicide attempts should receive proper support and should be helped in order to lower the risk of repeated suicide.

Feeling of guilt. Suicide acts have a great impact on the people involved. Doctors, family and friends may feel guilty and ashamed about not having been able to prevent a tragedy. However, those who have lost someone to suicide should understand that it is not always possible to prevent it and that they must accept the fact that they are not responsible. These words may help them to cope.

Possible genetic basis. Researchers at Mount Sinai Hospital together with Columbia University in New York, USA, have found that the predisposition to suicidal behaviour might be genetically transmitted and could depend on the mutation of three specific genes. Studies carried out to date shows that about 40% of the variability in suicidal behaviour may have a genetic basis. Other findings suggest that the relatives of patients who have attempted suicide are more likely to attempt or commit suicide.

Cold and light, a false myth? It is often believed that countries with low temperatures and limited solar power tend to experience high suicide rates. This is an oversimplified view of a very complex phenomenon. However, the countries located on the Arctic Circle Line such as The Russian Federation, Finland, Iceland, Sweden, Canada and Norway have mid/high suicide rates. As for sunshine, it has been observed that it is the exact opposite: paradoxically, suicides peak in the summer months when the sun is higher.

Industrialisation and system of government. Higher suicide rates seem to occur in countries where their traditional cultures and older ways of life are disrupted by rapid social change. Looking back at the course of history,

suicide rates first increased in countries where sharp changes of government took place such as in the former (USSR), or in countries where industrialisation imposed dramatic changes of lifestyle such as the countries beyond the Arctic Circle. Many of these countries have registered an increase in suicide rates associated with high alcohol consumption resulting in more people affected by severe depression.

What is the air like in Guyana? Now let us take a jump of many miles and position ourselves on the Equator. Guyana is located in South America next to Venezuela and it is the place where Jim Jones, an American cult leader and his followers committed a mass suicide in 1978, when 909 people died on a single day. An awful event that reminds us of how fragile and pliable the human psyche is. However, regardless of that tragedy, today's Guyana has the highest suicide rate in the world, with 44 deaths every 100 thousand inhabitants. It is shocking if you think that the global average is not up to 10 suicides every 100 thousand inhabitants and that South Korea, which has the world's second highest suicide rate, registers less than 29 suicides every 100 thousand inhabitants. What are the reasons for this terrible situation? It is still unclear but Gerard Hutchinson, a psychiatrist and Head of the Department of Clinical and Medical Sciences at the University of West Indies in St Augustine, Trinidad and Tobago, says that chemical-environmental factors may affect the behaviour of people living in Guyana and, in particular, the air they breathe. As a matter of fact, many farmers use large amounts of organophosphate herbicides and insecticides, which, according to several scientific studies, may lead to impulsive suicidal behaviours. This is another excellent and unexpected reason to go back to organic agriculture.

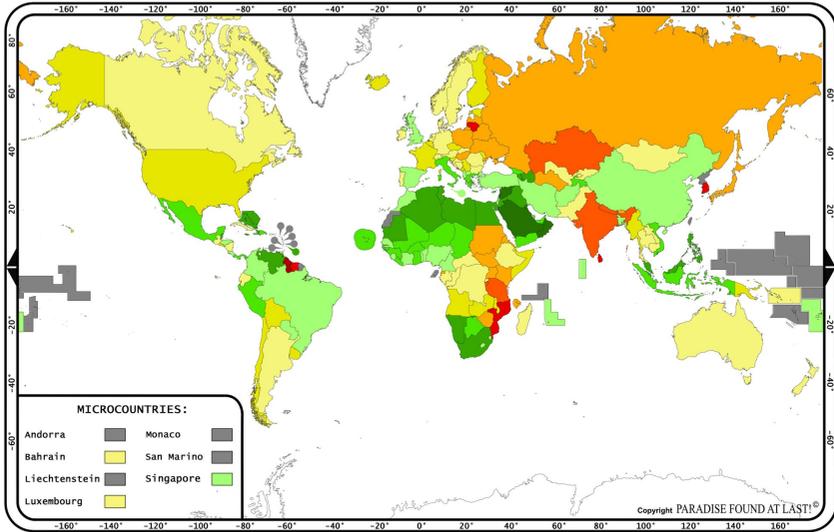
The map. The *world map of suicides* has been created taking into account the First Report on Suicide Prevention released by the World Health Organization. As the map shows the suicide rate for every single state, you will easily identify the countries where people are likely to suffer from depression or psychotic disorders leading to suicide. Last, but not least, the ratio of completed suicides to attempted suicides is 1:10.

SUICIDES

ANNUAL DEATHS PER 100.000 INHABITANTS

FROM 0 TO 1	
FROM 1,1 TO 3	
FROM 3,1 TO 5	
FROM 5,1 TO 8	
FROM 8,1 TO 12	
FROM 12,1 TO 16	
FROM 16,1 TO 20	
FROM 20,1 TO 26	
FROM 26,1 TO 40	
OVER 40	
NO AVAILABLE DATA	

WORLD MAP OF SUICIDES



[Open the World map of independent states to see the names of the states](#)

Chapter 22

The world's oldest profession

This long journey aims at showing you the real world. Nothing will be omitted. Prostitution is a basic social issue and cannot be disregarded. It is a global phenomenon that affects the way people live and think. Leaving it out would be like burying your head in the sand. It is said to be the world's oldest profession as prostitution has existed since the very beginning of human history. Whatever opinion you may have on the subject, it is vital to be informed about its global implications, to know what to expect if you move abroad. This chapter will give you a global picture of prostitution and will analyse the different approaches to it. In some countries, it is treated as employment like any other whereas in others it can even be punished by death.

What exactly is prostitution? Prostitution is sex for money or sex in exchange for valuable. This is what it actually is and nothing more. “Something valuable” may refer to a flat, food, drugs or whatever. Women often see prostitution as their way out of poverty. Many street girls are forced to beg, steal and prostitute themselves in order to survive.

The attitude towards prostitution. In popular debate, prostitution is and has always been reduced to something that people can be either for or drastically against. On the one hand, some may object to it on moral grounds; on the other hand, others may consider it as a positive force – mainly men – for those who freely choose it and even have a need in some cases. Most people who prostitute themselves, women but also men and trans, do not like what they are doing and they would not be doing it if they could only obtain another kind of well-paid job. In most cases, they are unable to find a regular job or they have very low-paid jobs and need to work as prostitutes to pay off their debts. A prostitute can quickly make large sums of money. For example, a Thai girl working in a “go go bar” can

make 20 or 30 times more money than she could make with other kinds of employment. Prostitutes can make mind-boggling amounts. A “window girl” in Amsterdam can earn about 13,000 Euros a month. These easy and fast profits attract those who are in urgent need of money.

As we all know, men who visit prostitutes prefer not to think what is behind it all and seem to be blind to the plight of these women. Everybody, however, is opposed to prostitution when it goes against the free will of the person who is involved. Actually, women are often forced to work as prostitutes by “pimps”, who may be a prostitute’s owner, partner, etc. They are the so-called prostitute’s protectors and are motivated by greed and money. They are the first to be fought in the war against prostitution according to present policies as everybody agrees that their role is totally immoral. In 1949, the General Assembly of the United Nations (UN) adopted the “Convention for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others”. It claims that forced prostitution is incompatible with human dignity and requires contracting states to punish pimps, brothel-owners and operators, and also to abolish all special regulations that subject prostitutes to special registration. The convention was accepted by 89 countries only. It is hard to believe that Germany, The Netherlands and the USA did not ratify it. Prostitution is a difficult issue that stirs controversy.

The main characters of this bad show. Now is the time to analyse the people involved in this real life story, and their unbecoming behaviour, in a world where civil rights should reflect the advancement of our developed world.

Pimps.

Their despicable activity is often denounced by the Law in theory, but not in practice. They are mainly criminal organisations or small groups that, in most cases, force people into prostitution without their consent by means of physical and psychological violence. Sex trafficking, which is one of the greatest sources of illegal profits at present, is often associated with drug trafficking. It is a sad phenomenon of illegal immigration involving mainly girls and young women but also boys and trans, who are usually persuaded

by force or deception into believing that a certain job awaits them. Once they arrive at the country of destination, they enter the prostitution trade. The women are taken from different areas of the world but mostly from South America, the Caribbean, Africa, Asia and more recently from Eastern Europe. It is estimated that about 2 million women are engaged in global prostitution annually, 35% of whom are under age. According to the International Organisation for Migration (IOM), about 500 thousand women were trafficked into the European Community for forced prostitution.

Prostitutes.

There are three kinds of prostitutes at present:

1. those who are coerced by pimps with no scruples;
2. those who, like drug addicts, have sex for money to buy drugs, mostly girls, but also boys;
3. those who choose to make their money this way.

Whatever the reason for people entering prostitution, they suffer great distress about their condition, even though at different levels. Prostitution, in many cases, is violence against women as they are forced against their will by unscrupulous pimps who tend to use excessive violence, sometimes threatening to cause bodily injury to the victim's family. Another thing to consider is that prostitution is often linked to drug addiction. Sometimes drug users prostitute themselves to get money to buy heroin. In other cases, drugs are just a way to forget the awful world they are living in. In some cases, pimps enslave girls to a life of prostitution by keeping them dependent on heroin. In spite of everything, there are those who decide to prostitute themselves voluntarily to escape from poverty or a difficult family situation. Finally, prostitutes' health is another important aspect to consider. This kind of "job" can cause physical problems related to sexually transmitted diseases. Prostitutes do not seem to be fully aware of the risks. They are likely to be infected with gonorrhea, syphilis, chlamydia, herpes, HIV, etc.: the risk is much higher for them than others.

Clients.

Globally prostitution is very common mostly because of its high demand. The age range of clients is from 16 to 80 and they belong to all social classes and educational levels. About 70% of them are married. Many of them have children. 43% of the clients require unprotected sex. Despite the high risk of sexually transmitted diseases, many clients do not seem to be concerned. Frequent causes for going to prostitutes are solitude and problems in building strong healthy relationships with women. Moreover, some men wish to have sex with many women and look for exciting experiences.

The three policies. Three different policies are applied with regard to prostitution:

1. There are countries where prostitution is legalised and regulated. Here the exchange of sex acts for money is legally recognised and it is considered as a legal profession and, as such, is regulated like any other job. Prostitutes are often obliged to pay taxes and to report their residence. Moreover, both male and female prostitutes are required to have regular health checks to prevent and not spread sexually transmitted diseases. The states applying the regulated system are only a small minority. They include The Netherlands, Switzerland and Belgium where prostitution is restricted to suitable indoor places such as strip clubs, brothels and massage parlours or to outdoor special areas such as in The Netherlands. In countries where prostitution is regulated, most prostitutes decide to sell their bodies of their own volition and are not coerced by pimps who live off their earnings. Even though a good percentage of “slaves” still exists, it is easier to locate pimps with respect to countries where laws are fragmentary and conflicting.
2. There are countries where prostitution is legal but with an abolitionist system according to which neither prostitution nor the exchange of sex trade with money are forbidden. Only pimping living off the earnings of prostitutes are punished. However, laws are never severe enough to punish adequately pimps in countries adopting this kind of policy.

3. There are countries where prostitution is illegal. They adopt prohibitionist systems that are followed by most of the world's countries. In many countries, prostitutes are punished but not clients; in others instead, both of them are punished. Legal sanctions vary from country to country. In many Islamic countries adopting *Shari'a*, prostitutes, but not clients, can be punished with death. Other countries consider prostitution as a crime that is punishable with severe custodial sentences. Finally, others countries consider it merely an administrative violation, where a penalty is imposed.

The three legislative systems just mentioned above are commonly adopted at present but there are some exceptions. Three countries, which are situated in the North of Europe – Sweden, Norway and Iceland –, follow the so-called “Swedish System”. Here clients, but not prostitutes, are punished, as the latter are considered as victims of trafficking. Yet all legislative systems condemn both pimps and the economic exploitation of prostitutes. Many attempts to fight prostitution have been carried out but the phenomenon still persists no matter the kind of system. On the one hand, criminal organisations make large profits by exploiting prostitutes; on the other hand, prostitutes may be forced to do this job by pimps or they may freely choose to be in the industry as they can make huge amounts of money. Clients, the third part involved in prostitution, are actually those who can be persuaded not to go to prostitutes by events and by the Law. The law of supply and demand maintains the market. Therefore, prostitution would come to an end if clients stopped asking for it!

Clients' answers to a survey. A recent survey has shown what could persuade clients not to seek for prostitutes. The question was: “What could discourage you from visiting a prostitute?” Here you will find most clients' answers, arranged in a decreasing order:

- if my name were included on a public sex offender register;
- if my photo or my name were put on a billboard or in a local newspaper as a sex offender;
- if I were sent to prison for a few days;

- if my photo or name were published on the Internet as a sex offender;
- if my family were sent a private letter about it.

Therefore, there is no use arresting prostitutes or chasing pimps! If these simple actions were applied, clients would stop going to prostitutes, so prostitutes and pimps would disappear!

Sex Tourism. The economic development in western countries has increased the wealth of many people and has created a new kind of prostitution. Many people, usually groups of friends, co-workers or single subjects, travel to foreign countries for sexual purposes. This is what has been defined as “sex tourism”. Some countries where prostitution is legally recognised even promote it as any other kind of professional activity. A brothel in Berlin – Germany’s capital – has recently launched a promotion to their clients: They can eat, drink and, of course, have sex for just 70 Euros. Not too bad in these times of economic crisis! As for Spain, Club Paradise opened in 2010. It was described as “*El mayor burdel de Europa*” (The largest brothel in Europe) by El Pais, a Spanish newspaper. It is located in Gerona Province on the French border, with 80 rooms and 160 professionals. Sex tourists will not miss this opportunity!

However, sex tourism is an increasing occurrence which is also interested in transgression at cheap prices. Consequently, sex tourists also tend to choose countries where prostitution is allowed, even if not particularly tolerated, namely countries which follow the abolitionist approach. Moreover, they are attracted by nations where prostitution is totally illegal, which have adopted the prohibitionist approach but where laws are not severely applied. Both in abolitionist and prohibitionist countries, criminal organisations exploit poor, defenceless victims, forcing them into prostitution, without any protection of human rights. It all happens in squalid conditions where under-age people may be involved, and at very cheap cost prices.

Ivory Coast, in Africa, has adopted an abolitionist approach, namely prostitution and the exchange of money for sex, which is not forbidden.

On the contrary, behaviours such as aiding and abetting, induction, recruitment, exploitation, management of brothels and child prostitution are punished in order to discourage prostitution as a whole, but there is no a direct prohibition. Actually, things are quite different in everyday life here and behaviours associated with prostitution are not adequately fought, which creates inhuman situations that only people with mental disorders could conceive. Children are the world's most precious treasure, and when they are violated, mankind's future is at risk! Soletterre, a non-governmental organisation operating in Ivory Coast, has recently published an article with the following headline: "Small Girl Prostitutes for 0.46 Euros". Child prostitution and trafficking have reached enormous proportions in Ivory Coast involving over 400 thousand children in a country with 21 million inhabitants. They are victims of prostitution, pornography and sexual violence. The primary cause is poverty. There, a family has an average monthly income of 30 Euros. They can only buy a meal a day so children are forced to sell their bodies. The Government is not willing to implement specific measures in order to punish "the monsters" who ruin the lives of innocent creatures.

Sex tourism also thrives in Thailand, a country where prostitution is totally forbidden by the law through a prohibitionist policy but where, in practice, the sex trade is thriving. Thai girls working in "go go bars" and "sexy shops" attract more foreign tourists than their beautiful beaches. Girls, often very young, earn more with prostitution than with any other kind of job but in loathsome conditions. High alcohol consumption and psychotropic drug use are popular among these women in order to bear their extremely unpleasant life. Suicides are frequent mostly when their physical conditions do not allow them to prostitute themselves any more. The most common saying in an area of Bangkok called Patpong says: "women at 10, old at 20 and dead at 30".

However, child sexual abuse is not only restricted to developing countries or caused by poverty. The Czech Republic is known for its huge quantity of pedo-pornographic materials on the Web. On the German border as far as Jachymov, women display their children and pimps throw the latter on the road at service stations and bus stops. This horrible practice mostly involves

German, Austrian, Italian and sometimes American clients.

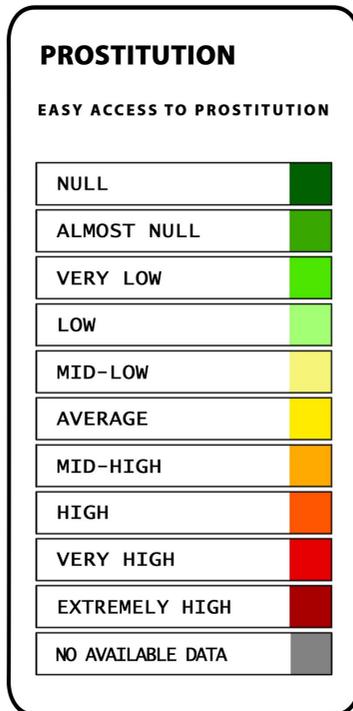
However, there are many other squalid stories, even though the ones about children are the most repulsive. In Bulgaria, prostitution is booming in small towns on the border with Greece and Macedonia. About 2,000 prostitutes have been reported to be in Sandaski, a small town of 30,000 inhabitants. Prostitutes usually come from the northern regions, which are characterised by high unemployment rates. These prostitutes can be hired by the hour or bought and taken abroad. In these cases, prices range from one thousand to 3 thousand Euros. In other cases, local women prostitute themselves in order to supplement their wages, whereas several female students coming from Blagoevgrad, a nearby town, earn a hundred of Euros with their sexual activity on the weekends. Thousands of Greeks arrive there by bus to have sex with them and the town becomes full of men looking for cheap one-night stands.

Prostitution and technology. Streets have always been a window to display one's body and things for sale. Nowadays prostitutes are less likely to be found walking down the street and this change is due to technology. The evolution of prostitution into the online world has made life easier for both prostitutes and clients. The former can stay comfortably at home whereas the latter do not need to drive along the street in search of a woman they like. They just refer to suitable websites on dating. There are real catalogues on line showing pictures and videos about women who describe in detail the services they offer. Once the girl has been chosen, to make an appointment, the client phones on her cell phone number shown in her profile.

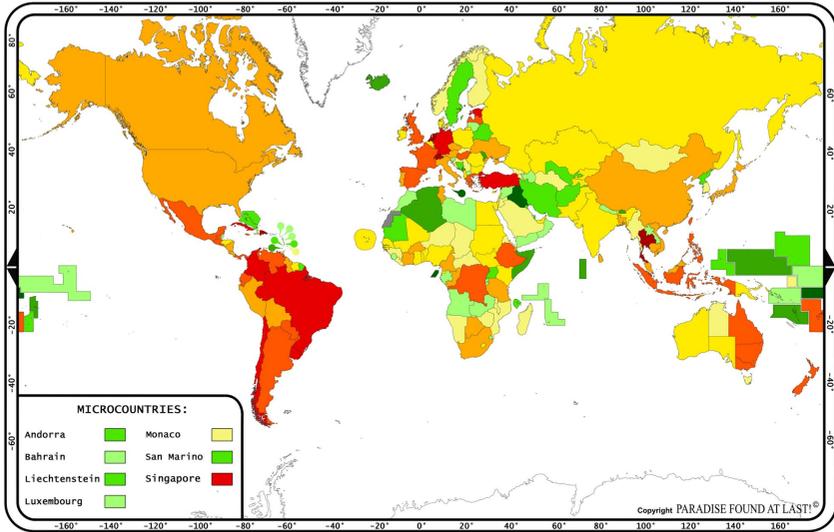
Technology has also created new kinds of jobs in the evergreen sex industry. In addition to the usual escorts – female but also male prostitutes – male or female striptease dancers and pornographic actors/actresses, there are also erotic switchboard operators and cam girls who simulate sexual acts in exchange for money on the phone and in front of a video camera respectively.

The map. A statistical analysis of the actual situation in every single

country has been carried out in order to create the *world map of prostitution*. The spreading of the phenomenon within a geographical area and the different kinds of legislative approaches (legal, abolitionist and prohibitionist) have been taken into account to define an index showing how easy it can be to find and have access to prostitution. The green colour (null) refers to the countries where it is neither easy nor advisable to look for prostitutes. On the contrary, the red colour (extremely high) refers to the countries where it is very easy and not risky to have access to prostitution.



WORLD MAP OF PROSTITUTION



[Open the World map of independent states to see the names of the states](#)

Chapter 23

Human relations

We have discussed some important social core issues and many others will follow. However, there are other themes that need to be discussed although some may consider them to be superficial but for others it may be important. This is the reason why minor subjects will also be analysed. However, there is still a long way to go. This section is particularly compelling and intriguing. Now you are on a plain that will enable you to broaden your horizons. You are going to be shown the secrets underlying the structure of the world's population. Are there more men or women on Earth? Which nations are made up of more youths than seniors? Where is it possible to find more people your age? What are the countries with more men and those with more women? Where are those with more singles?

The database supplied by the UNPD, which stands for United Nations Population Division, has revealed some important statistics regarding population. For each country, the following topics will be examined:

- The rate of people who are singles;
- The rate ratio between males and females (referred to with the term: how many women for 100 men?);
- Population distribution by age group.

The first paragraph, which is about people who are single, has been written from an unmarried person perspective who may choose to identify his/her own Eden in places where hypothetical male or female partners are more likely to be found.

The second paragraph examines the rate ratio between men and women, an overview of the places where the majority of people belonging to the gender

you are seeking are to be found. Even if you are not interested in this kind of information, the statistics emerging from the paragraph, map and chart attached, will allow you to understand that there are several exceptions to what may seem to be a logic distribution of people by gender and age.

Finally, the third paragraph, which examines population distribution by age groups, has the aim of supplying data, which allows you to define the number of youths and seniors forming the population of every single state. This information may be useful to the reader who is interested in a specific age group.

You can learn a number of interesting facts, which are far from being banal. The time you spend with others can significantly influence your thoughts and actions. It is important to have positive people around you qualitatively and quantitatively. So now, it is possible for you to choose what kind of people to be with in your own new Eden. This chapter has four maps. Two of them are about people who are single, one for males and one for females; one map shows the rate ratio between men and women and the last map regards youth rates. All of them refer to an age group ranging from 25 to 29. Nevertheless, by examining the proper charts you will also be able to know all the other group age rates. You will find the complete charts in the Appendix at the end of the book. Full data will show the population distribution by age group, from the teens to the elderly oldest one. The rates are subdivided into 11 age groups as shown in the Appendix, ranging from the following age groups:

- From 15 to 19
- From 20 to 24
- From 25 to 29 (which has been used to create the maps)
- From 30 to 34
- From 35 to 39
- From 40 to 44
- From 45 to 49
- From 50 to 54

- From 55 to 59
- From 60 to 64
- Over 65

Singles

The first topic of this articulate chapter regards people who are single. “Singles all over the world” share the fact that they do not have sentimental ties that are certified by civil or religious authorities. If they can afford it, “singles” tend to live on their own; otherwise they keep on living with their parents or other family members. Nowadays, an important cultural change is occurring in the wealthiest countries. There is a new way of living as a result of the loss of values that were regarded in the past as basic. The decline in religion is playing a leading role. There is also a widespread conviction that a personal relationship between two people does not need to be sealed by a “legal contract” for it to last forever. It seems that the institution of marriage is no more the basis of social life, mostly in the Northern Europe.

In the past, people who were not married and did not have any children were considered to be “weird”; nowadays they are well accepted. People tend to remain single for a long time, couples get married later in life or are less likely to get married and today’s generations have fewer children. Consequently, the populations of these European countries are rapidly ageing. The main reasons are usually said to be the lack of money, the current economic crisis, the increases in prices and unemployment. However, looking at global trends, it can be noted that the most developed countries, where everybody’s rights are safeguarded and people do not live in poor financial conditions, have the highest rates of singleness in all age groups. It must be acknowledged therefore that wealth in itself is not an incentive to create stable relationships that lead to a family, contrary to what you might think, even though you cannot say that economic uncertainty or poverty may spur people to settle down and raise a family.

Female situation. In almost all cultures, marriage is characterised by the

subjection of the wife to the husband's authority, often due to women's economic dependence on men. Conversely, an ever-growing number of women are becoming economically independent as they refuse to depend on a husband and, in many cases, prefer to live a relationship free from legal ties, as a symbol of their emancipation. Women's struggle for emancipation has been long and difficult but now they can enjoy more freedom, can fulfill their dreams and be independent both socially and professionally. A good example is Japan where there have been huge changes in women's way of thinking and behaviour. Young Japanese girls say that you do not need to have a husband to be happy. In fact, he is often an obstacle. In other words, they think it is better to be free than married. Free to work, earn, spend money and go out with friends rather than staying at home with their husband and mother-in-law. Free to have lunch at a restaurant rather than cooking; free to make a career instead of being a housewife and raise children. Marriage has always been the final stage of a woman's life but women who have higher education and have travelled do not wish it any more. On the one hand, women's future conditions are likely to improve considerably in countries where a husband is still similar to a boss rather than to a life partner. On the other hand, they may dramatically change the social structure of people, which will be based more on individualism and less on the traditional family.

Male situation. In many parts of the world, the male population prefers personal relationships without any legal ties. This lifestyle change is affecting the personality of the new male generations so that men are less likely to settle down and to become "bread winners". Consequently, courtship and romance are not their primary approach to women, as these are mainly seen as a way to satisfy their sexual instincts and pleasure.

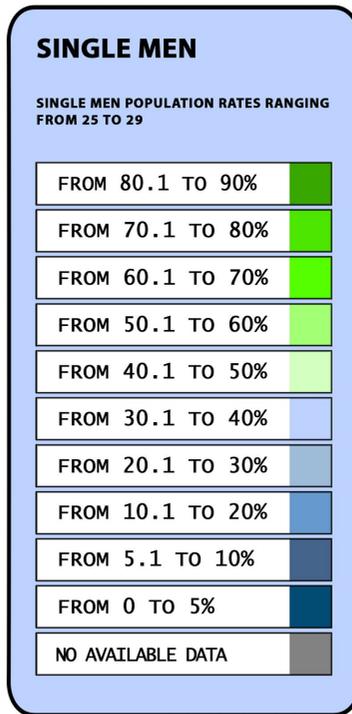
However, sometimes males and singles do not fully appreciate this change. They apparently lead an easy life and are busy in many interesting activities but that does not necessarily mean that they want an independent life. Many singles tend to be hyperactive in order not to think about their condition, which does not always equate to satisfaction. Actually, there may be some negative psychological effects associated with depression and mood swings. On the contrary, being singles does not give cause for concern to

people living in countries where the institution of marriage and the traditional family unit are kept alive. In these countries, people tend to get married quite early in life thus not remaining single for long. In these places, where old lifestyle and traditions are maintained, singles are to be found mostly in the younger age groups.

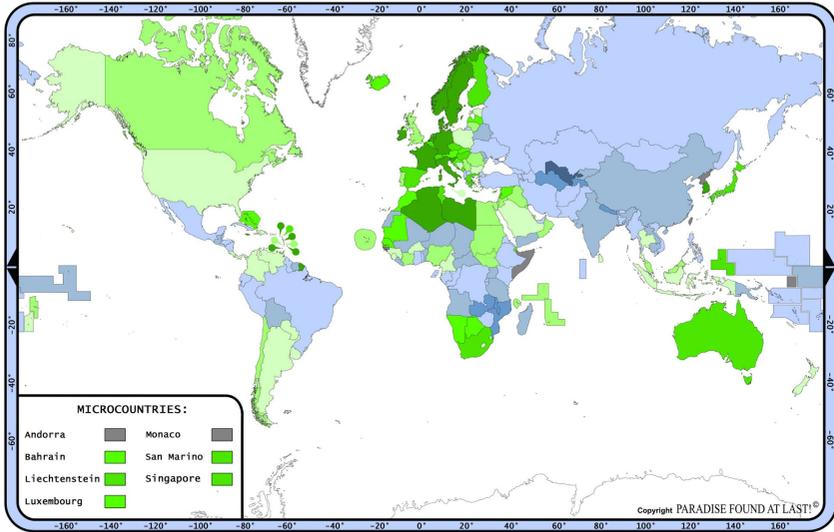
Where singles prevail. It is in large urban areas, especially in the developed countries that people tend to remain single for a longer period of time. Therefore, in the future it is expected that there will be an increase in the rate of single people in urban areas and this will lead to a series of economic changes. The first signs are already to be seen in department stores where single-dose packaging for any kind of food have been launched on the market or in the housing market where there is a growing demand for studio flats or lofts that is for single-family housing, whose prices have considerably increased. A good example of a market that has been developed for singles is to be found in Alexandria, a metropolitan area in Washington, in the USA, where about 47% of the population is composed of unmarried men and women. Despite the high concentration of singles in big urban areas such as Washington or New York, people do not usually remain single for a long time. As a matter of fact most Americans have a strong Protestant religious tradition and consider marriage as a foundation of the structure of society. As a result, people usually get married quite early in life. As for the general situation of a country, it is important to stress that Jamaica, Dominica and Grenada have the highest rates of unattached men and women among their citizens. Of the age group ranging from 25 to 29, almost 90% of males and about 80% of females are singles. Very high rates of singles are also to be found in Barbados, Sweden, Ireland and Slovenia. On the contrary, the lowest rates are in the African countries such as Malawi, Mozambique, Chad and Mali. Nepal, India and Bangladesh are also low in singles. These are states where marriage is regarded as a necessary tradition and it is usually celebrated at an early age.

The map. Two maps have been produced, to assist both male and female readers: the *world map of single men* and the *world map of single women*. Only the data concerning unmarried men and women and those who have never been married before have been taken into account. Divorced and

widowed people have been excluded. The chart, which you will find in the Appendix, will supply you with all the data concerning all the age groups shown in the introduction.

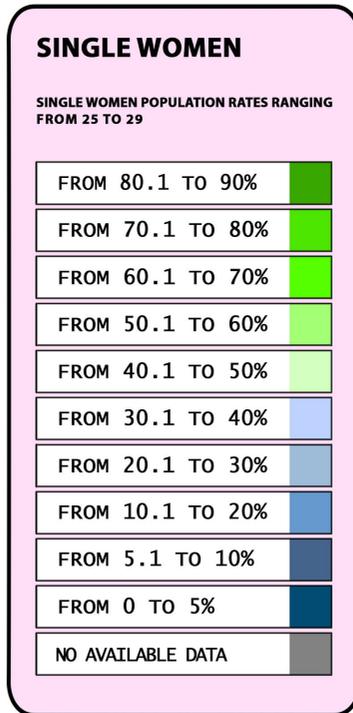


WORLD MAP OF SINGLE MEN

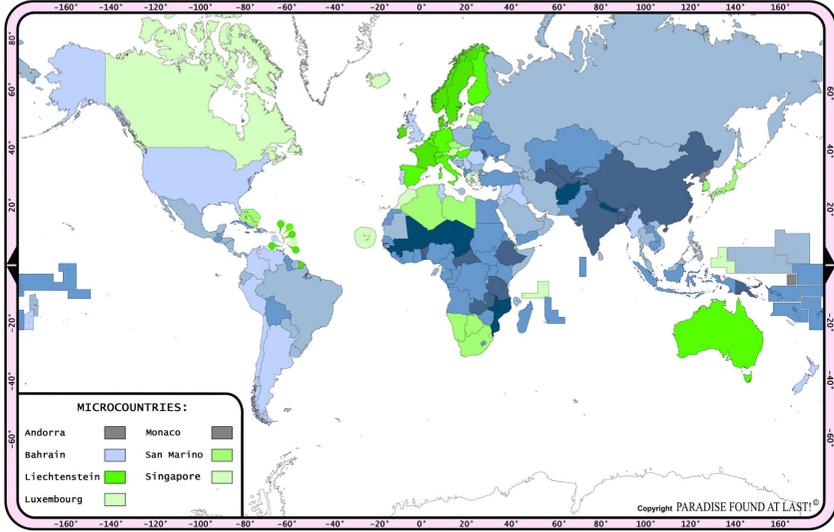


[Open the World map of independent states to see the names of the states](#)

An ever-growing number of women are choosing to be economically independent and refuse to depend on a husband. In many cases, women prefer living a couple relationship without any legal ties, as a symbol of their emancipation and self-sufficiency.



WORLD MAP OF SINGLE WOMEN



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Male to female ratio.

Are there more men or women on Earth? This is a very common question but it is difficult to give a correct answer. Therefore, an introduction is important. Usually, more boys are born than females and this is due to biological factors. On average, the gender ratio at birth is 94.5 females for every 100 males.

However, over the years, women win the battle for longevity. The global average is 123 women every 100 men in the over 65 age group, 189 women every 100 men in the over 80 age group and even 385 women every 100 men in the over 100 age group. From a biological point of view therefore, the male to female ratio tends to naturally balance again with ageing and women are even likely to outnumber men. However, actual data shows a different situation. Globally, at present, there are 98 women every 100 men.

Therefore, even though women live longer, men tend to be slightly more.

Some women are absent: what has become of them? The answer is shocking. More than 160 million women have disappeared and this is only in Asia! The truth is that they have been killed! It is a veritable silent female genocide, which involves all continents! It affects the rich and the poor, the educated and the illiterate, Hindu, Muslims, and Christians; there are no ethnical, cultural or religious barriers. Those who committed this barbaric act before the 1980s, filled girls' mouth with food in order to choke them to death or to abandon them. Today they are eliminated in a more subtle way. Ultrasound scans can reveal the sex of the baby during pregnancy, so girls are killed even before they are born. This terrifying phenomenon has dramatically increased after the introduction of this technique. Just to give you an idea, think that, for example, in Punjab, which is located in India, the gender ratio at birth was 92.5 females to 100 males when the first ultrasound scan was used in 1979. In 1991, the number of females at birth dropped to 87.5 every 100 males and in 2001, it even dropped to 79.3

every 100 males. China, Oman and Azerbaijan are just some examples of countries where female birth rate is presently very low. We hope that this inhuman and vile act will end. Even in countries where this kind of selective abortion is not widespread, parents tend to prefer a son due to their past cultural heritage. Actually when a couple is waiting for a baby they are commonly told: “Best Wishes and may your offspring be male!” This wish proves that girls tend to have a subordinate role with respect to boys.

Seven women for one man. Globally there are 98 women every 100 men nowadays, which means 0.98 for one man. Why do people commonly say and believe that there are 7 women for a man then? This statement is a cliché whenever people talk about love affairs, conquests, a breakup or talk to a person with broken heart. It is so difficult to change traditions that have been verbally passed down from generations to generations over the years, in spite of overwhelming evidence. Cliché are almost never disbelieved and are regarded as absolute unchangeable truths. It is important to start by saying that number seven occurs several times in the Sacred Scripture. It represents completeness. In particular, the statement that “there are seven women for one man” comes from a Biblical episode mentioned in the book of Isaiah, Chapter 4, Verse 1. This event occurred in 740 BC, when the people of Israel had begun to drift away spiritually and engaged in struggles and wars against Syria. The prophet Isaiah predicted that those wars would lead to the decimation of the male population so few men would be left that even 7 women would fight for the same man. They would accept polygamy and concubinage in order to play even a small part in the life of a man so that they could partly escape the shame of being widows, unwedded or childless. Therefore, the claim “seven women for one man” clearly refers to this Biblical account, which is limited to that particular time and specific circumstance and it cannot be applied to any place and time. The same situation may have occurred elsewhere and at different times in history, maybe in war times when almost all the young men who were fit for military services were forced to go to war and leave their cities, towns and villages, which were then populated only by abandoned women. In these cases, it is likely that the few men who were left at home could dispose of seven women!

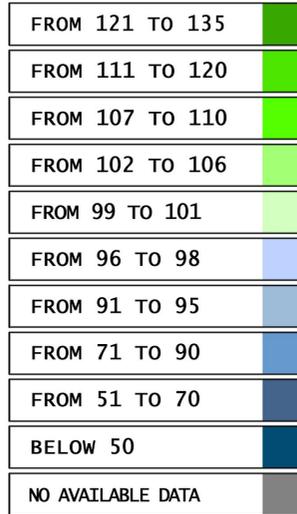
Today's reality is different. Taking into account the totality of the world's population, today the gender ratio is 98 women every 100 men. However, the situation changes from country to country and according to the different age groups. The countries belonging to the Persian Gulf – United Arab Emirates, Oman, Kuwait, Saudi Arabia, Bahrain and Qatar – have a peculiarity: males far outnumber females in terms of population rate in all age groups. In Qatar there is an extremely unbalanced gender ratio: there are only 20 women every 100 men! The Persian Gulf region situation is due to low-cost foreign workers coming mainly from China, India, Pakistan, Bangladesh and the Philippines that occurred during the 1990s. According to the immigration policy of that time, these workers were not allowed to take their wives and children with them. This event, which extended over several years, has led to a dramatic increase in the number of men with respect to women and this phenomenon is still to be found.

Quite different is the situation in Benin, a small state in North-West Africa, which once was a French colony. Here women have global numerical superiority; there are 133 women every 100 men. They are African horsewomen, female warriors, mothers, workers and wives who were subjected to the King in the past and now share a common virtue: courage! Just like the terrible fighters of the ancient kingdom of Dahomey, the old name of the country, today's brave Beninoise women not only show great industriousness and spirit of enterprise, but also strong family ties. They actually live for their families.

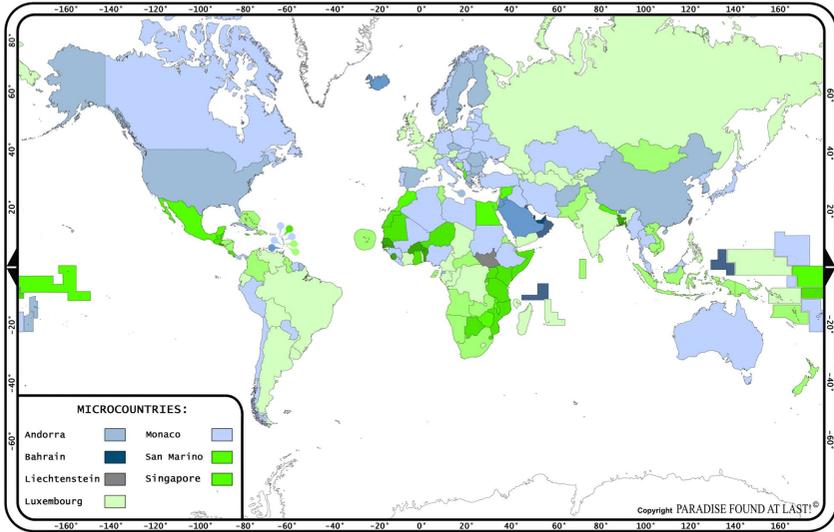
The map. Thanks to the *world map of how many women every 100 men?* you can see the female to male ratio of the world's population, in the age group ranging from 25 to 29. The chart, which is available in The Appendix, supplies you with all the data concerning all age groups shown in the introduction.

HOW MANY WOMEN EVERY 100 MEN EVERY 100 MEN?

NUMBER OF WOMEN EVERY 100 MEN
AGE GROUP RANGING FROM 25 TO 29



WORLD MAP OF HOW MANY WOMEN EVERY 100 MEN ?



[Open the World map of independent states to see the names of the states](#)

Age Groups

Here you can find the data concerning population distribution for age groups so you can appreciate the present world situation. Readers may be interested in this subject so that they can learn if the age group they prefer has a high rate of people. By analysing the data of the chart referring to this paragraph, which is shown in the Appendix, you can easily learn if the population of a given country is composed mostly of youths or seniors. You should consider that when the population rate ranging from 15 to 19 or from 20 to 24 is by far superior to the one ranging from 40 to 44 and from 45 to 49, this population is said to be “young”. This means that society is undergoing radical changes, which may be due to two factors:

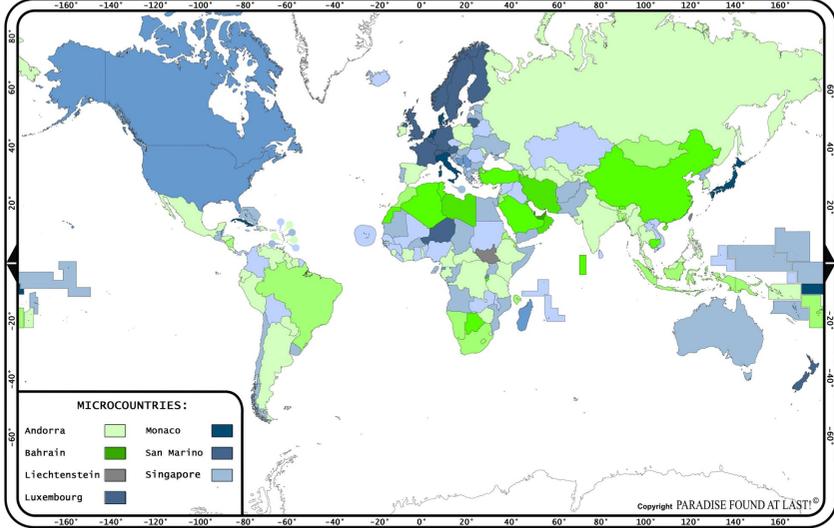
- high birth rate;
- relatively low mean age, to which a low expectancy of life corresponds.

These factors may often happen simultaneously. On the contrary, when people of average age ranging from 40 to 50 prevail with respect to youths ranging from 20 to 24 or to adolescents ranging from 15 to 19, then it means that birthrate is declining and that average age is increasing. This is the opposite phenomenon. Is a young or an old population preferable? It depends. Ideally, a well-balanced population with birth rate counterbalancing death rate is preferable. This stability helps to keep a high standard of living for a large part of the population. Developing countries usually have large youth populations. If you visit some countries in the Persian Gulf such as Qatar and United Arab Emirates, or some regions in Asia such as China and Bhutan, or some countries in Northern Africa such as Libya and Tunisia, you will be surrounded by a high number of youths. In contrast, if your destination is located in Western Europe, middle aged or elderly people will mainly surround you.

The map. The *world map of population ranging from 25 to 29* shows you the distribution of population in this age group and tells you whether the

population is mostly young or elderly. The chart, which is available in the Appendix, on the contrary, supplies you with the data concerning all the age groups shown in the introduction.

WORLD MAP OF POPULATION RANGING FROM 25 TO 29



[Open the World map of independent states to see the names of the states](#)

Chapter 24

Longevity

To postpone death as much as possible and live a healthy life is the desire of many. Ageing and death is undesirable. You are searching for your Eden and this amazing journey offers you very important questions: Where do people live the longest and why? What are the countries with the shortest life expectancy rates?

What drives mankind towards death? Each deadly disease, each lethal virus that can invade the body, each stressful event, each negative state of mind can negatively affect and degrade individual cells and cause structural changes in molecules. Whenever adverse event occurs, human health is somehow damaged and life gets inexorably shorter. Over the last 100 years, there has been a remarkable increase in life expectancy in some countries. People are living longer now as some viruses responsible for serious diseases have been eradicated. This has particularly occurred in developed countries and it is due to a number of factors including improvements in sanitary conditions and the access to a wide range of health and social services. Two thousand years ago, 3 in 4 babies would die at birth. Nowadays things have considerably changed in developed countries and all 4 babies have a very good chance of survival. In fact, they can also reach a venerable age. Social progress is in constant evolution. Scientific research and technological development will enable mankind to reach new goals. In particular, global genetics research is trying to provide additional information on how genetics relates to diseases and is also studying new treatments, which may eventually lead to a longer and better life. Scientists agree that the main biochemical and cellular structures leading to ageing and longevity are likely to be identified within the next decade. Therefore, it can be inferred that cellular ageing can be manipulated and that this goal can be achieved, even though we are only at the dawning of this revolution. It is thought that genetic factors are responsible for about 25% of the variation in life

span. Professor Pellicci, who is the director of the Department of Experimental Oncology at the European Institute of Oncology (IEO) in Milan said: “Centenarians in good shape may shortly become the norm. Our body is genetically programmed to last for 120 years. This is written in our DNA and diseases and accidents apart, our life span is fixed. The goal is not immortality but living longer, keeping people younger and healthier longer, with fewer diseases”.

What has already been written about human beings? In the Middle Ages, it was believed that each person was born with a definite number of breaths. Once these breaths were taken, people would inexorably die. Consequently, people tried not to waste their breath and devoted themselves to slow and easy activities. Nowadays this theory may seem to be strange and old-fashioned, but it may be linked to what modern scientists are discovering. The law of nature eventually leads human beings to die. As a matter of fact, each cell has a time to live and a time to die. The human body is made up of about 100 thousand billion cells. These cells, coordinating in perfect synergy, allow you to concentrate on the pages of this book! Genetics has discovered that each cell is programmed to last for a fixed period of time. This is one of the apparently paradoxical phenomena associated with a cell, which is known as apoptosis, the process of programmed cell death. Human cells have the ability to self-renew themselves and can reproduce up to 50 or 60 times at the most in a life time, before they deteriorate and die. The genetic material that is involved in cellular reproduction is Deoxyribonucleic Acid, known as DNA. DNA is a double helix where chromosomes, which are formed by genes, are to be found. Cells need a program to be able to replicate themselves that is contained within the genes themselves. Telomeres are located at the end of the chromosomes and act as a biological clock. Every time the cell divides, it also duplicates a sequence of telomeres, which become shorter. In other words, the chromosomes gradually lose parts of their end sequence. Once telomeres have shortened to a critical length, the cell can no longer divide and dies. In 1985, researchers at Berkeley University, in the USA, showed that an enzyme called Telomerase plays a crucial role in the process of cellular reproduction. Telomerase activity is able to avoid programmed cellular death so that new sequences of telomeres can be always duplicated.

As a matter of fact, there is evidence that increasing telomerase activity may result in telomeres lengthening. In 2006, the Geron Corporation announced that two new drugs able to activate telomerase would be studied. It thus appears that something is moving towards a longer life.

Deterioration. However, there is still a long way to go. Cell damage and early death can also be caused by free radicals. These are molecules whose ionized atoms contain impaired electrons that are very reactive and tend to subtract atoms from the surrounding molecules so that the cell around them are damaged. Many factors may generate free radicals in cells including exposure to X-ray, solar ultraviolet light and radioactivity, to which a large number of people are daily exposed in one way or another. This kind of damage may also be due to mutagenic and carcinogenic effects of chemical substances that may be voluntary or involuntary taken, as they are part of a person's diet. Therefore, ageing could also be the result of cell damage. Cell ageing causes the deterioration of the body vital functions, which leads to death even in the absence of a disease. As people age, their body starts to deteriorate. Ageing may be associated with loss of skin elasticity, which results in visible wrinkles, with muscle weakness, unusual sense of tiredness, a chronic inflammatory state, which may increase the risk of diseases, with hormone imbalances, immune system dysfunction, oxidative damage and cardiovascular diseases. At present, coronary heart disease is the leading global cause of death and it is believed that high levels of LDL cholesterol can increase its risk. Several physicians and nutrition specialists claim that high blood cholesterol may be caused by a high fat diet; other doctors think that it may be the result of a high sugar diet. Some studies suggest that a higher intake of sugar is associated with increased coronary heart disease. As a matter of fact, there is some evidence that higher sucrose consumption (common sugar) may lead to increased blood cholesterol levels. Here is some good advice: you should keep away from the sugar bowl! Besides, you should avoid high alcohol consumption and drug abuse and you should not smoke. The use, but mostly the abuse of these harmful substances will not allow you to live as much as you could with a healthy lifestyle. People should go back to healthier lifestyles and to natural food. Vegetarian diets provide the nutrients, which are necessary to be healthy, whereas processed food has led people to suffer from a long

series of new diseases relating to social wellbeing.

Where centenarians live. As the aim of this book is to accompany you on your journey to identify your Eden, it is essential to talk about the special places where people live longer, which are clearly characterised by positive aspects, and where you can find the healthiest people in the world, who are renowned for their longevity. Some of them live in places little known to ordinary people. It is not often possible to say how old they are as reliable registers or identity cards do not exist but researchers agree that the majority of these individuals are over 100; some even over 120. The legendary Hunza people, named after the homonymous Himalayan region, are, on average, over 100 and still work hard in the fields. They are unbeatable climbers and are able to walk 300 kilometres without getting tired! Believe it or not, they are always healthy and mostly happy! They are vegetarians and need just 1200 calories a day.

There are 7 places on Earth where people stay healthy as they grow old and, in many cases, they live up to 100 and more. They are:

- the Hunza Region in Northern Pakistan;
- the Valley of Vilcabamba in Ecuador;
- the Caucasus Region of Abkhazia, in Georgia, Russian Federation;
- the Okinawa Islands, in the south of Japan;
- the Greek Island of Ikaria;
- the Region of Barbagia, in Sardinia, Italy;
- Loma Linda, in California, USA.

All these populations share important factors leading to longevity. Firstly, they pay attention to what they eat. They have a varied and balanced diet, which is based on fruit, vegetables, nuts, cereals and legumes. They need no more than 2,000 calories a day. In other words, they do not eat much and prefer fresh and often raw food. Secondly, they exercise regularly. They walk for long distances over plains and mountains. Sometimes they are obliged to; sometimes it is for enjoyment, so they build stamina and

endurance. Thirdly, they are able to establish and maintain good human relations. They truly love each other and have a strong sense of community, so that nobody feels alone. Solidarity is the foundation of this kind of society. Fourthly, they are able and want to avoid stressful situations. Whenever they feel tired, they have a break which may even last for a few hours. They relax and take it easy. Therefore, they seldom have physical problems and thus live longer, healthier and happier.

The profile of a centenarian. People who live longer, not necessarily those who belong to the 7 regions mentioned above, tend to share common features. It is patently obvious that all people who live longer have a slender build. This is mostly due to the fact that they are not tempted by food. They do not eat much and prefer natural food. Their blood tests show that they have low levels of cholesterol, triglycerides, glucose and insulin. Moreover, they have the lowest incidence of cardiovascular disease and cancer. This may be due to their high sensitivity to insulin, which may suggest that correct glucose metabolism and insulin action play an important role in longevity.

The importance of tradition. It is essential to stress another factor. Populations still eating local food suffer from very fewer dental diseases, have fewer caries and are healthier. Some native populations were very healthy in the past but, after changing their lifestyle and eating habits, they have become unhealthy. Whenever indigenous people come into contact with western people, they assimilate western traditions and lifestyles. Subsequently, they develop diseases and their life span shortens considerably until it becomes equal to that of the so-called “white man”. They make the big mistake of introducing processed food in their diet such as refined food or parboiled rice. A healthy and balanced diet is a critical factor in natural anti-ageing. A healthy body better eliminates waste and renews itself more efficiently.

Every cell in your body is replaced by a new one. Some studies have shown that red blood cells survive for about one month but there are also cells that last less. There is a complete body chemistry change on a seven-year-cycle that turns the human body into a definitively new one! New cells

are generated from the chemicals in the food we eat. In other words, we are what we eat so everybody should have a healthy and balanced diet to keep their body healthy. Fruit and vegetables contain essential nutrients, so they should be part of a healthy diet. It is also important to avoid overeating; as obese people do not have a long life. For example, if you weigh 70 kg, 15 kg more can shorten your life by four years, whereas 30 kg more can shorten your life even by 10 years. A low-fat hypocaloric diet can cause the metabolism to slow down and can reduce insulin levels. These factors, as well as low body temperature, are always present in people who live longer. Daily caloric intake should not exceed 2,000 calories a day. Participating in regular aerobic exercise is also essential for your health as it can help you live longer. Examples of aerobic exercise include walking briskly, jogging, cycling or swimming. Regular aerobic exercise improves the heart, the lungs, blood vessel health, increases muscular strength, strengthens ligaments and helps you control your weight. Being overweight may take years off your life. In particular, you should avoid abdominal fat, as it is very harmful. As a matter of fact, adipose tissue releases inflammatory chemicals called cytokines, which can lead to the development of cardiovascular diseases, diabetes and cancer. Moreover, a happier, healthier and longer life should also be associated with mental health. Therefore, you also need mental exercise to keep your brain as healthy and fit as your body. You should remember what Renato Dulbecco, the Italian biologist who was awarded a Nobel Prize for Medicine and who died recently, said: "When an initial set of brain connections occurs, it is never permanent, through the principle "use it or lose it". If a nerve fibre comes from a very active nerve cell, it continues developing new connections, much like a tree branch; on the contrary, if the nerve fibre comes from an inactive cell, its connections decrease until they die. This is the reason why elderly people should keep their brain active as much as possible, to prevent them from losing brain connection as they age". Therefore, it is essential to improve your brain fitness through mathematical logic exercises, reading and reasoning. If the brain is not used, it becomes atrophied, loses elasticity and "forgets" some of its functions, which are difficult to restore, just as it happens to any other human organ. A longer and healthier life is also associated with the ability to eliminate, or at least to reduce, stressful situations. Therefore, you should engage in your favourite social and productive activities such as gardening, walking, culture, recreation and playing with children. You should also

allow yourself some breaks to unwind and relax during the day, stop working when you feel tired and catch your breath. Besides, close, loving relationships are so crucial for a person's well-being so you should not withdraw into yourself but be part of the right "tribe". It is vital for you to get in touch with people with similar interests so you can communicate, be yourself and share similar hobbies with them. Last, but not least, love should be first in your life. Not only love for your partner, but also love for life and people. You should have an optimistic and positive attitude towards life, be in a cheerful mood and enjoy every single day of your life. Horace used to say: "*Carpe Diem*." (Seize the Day). In short, a healthy, natural lifestyle is all you need to live a happier and longer life.

Why do women live longer than men? In the developed countries, on an average, women live from five to ten years longer than men. Moreover, 80% of people who are over 100 are women. This is mainly due to the fact that women tend to suffer from cardiovascular diseases such as heart attacks and strokes later in life with respect to men. These diseases may affect women when they are usually over 70, therefore about ten years later than men, provided that they adopt a healthy lifestyle. In the past, it was thought that this difference was mainly due to oestrogens. Nowadays, however, physicians disagree and believe that giving oestrogens to postmenopausal women may be harmful. Women are likely to be subject to cardiovascular diseases later in life as they are relatively iron-deficient with respect to men because of menstruation. Iron plays a leading role in cellular reactions, which generate damaging free radicals. As these penetrate cell membranes, they can damage DNA and can lead to premature cell ageing. Specific studies carried out in Leiden, The Netherlands, have shown that in the regions where people eat very little red meat, the incidence of heart failure and strokes was less than half.

The countries with the highest life expectancy and those with the lowest. Today's life expectancy is, on average, 79 in the developed countries, 67 in the developing countries and 55 in the underdeveloped countries. There is a 12-year difference between one group and the next one. The worst situation is to be found in the Sub Saharian Africa, where life expectancy is only 50 or even less. The extreme case is Sierra Leone, the

country with the lowest life expectancy in the world, which is 46. These countries are afflicted by alarming political-economic, sanitary and social conflicts, where the HIV virus continues to be a plague claiming many victims. Rural areas experience the worst situation as sanitary conditions, drinking water supply and education levels are even more unstable and infant-maternal mortality rates are very high. The countries with the highest life expectancy, which is over 80, are mostly to be found in North-Western Europe where the problems mentioned above have been tackled and solved thanks to the continuous economic development

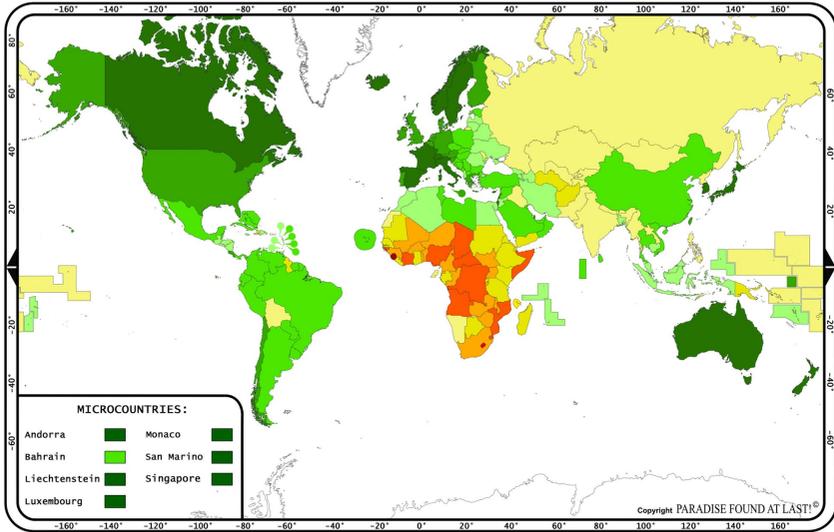
The map. Many factors influence life expectancy in the world's countries including dietary habits, lifestyle that can be more or less unhealthy, the levels of sanitary conditions and the quality of the health care system. The *world map of longevity* shows the average male and female life expectancy, so you can easily understand the different situation in every country. This is a useful tool to evaluate the degree of a country's economic development, as it is related to the quality of life and to socio-sanitary aspects. Japan has the highest average life expectancy in the world, which is 84. This is an example that should be imitated.

LONGEVITY

AVERAGE LIFE EXPECTANCY

FROM 81 TO 84 YEARS	
FROM 78 TO 81 YEARS	
FROM 74 TO 78 YEARS	
FROM 70 TO 74 YEARS	
FROM 65 TO 70 YEARS	
FROM 60 TO 65 YEARS	
FROM 55 TO 60 YEARS	
FROM 50 TO 55 YEARS	
FROM 48 TO 50 YEARS	
FROM 46 TO 48 YEARS	
NO AVAILABLE DATA	

WORLD MAP OF LONGEVITY



[Open the World map of independent states to see the names of the states](#)

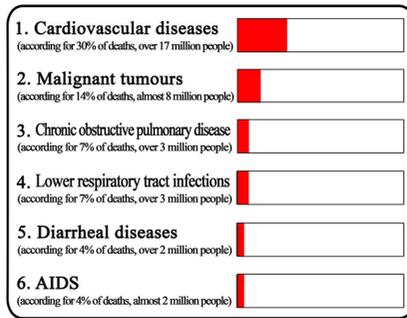
Chapter 25

Human diseases

In certain countries travellers may have a higher risk of developing infectious diseases. Consequently, to choose the best location to live, it is imperative that we discuss the principal diseases that may affect you and the regions where they are to be found.

Other countries' diseases. Not all diseases affecting a country involve health risks but an analysis of the risks is the optimum way to proceed. It is also very important to consider additional measures such as effective vaccines or preventive medications able to reduce the most serious health problems. As we will see later, some diseases have been eliminated from many parts of the world, but still exist in other places and their infectious agents are extremely virulent and terribly contagious. This could also be due to the fact that the immune system is not trained to resist these diseases. Actually, when you go to a different climate you may develop a health problem you have never experienced before. It could simply be a mild indisposition from which you soon recover, then you acclimatise and feel fine. Other indispositions might occur when vital behavioural rules are not respected. However, once you follow the right instructions you will promptly improve. Finally, there are more insidious diseases against which prevention is essential.

The most lethal diseases. Every year about 60 million people worldwide die of diseases or accidents. Below you will find a classification of the diseases with the highest mortality rates:



Altogether, the above mentioned diseases cause 36 million deaths every year, namely more than half of all deaths occurring globally (60 million deaths)! The remaining 24 million deaths are partly caused by “minor” diseases – that is less aggressive diseases – such as tuberculosis, diabetes, cirrhosis of the liver, Alzheimer’s etc. and partly by accidents, murders, suicides and wars.

Diseases may be divided into two major groups: communicable and non-communicable. The latter are the leading global causes of death, whereas communicable diseases, which are also known as infectious or contagious diseases, are responsible for a lower number of deaths, but this is the danger people living overseas mainly have to face. The infectious agent of “Communicable diseases” can be transmitted from one individual to another. All infectious and parasitic diseases are communicable diseases.

NON-COMMUNICABLE DISEASES

Let us consider non-communicable diseases first. They are not caused by viruses, bacteria or pathogens, therefore not infectious and cannot be spread from person to person. In theory, they present a lower risk for travellers or for those who decide to live overseas. Sometimes they depend on a country’s lifestyle so the risk of developing them may increase if people moving abroad adopt the local lifestyle.

Cardiovascular diseases

1. The most common form of non-communicable diseases are

cardiovascular. They are globally the worst health scourge and, as you can see from the chart above, the leading cause of death. There are different kinds of cardiovascular diseases but the most serious are ischemic heart diseases, which are characterised by reduced blood supply to the heart and cerebro-vascular diseases, which occur when the brain does not receive sufficient blood flow. The heart is the most powerful organ in the human body; it is amazing how long it can beat! It works hard and constantly in the course of a lifetime. The average heart beats 40 million times a year. If a person lives until the age of 80, for example, it means that his/her heart has beaten constantly over 3 billion times. Yet, people find it hard to keep their heart and circulatory system in good shape as heart diseases are the world's leading cause of death. Physicians have no absolute certainties about the causes that may lead to heart diseases. However, in the long run, unhealthy lifestyles may be associated with heart damage and to the arteries. This may gradually lead to the inflammation of the inner membranes of the heart (endocarditis) or to the inflammation of the inner layer of an artery (endarteritis). Chronic inflammation is clearly a state that should be avoided. People should maintain a healthy lifestyle and should stick to 10 basic rules as follows:

2. Eat organic fruit and vegetables every day, when possible.
3. Eliminate refined sugar and artificial sweeteners like aspartame.
4. Eliminate white flour products such as bread, pasta, biscuits, crackers and replace them with wholegrain flour.
5. Eliminate or reduce animal proteins contained in milk, meat and cheese.
6. Avoid substances such as tobacco and coffee.
7. Avoid excessive consumption of alcohol; no more than one glass per day for men and half a glass for women.
8. Avoid being overweight; follow a healthy balanced diet if you tend to put on weight.
9. Avoid an unhealthy lifestyle that may lead to high blood pressure such as a high salt diet and obesity itself.

10. Do regular physical activity.
11. Avoid stress, sleep deficiency and excessive emotions.

It is not easy to conform to these rules; try your best not to exceed. Breaking one or more rules does not necessarily mean you will have heart problems. It also depends on the rule you break and how long you break it for. Moreover, some people have a higher risk of developing heart diseases due to genetic factors. It is also important to emphasize that cardiovascular diseases are geographically widespread even though at different rates. This confirms that many people find it hard to follow the ten rules mentioned above. The higher cardiovascular diseases death rates are to be found in Asia and Africa. In Europe and North America death rates are not as high as the global average, even though the rates of the former Soviet bloc are worrying. A low incidence is registered in Central and South America as well as in Australia and New Zealand.

Malignant Tumours

Cancer is the second leading cause of death. The highest death rates involve cancer of the trachea, bronchus and lung, followed by stomach, colon rectal, liver and breast cancers. Cancer occurs when cells undergo a degenerative change due to genetic alterations, causing them to grow abnormally and multiply out of control. Cancer cells literally go crazy and when a weakened immune system cannot destroy them, they thrive and develop what is commonly known as tumour or cancer. Actually cancer is a disease of the body cells and as the body has different types of cells, there are also different kinds of cancers which affect different human organs and tissues. Therefore, different diagnostic tests and therapeutic measures are needed. For example, official medical science is still unable to provide univocal causes and, consequently, univocal treatments for cancer. However, it has been observed that there has been an increase in the incidence of cancers since the beginning of the Industrial Revolution. Before this, cancer cases were rather rare and totally absent in some areas of the world. It can therefore be inferred that there must be a link between the spreading of the disease and chemical substances. It is generally thought that cancer numbers have increased not only because people are living

longer, but also because people have been exposed to carcinogenic chemicals which are present everywhere: in the food we eat, in the water we drink, in the air we breathe and in the objects we use. In addition, the increasing exposure to radiation is noteworthy. Cancer is also caused either by active or passive cigarette smoking and alcohol abuse. Cancer is primarily a disease of older people. Actually, about 70% of all cancers are diagnosed in people over 60 but nowadays cancer incidence rates among children and youths are increasing. Sometimes the disease is genetically transmitted from parent to child. Genetic factors account for 1 out of every 10 cancer cases. As a general rule, inherited cancer refers to an abnormal gene which is being passed on from parent to child. Sometimes recessive genes, which are silent in parents, can be inherited and fully activated in children. There is strong evidence that a person's risk of developing cancer can be significantly reduced by leading a healthy lifestyle. For example, women who have many children and breastfeed them may have a lower breast cancer risk. The reason is that breastfeeding might increase mammary cell maturation. Mothers should therefore breastfeed their babies for at least 6 months and possibly even longer. Long breastfeeding could prevent breast cancer. Experts suggest that a healthy diet rich in vitamins may not only reduce the risk of cancer and heart disease but also be useful in their treatments. In other words, some antioxidant supplements such as vitamins A, C, E and selenium can help prevent cancer. These substances may prevent the development of cancer as they interfere with the process that can trigger cell damage as they boost the immune system to destroy cancer cells before they start multiplying out of control. Actually, keeping away from any source of chemical and radioactive pollutants would be the most sensible thing to do. That would mean radically changing your lifestyle, abandoning urban areas and isolating yourself from modern life. The majority of people living in unwholesome urban areas may not be ready for such a drastic change but you could always live in areas with low air pollution. Bio-architecture has been trying to pursue these objectives for several years now.

Cancer is globally widespread but the situation appears particularly worrying in Europe. Asia and South America follow, except for some countries like Mexico and Venezuela, where cancer incidence rates are low. The problem is also alarming in Africa, even though the northern coastal strip overlooking the Mediterranean accounts for low death rates. The Middle East has low cancer rates, except countries such as Iraq where

cancer rates are almost double the average in its geographical region. In contrast, cancer incidence rates are very low in Oceania, the Pacific Ocean, whereas New Zealand and Australia are in line with the global average.

Chronic obstructive pulmonary disease

After cardiovascular diseases and cancer, the third global leading cause of death is COPD, the short form for chronic obstructive pulmonary disease, a non communicable disease. It involves the respiratory system, and is characterised by chronic obstruction of lung airflow that interferes with normal breathing and is not fully reversible. It is a progressive disease which tends to get worse in time. It is associated with chronic inflammation of the airways, lung tissue and pulmonary blood vessels and is an incurable disease. Emphysema and chronic bronchitis are both forms of COPD, which are non communicative, namely non-infectious diseases. Cigarette smoking is the major risk factor for COPD and it has been estimated that 15-20% of habitual smokers are diagnosed with this disease. Moreover, workers who are exposed to dust, irritant powders, gas vapours, in particular cadmium and silica in the workplace, are at high risk of developing COPD. Other minor risk factors include air pollution, not only atmospheric pollution caused by smog and fine particles, but also indoor air pollution due to emissions from stoves, electrical appliances and air conditioning systems. COPD causes the lungs to lose their shape and elasticity over time so that lung capacity is gradually reduced and this leads to death by asphyxiation. There is no cure for COPD but treatment can sometimes slow the progression of the disease and relieve symptoms. Bronchodilators are medications used to treat COPD. When inhaled, they expand the bronchial tubes allowing more air to flow through lungs and bronchi. Severe cases of acute exacerbations of COPD may be treated with powerful anti-inflammatory drugs like cortisone. There are also alternative treatments such as oxygen therapy, which provides supplemental oxygen and mechanical ventilation. This can help patients in acute respiratory distress. This disease is not uniformly distributed around the world. Even though the situation is particularly serious in a few areas of the planet, they account for a great number of deaths. COPD affects mostly China and India where the highest numbers of deaths thus accounting for a very high death rate, about 1 million pro capita per year. Other countries particularly hit by this

disease are: Armenia, The Marshall Islands, Denmark, Tuvalu, United Kingdom, Belgium, Thailand, Sri Lanka, Norway, USA and Jamaica.

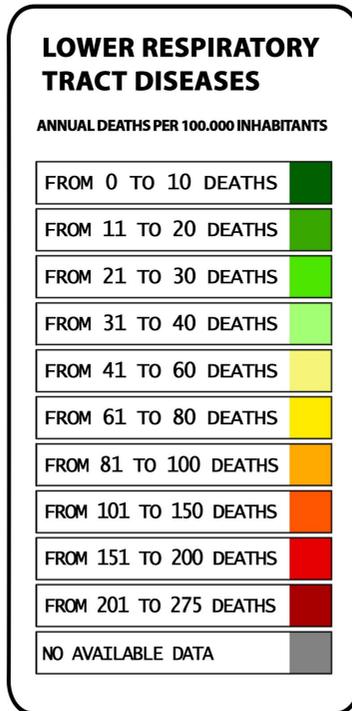
COMMUNICABLE DISEASES

So far non-communicable diseases have been analysed. Let us now consider infectious diseases, which are caused by pathogenic agents such as viruses, bacteria, fungi, moulds etc. These are mostly to be found in countries with poor sanitary and hygienic conditions. Nowadays, an ever growing number of people from developed countries travel to developing countries on business or for pleasure, but these countries have a substantially higher risk of infectious diseases due to climate conditions and/or poor sanitation. Each contagious disease is characterised by a pathogenic mechanism of interaction between the immune system and infectious agents. These diseases can be spread through direct contact, or through the exchange of body fluids, such as through sexual contact or via air. Faeces from infected humans and polluted water are very effective tools for spreading these diseases.

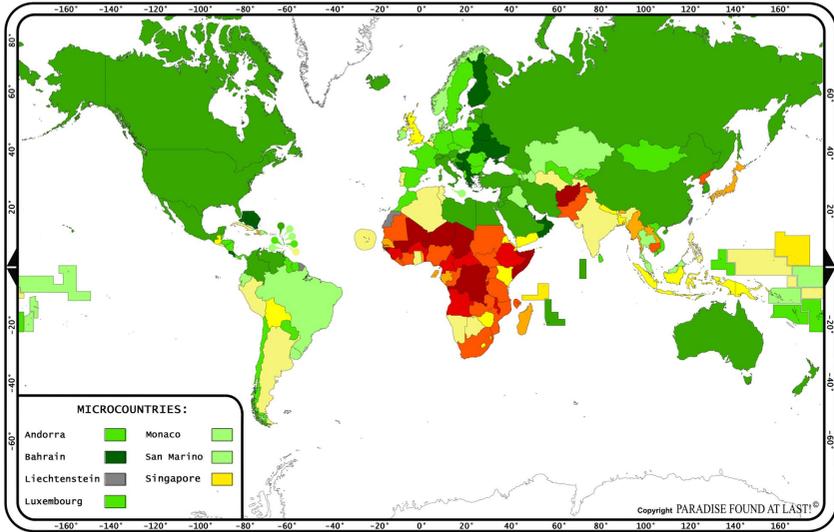
Lower respiratory tract infections

Lower respiratory tract infections are the most dangerous among the infectious diseases. They are the fourth leading cause of death worldwide, after cardiovascular disease, cancer and COPB. Lower respiratory tract infections are mainly due to bacteria which cause bronchitis, bronchopneumonia, pneumonia and pleurisy. If these infections are not adequately treated, they can lead to death. Pneumonia is the most dangerous and the main cause of death in children under the age of five. Not only infants are at risk, but also the elderly, cardiac patients, diabetics and the immune-suppressed. These infections can be effectively treated with several kinds of drugs such as antibiotics but are not often available or are too expensive or are of poor quality in developing countries. On the other hand, these diseases can be easily cured in countries where antibiotics are readily available. To avoid such infections you need to breathe fresh, not polluted air, avoid smoking and endeavour to strengthen ones immune system. You should also consider a vaccination if you wish to reduce the risks which may lead to lower respiratory tract infections. Vaccination is strongly recommended for people with high risk.

The map. The *world map of lower respiratory tract diseases* shows global death rates. Afghanistan is the worst affected country with 275 deaths every 100 thousand inhabitants. The lowest incidence rate is to be found in Qatar, with only 2,1 deaths every 100 thousand inhabitants.



WORLD MAP OF LOWER RESPIRATORY TRACT DISEASES



[Open the World map of independent states to see the names of the states](#)

Diarrheal diseases

Acute diarrhea is also an infectious disease. More than 2 million people die from diarrhea every year as it is the fifth cause of death worldwide. It mainly affects children. If you live in a Western country, it might seem strange that people die from such a disease. However, if people who are vulnerable to this disease are not treated rapidly and properly, they can die. Those who love travelling to exotic places located in developing countries should be aware that they run the risk of being affected by this insidious disease. Actually, diarrhea mainly occurs amongst travellers who visit high-risk areas and it can adversely affect travel plans and the pleasure of a holiday. This is the reason why travellers may be anxious before departing. Invariably medicines to combat diarrhea are packed in their first aid kits. The so-called travellers' diarrhea, known as Montezuma's revenge, affects almost all tourists from developed countries. Montezuma was the last emperor of the Aztec empire ruling in Tenochtitlan, a Mexican city, until 1520 AD, when Hernan Cortez, the famous Spanish colonizer, arrived. Nowadays Europeans, who visit high risk countries as simple travellers very often catch this acute gastrointestinal infection, suffering at least two or three stools per day. Some people think that this is the right punishment for the terrible crimes committed first by the Spanish colonisers and subsequently by other Western countries. However, Montezuma's revenge hits at random and affects both the good and the bad. Today the term "Montezuma's revenge" commonly refers to the series of intestinal problems that tourists may have when visiting countries with poor sanitary and hygienic conditions such as lack of safe drinking water, overcrowding and inadequate waste disposal. This usually occurs in the tropical developing countries. Viruses, bacteria, fungi and protozoans tend to be less aggressive below 30°C and therefore the temperate climate countries are less affected. Diarrheal diseases are caused by different types of micro-organisms which enter the human body through the mouth. For example, you might drink contaminated water or eat food which has been washed with contaminated water, or you might clean your teeth with unsafe drinking water, or you might swim in contaminated surface water. Diarrhea can be caused by several micro-organisms. Cholera and amebiasis are the most

severe forms of diarrhea. It is also worth mentioning typhoid fever, bacillary diarrhea, giardiasis and gastro-enteritis. Once a person gets infected, the disease usually starts with watery or bloody diarrhea depending on the infectious agent involved and may be accompanied with nausea, vomiting and fever. Some bacteria, like salmonella or shigella may cause stomach pain, high temperature and bloody diarrhea. Diarrheal diseases could be easily prevented. It would be sufficient to provide access to safe drinking water and improve sanitary hygienic conditions especially in the developing countries which lack these facilities, (see the chapter on access to safe drinking water), so that people living in these countries would avoid getting microbes, which cause infections.

What to do. Unprepared travellers are usually victims of acute diarrhea. To avoid this unpleasant condition, it is essential to know where these diseases are spread and take precautions against them. Probiotics are useful in the prevention of infectious diseases. The most common strains are lactobacillus and bifidobacterium, which are widely known as a way to improve intestinal micro-flora. They are also able to lower the risk of diarrhea as they eliminate the bacteria, viruses or parasitic organisms that are responsible for the infection. If you take them before and during your trip to areas considered to be at risk, they can prevent you from developing potential gastrointestinal infections. When you catch a viral infection, diarrhea suddenly occurs, even though it usually disappears in a few days without any treatment. As a general rule, it can last from 12 hours to 2-3 weeks. People with diarrhea do not need to see a doctor when there are no other symptoms. All they have to do is avoid eating and drink plenty of liquids to prevent dehydration, that is loss of too much water from the body. You should absolutely avoid a “do-it-yourself” treatment with antibiotics. If diarrhea is associated with abdominal cramps, nausea or fever, the infection must not be underrated. In this case the most important and sensible thing to do is to consult a doctor. After analysing the patient, the doctor will diagnose the type of disease and will prescribe the most effective treatment for it, usually antibiotics.

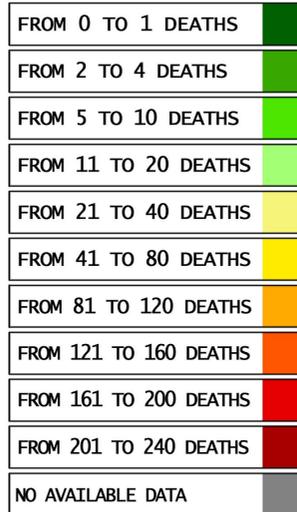
Ten tips for travellers. If you are in a country which is at risk, below you will find some good preventative advice.

1. Only drink safe drinking water, that is boiled water or water which has been disinfected with chlorine or iodine, or stick to bottled mineral water, better if sparkling as it contains bacteriostasis and is not easily adulterated. Insist that any bottle you order be opened in your presence.
2. Never have ice with any drink as it may contain contaminated water.
3. When you are at a restaurant, eat only cooked food, which must be warm when it is being served. Absolutely avoid seafood, shellfish and raw fish.
4. Only eat fruit that has been washed and peeled yourself.
5. If milk is not pasteurised, boil it before consumption.
6. Avoid cream cakes and ice cream as they could have been made with unpasteurised milk. Avoid cream, butter and fresh hand-made cheese too.
7. Take packaged probiotics in pill form or a safe fresh yogurt either before and during the trip.
8. Protect your food with insect-proof screens or keep it in containers. Refrigerate it if you do not consume it at once.
9. Always wash your hands with soap and water before meals and after going to the toilet.
10. Disinfect immediately any minor cuts

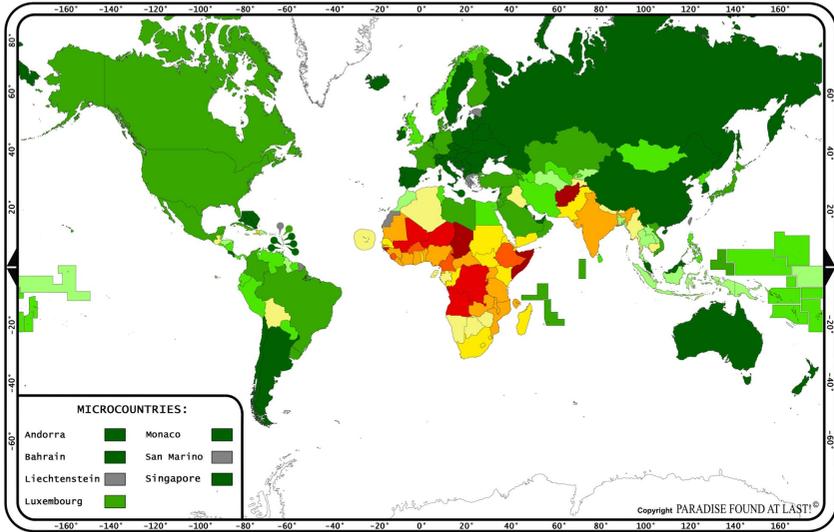
The map. The *world map of diarrheal diseases* shows global death rates. As you can see, the diseases causing acute diarrhea such as typhoid fever, cholera, amebiasis bacillary, diarrhea, giardiasis, gastro-enteritis, salmonellosis etc., are mostly to be found in countries with poor sanitation and hygienic conditions. The highest death rates occur in Afghanistan, Somalia, Chad, Mali, Angola, Congo Kinshasa, Niger, Guinea Bissau and Burundi.

DIARRHEAL DISEASES

ANNUAL DEATHS PER 100.000 INHABITANTS



WORLD MAP OF DIARRHEAL DISEASES



[Open the World map of independent states to see the names of the states](#)

AIDS

In ancient times, lepers were considered impure, they were utterly despised and segregated from the community. According to the Pentateuch, also called the Torah, lepers were supposed to shout: “Impure! “Impure!” when they approached people so that they could keep at a distance. AIDS could be likened to modern leprosy. People affected by AIDS are often marginalised and segregated from society, and irrevocably relegated to solitude. No mercy! AIDS is the sixth leading death cause in the world. It is believed to have originated in sub-Saharan Africa between 1955 and 1965. The most plausible hypothesis is that an animal virus had a mutation, allowing it to be transmitted to humans. Some scientists think that this transmission occurred when hunters came into direct contact with the blood of infected animals or during tribal rites. Others think that the virus was accidentally created in a lab during vaccine polio trials. The infection was geographically confined to the region of origin for quite a long time, but, in the late 1970s, some infected people moved from Africa to the USA, the Caribbean Islands and North Europe on business or as tourists and a global AIDS epidemic broke out. The UNADS and the WHO, both organisms of the United Nations, estimated that there have been around 25 million deaths since the virus was discovered, which means that it is one of the most deadly outbreaks in human history. Nowadays this plague seems to be declining and deaths tend to decrease. In 2009, it was estimated that globally about 2 million people died from this disease. AIDS stands for “Acquired Immune Deficiency Syndrome” and is the final stage of HIV infection. Once the HIV virus enters the body, it infects T4 helper lymphocytes directly, weakening the immune system and causing severe immune deficiency. A weakened immune system is associated with a higher risk of infections caused by viruses, bacteria, protozoans and fungi, which people with healthy immune systems could easily fight off, but, if the immune system is debilitated they can be lethal. Those who are infected with the virus are called HIV positive. When the person’s immune system is heavily compromised, he/she has an AIDS diagnosis. It takes about 10 years on average for the HIV virus to damage a person’s immune system without effective treatment, and to turn a healthy person into a person infected with

AIDS. Without treatment it takes about 2 or 3 years for AIDS to cause death. People with AIDS can develop bacterial skin infections such as seborrhoeic dermatitis, psoriasis, as well as exfoliative dermatitis, herpes zoster (shingles), fever, night sweats, swollen lymph-nodes, tremors, weakness, weight loss, anemia and iron deficiency, duodenal and gastric ulcers, chronic diarrhea, encephalitis and eye infections that may lead to blindness. Moreover, AIDS increases the risk of developing pneumonia, toxoplasmosis, tuberculosis and different kinds of cancer such as Kaposi sarcoma, lymphoma and brain tumour. Most people with AIDS die from infections. Fortunately, being infected with HIV does not always mean being diagnosed with AIDS. Many HIV positive people never reach the AIDS stage. As for those who develop AIDS, modern therapies are much better tolerated with respect to the ones used when the emergency occurred in the early 1980s. Now they are able to limit the multiplication of the HIV virus and to lower its amount in the bloodstream, allowing the immune system to recover and people to live healthier lives. Life expectancy for HIV positive people has increased by about 30 years since effective therapies, known as HAART, were available. Although there is no cure for the HIV virus as it remains in the body for life, it can be treated. Scientists are researching vaccines that might help prevent these diseases. The HIV virus can be found in blood, genital fluids and breast milk. It can be transmitted via open bleeding wounds or via shared razors, scissors or any other tool that can cause wounds or micro-lesions, or can pierce or scratch and infect users. It can also be transmitted with a blood transfusion with HIV-infected blood or organ transplant. However, HIV virus is mostly transmitted through sexual intercourse. The infection occurs when biological liquids such as pre-ejaculatory liquid, sperm or blood containing HIV come into contact with vaginal or anal tissue during heterosexual or homosexual intercourses. Oral intercourses are at risk of infection too and the risk of infection is higher for the person coming into contact with infected biological fluids. During sexual intercourses, the risk is greater for women and homosexuals. It is important to stress that sperm contains a major concentration of HIV virus with respect to vaginal secretions. Besides, vaginal and anal tissues may have micro-lesions, which permit the entrance of the virus into the bloodstream. A condom is the only real protective barrier to prevent the spread of HIV virus during sexual intercourse. "Mother-to-child-transmission" too must also be considered. An HIV positive woman, if pregnant, runs the risk of

transmitting HIV to her baby during pregnancy, vaginal childbirth and through breastfeeding. However, thanks to antiretroviral drugs taken during pregnancy, labour and delivery, to the chance of having babies by caesarian section and avoiding breastfeeding, the percentage of babies born with HIV infection has drastically decreased in developed countries. Unfortunately, this does not occur in the developing countries where HIV-positive women tend to breastfeed their babies owing to poor knowledge of AIDS. Sub Saharan Africa accounts for about 25 million people living with HIV, which represent more than 60% of the global population affected by AIDS and more than three quarters of the total number of women with AIDS. There were about 2,000 HIV infections in Latin America and the Caribbean area in 2011, which led to the total number of about 2 million people affected by HIV. This area, which accounts for 100,000 AIDS deaths is the most affected region, followed by sub Saharan Africa. The epidemic is spreading to Eastern European countries and Central Asia. In developed countries such as the USA, where the disease is widespread but treated, HIV-positive people live longer and, consequently, the number of HIV infections has increased. The only way to know if you are infected with HIV is to take an HIV test, which is free in many countries as well as hospitalisation following the development of the disease.

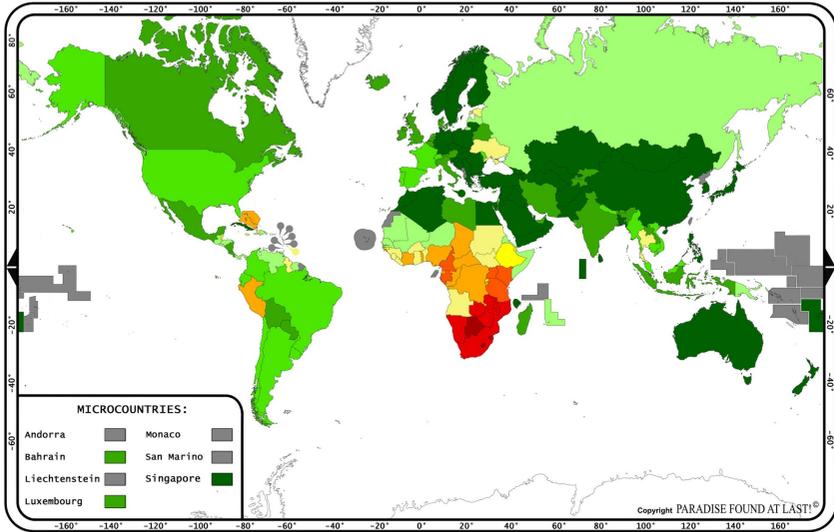
The map. The *world map of AIDS* shows the regions where most of HIV-positive people are to be found. Consequently, here it is easier to be infected with HIV.

AIDS

PERCENTAGE OF POPULATION AFFECTED
BY HIV

FROM 0 TO 0.1%	
FROM 0.2 TO 0.3%	
FROM 0.4 TO 0.6%	
FROM 0.7 TO 1%	
FROM 1.1 TO 2%	
FROM 2.1 TO 3%	
FROM 3.1 TO 5%	
FROM 5.1 TO 10%	
FROM 10.1 TO 20%	
FROM 20.1 TO 26%	
NO AVAILABLE DATA	

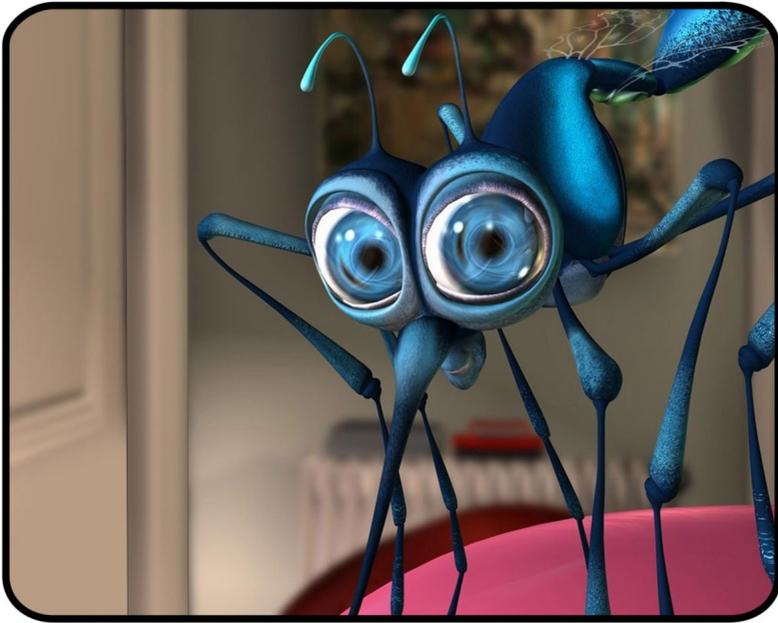
WORLD MAP OF AIDS



[Open the World map of independent states to see the names of the states](#)

Diseases transmitted by mosquitoes

There are other infectious epidemic diseases that are less dangerous than the ones already mentioned, but people often start to panic when they hear their exotic names. This may be due to the fact that their real degree of harmfulness is actually unknown. These vector-borne diseases involve mosquitoes.



“...I’m not only irritating; I can also be dangerous...”.

Malaria. Malaria is the disease causing the highest number of deaths amongst infectious diseases. Malaria is transmitted through the bites of infected mosquitoes. It causes about 800 thousand deaths a year, which is 1.3% of all the deaths in the world. Malaria dates back to 1600s and only in the last few years there has been a sharp decrease in the incidence of the disease. The most common victims of malaria are infants; actually they account for about 85%, just as for many other infectious diseases. Malaria is an acute febrile disease and is also sadly known for its iron deficiency, jaundice and an enlarged spleen. It is a dangerous disease and can even be lethal in a short period of time. Mefloquine is one of the most effective

drugs used to treat malaria. Artemisinin Combination Therapy (ACT), which is based on a wild plant, is also recommended. About 90% of malaria patients have recovered with these therapies. Currently, there is no effective malaria vaccine. Actually, vaccine efficacy is 35%. Malaria infection is caused by the protozoan parasite plasmodium. Four species cause malaria in humans and it is transmitted through the bites of a mosquito called anopheles. This kind of mosquito lives in countries with hot and wet climates and is mostly present in marshy areas at an altitudinal range of up to 3,000 metres above sea level. They bite humans mostly after the rainy season, at dusk and at night.

Yellow fever. Yellow fever is another vector-borne disease spread by mosquitoes. Yellow fever, like many other infectious diseases, is caused by a virus belonging to the group of viruses known as arboviruses. It is transmitted through the bite of infected mosquitoes belonging to the genera aedes aegypti, haemagogus and sabethes. Its symptoms are characterised by fever associated with tremors, headache, muscle pain, weakness, nausea, vomiting and later jaundice. In a severe yellow fever, bleeding can occur from the nose and within the intestine resulting in kidney and liver damage which can lead to death. The WHO estimates that 30,000 deaths, which is 0.05% of all the deaths globally, occur every year. Once you get infected, there is no cure for yellow fever and medical treatments can only relieve symptoms and make patients more comfortable. Vaccination is the most important preventive measure against yellow fever. It provides a total protection for more than 30/35 years.

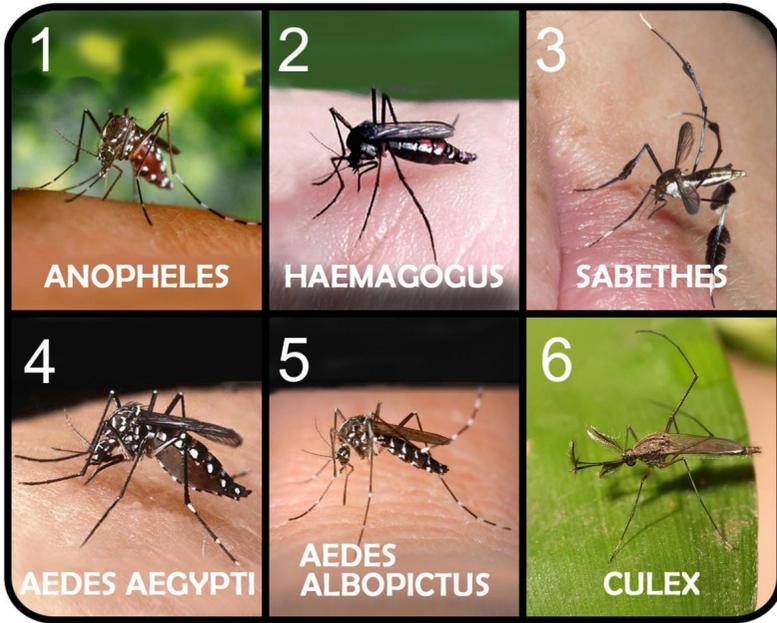
Dengue. Dengue is a very insidious disease which has dramatically increased over the past decades, both classic dengue fever and its most dangerous form dengue hemorrhagic fever. In 2008, there were about 16,000 deaths, which is 0.02% of global deaths according to the WHO. Dengue infection is caused by a virus which is actually called dengue and it is transmitted to humans through the bite of the mosquito aedes aegypti. This disease is associated with fever, nausea, vomiting and altered taste sensation. Severe dengue includes tachycardia, gastrointestinal bleeding, an enlarged liver and circulation collapse leading to death. No specific treatment is available for dengue other than supportive therapies that may

be used to lower fever and keep patient body hydrated. Most people who develop dengue fever recover completely in two weeks. A significantly higher chance of death is associated with severe dengue hemorrhagic fever. There is no vaccine to protect against dengue so at present you can only avoid being bitten by infected mosquitoes as prevention. Dengue has a wide geographic distribution and it is endemic in almost all tropical regions. It usually spreads during the rainy season, mostly in urban and sub-urban areas at an altitudinal range of less than 700 metres above sea level.

Japanese Encephalitis. Japanese encephalitis causes about 14,500 deaths every year, which represents 0.02% of all deaths occurring globally. Japanese encephalitis is a viral infection caused by a flavivirus, which is transmitted to humans through the bite of an infected culex mosquito. Japanese encephalitis is associated with fever, altered mental state and headache. Its mortality rate is around 25%. It only occurs in Asia and it is an endemic disease in rural areas, especially where rice cultivation and pig farming are prevalent. A vaccination against Japanese encephalitis is available and recommended for travellers to rural areas of these Asian regions.

Chikungunya. Chikungunya is another mosquito vector-borne disease caused by the bite of infected aedes mosquitoes. It is transmitted by a virus known as arbovirus and the mosquitoes involved are aedes aegypti, which is the same kind causing yellow fever, dengue, and aedes albopictus. These mosquito species are commonly known as tiger mosquitoes. They become infected when they bite an ill person in the acute stage, therefore, when an infected mosquito bites another person, it can transmit the virus. On the contrary, the virus cannot be transmitted directly from person to person through normal social contacts in everyday life. The symptoms of Chikungunya are similar to the ones developed with dengue. This disease is very rarely lethal – 0.4% of the cases – except for elderly people who already suffer from other diseases. A vaccine from inactivated virus is available but it is only for laboratory staff.

The 6 kinds of mosquito-borne diseases.



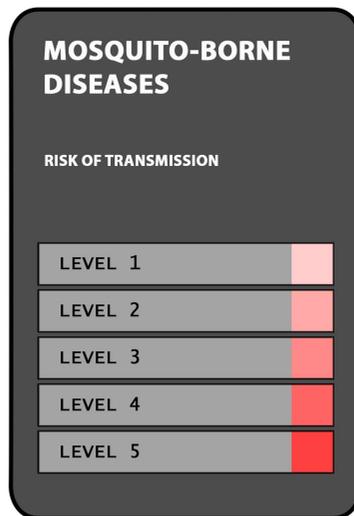
How to avoid mosquito bites. Since mosquitoes tend to bite mainly late in the afternoon, in the evening and at night, try these tips to protect yourself against their bites:

- Avoid wearing black, navy blue and red clothes.
- Wear clothing covering your arms and legs.
- Put mosquitoes repellent, like creams or spray, on areas of your body not covered by clothing.
- Install mosquito bed nets and screens on windows and doors in your house.
- Eliminate stagnant water, like manhole covers, gutters, flowerpots etc around your house as much as possible. Mosquitoes can lay their eggs and reproduce there.

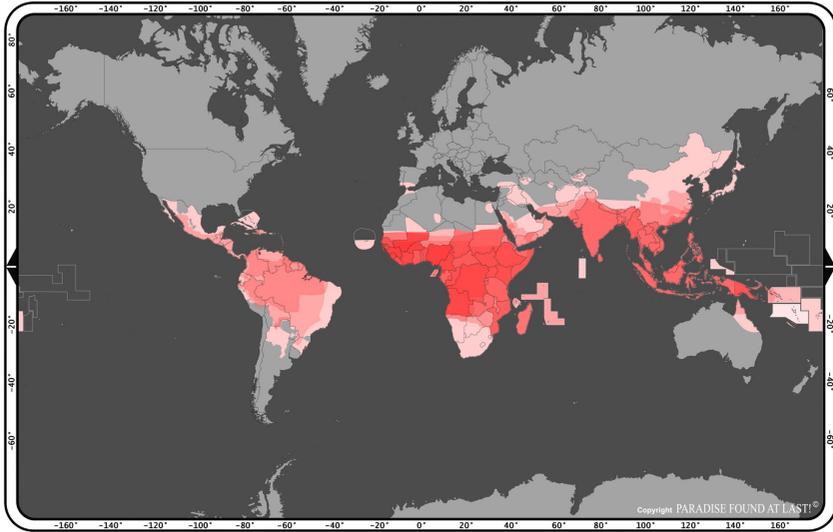
Why mosquitoes prefer to bite some people over others? One of the most common clichés is that mosquitoes would prefer to bite people with sweet blood. This is untrue! There is no scientific evidence that higher amounts of glucose, that is sugar, in the blood may attract mosquitoes more. In fact, mosquitoes make no difference between diabetics and

generally healthy people. Actually, only female mosquitoes bite to obtain necessary proteins to produce fertile eggs. They can detect human scents from more than 100 metres/330 feet away. Mosquitoes are more attracted by CO₂, lactic acid and folic acid. In particular, overweight people produce more CO₂. Similarly, those who exercise and are more physically fit produce higher levels of CO₂ and lactic acid. As for lactic acid, it is also known as vitamin B9. People who take high doses of folic acid are usually mosquito targets. Moreover, another substance called “nonanal” attract mosquitoes. It is used in the industrial production of perfumes and creams but it is also naturally released from the human skin. It could sound strange but people who are subject to psychological stress are not usually bitten by mosquitoes as their skin produces chemical substances that smell bad to mosquitoes, like nail-varnish remover or fruited-geraniums. It may not be applicable everywhere and for every kind of mosquito. Yet, protective behaviours against mosquito bites are always recommended.

The map. The *world map of mosquito-borne disease* shows the areas at risk for contracting one or more of the five diseases described above, which are Malaria, Yellow Fever, Dengue, Japanese Encephalitis and Chikungunya. These are all transmitted through the bite of infected mosquitoes.



WORLD MAP OF MOSQUITO-BORNE DISEASES



[Open the World map of independent states to see the names of the states](#)

General conclusion concerning communicable and non-communicable diseases.

This chapter has shown that endemic diseases – that is communicable diseases – are mainly to be found in developing and emerging countries, owing to poor hygienic conditions. In fact, the leading causes for these diseases are the lack of safe drinking water and sewerage systems. Before travelling to exotic destinations you should check to see what vaccinations or treatment are advisable; speak to your general practitioner who will be able to assist you. Short or long journeys can offer you amazing and unforgettable experiences but they can also put you at risk of contracting infectious diseases. Sensible and careful prevention measures will help to reduce your chance of contracting an infection while overseas. In developed countries, the burden of infectious diseases has been greatly reduced thanks to the efficient network of sewerage and water supply systems and also to the availability of effective medicines. However, developed countries have seen a significant increase in other kinds of diseases linked to different forms of pollution. As a matter of fact, cancers and dementia disorders such as Alzheimer's are more developed in the industrialised countries. Walking down busy thoroughfares full of traffic expelling carbon dioxide, inhaling toxic metal particles in urban areas or eating non-organic food may be a risk factor for developing diseases. You should reason seriously about the risks. A place without diseases does not exist, at least here on our planet, but the risk of developing endemic diseases is much higher in some specific areas. It is, therefore, essential to be cautious and examine the situation. Do not disregard people's advice. Responsible personal awareness can help you to reduce your risk of falling ill.

NB: The medical information contained in this chapter does not pretend to replace consultation with your general practitioner. As this topic undergoes constant evolution, it is important to provide the reader with a thorough explanation of the risks that travelling or moving abroad may have.

Chapter 26

Nuclear power plants: a hot issue

At a first glance, it might seem strange that your journey in search of your own Eden makes a stopover in the world of nuclear power plants. You might wonder: “What have nuclear power plants got to do with my happiness or my unhappiness? What about visiting other energy providing plants then?” The reason is fear. People are often scared of nuclear power plants, sometimes terrified. It is an instinctive and involuntary feeling stemming from the intimate sphere of unconscious mind. This chapter attempts to provide a balanced view of reasons why this happens. Several governments and conservation groups are against the civilian use of nuclear energy as well as the use of nuclear weapons for military purposes. Their attitude has undoubtedly influenced public opinion. Those who do not want to live near a nuclear power plant because of the risk of accidents and the problem of radioactive waste will be able to identify their ideal places thanks to this chapter. On the other hand, those who do not agree will find a lot of important information here, which will increase their knowledge.

Why people are afraid of nuclear power plants. When people think of nuclear power plants their worst fear is that a major and unforeseen accident may occur. However, talking about nuclear power is not easy for many. Blissful ignorance! Unfortunately, there have been many accidents in the history of nuclear power plants and they still occur, but hardly anyone is aware that there have been minor accidents. As far as we know, there have only been a few major accidents in nuclear power plants with devastating effects for human beings. Some of them are a military secret and have not been revealed. Moreover, hardly anyone knows that hundreds of atomic bombs are tested in the Nevada Desert in the USA. Yes, it is true. Hundreds of them. The US Department of Defense has done this for many years. Actually, the American army is not the only one to do this, but we are not discussing weapons now. As for civil nuclear power plants, it is

important to point out that all the current plants including planned future ones, use “nuclear fission”. The alternative nuclear fusion would solve a good part, if not all the problems linked to nuclear fission. It has been under experimentation for quite a while now, and has made significant progress, but for a number of reasons nuclear fusion is still extremely distant from being exploited on an industrial level.

Chernobyl. It was in April 1986 that humanity experienced the consequences of a global nuclear disaster. Actually, a major accident had already occurred in the nuclear power plant on Three Mile Island in the USA in 1979, when radiation had spread over a large area. Such a devastating nuclear accident had never occurred in the USA before, although there were no proven deaths. However, 7 years later, terrible news had devastating effects worldwide. The nuclear accident occurred in Chernobyl, a small town located in the south-west of the former Soviet Union, where a nuclear power plant of the II generation with 4 reactors was located. A remarkable range of human mistakes made reactor n° 4 explode, which resulted in the fusion of its core. There was a rapid succession of blasts and fire broke out; after which a mushroom cloud rose into the sky and the wind blew it thousands of kilometres away. At first, the Soviet government tried to keep the disaster at Chernobyl a secret. The surrounding countries took several days to realise the seriousness of the situation, as the leaders of the Soviet Union preferred to remain silent and did not warn the world about the extent of the nuclear disaster. It is important to highlight that it happened during the Cold War period; Michael Gorbachev, the leader who would lead the country to “*Glasnost*” (transparency) and to “*Perestroika*” (revival), had just come into power. However, this president behaved like his predecessors. The technicians of a Swedish nuclear plant were the first to raise the alarm when their monitors registered unusually high levels of radioactivity. After checking the safety of their plants, they concluded that a nuclear disaster had occurred. A thorough scan discovered that the real source of the radiation was the (USSR). They called the Soviet government to account for the reason why they had not informed anyone. At first, the government tried to minimise the situation but, as the Swedish had already informed the world, it had to be admitted. Shortly after the accident, firefighters, the military and emergency workers were called upon to

extinguish the fire. Teams worked with half mask respirators, overalls and gloves, which were not sufficient to protect them against extremely high levels of radiation. They were the first victims of the disaster. The population from the area around Chernobyl was evacuated only about 36 hours after the accident had occurred and this made things worse as people living next to the plant were exposed to a deadly dangerous amount of radiation. This caused a devastating number of deaths over a period of weeks, months and years. In a short space of time, that is from May to November 1986, a giant sarcophagus, made of steel and concrete, was built to contain the escaping radiation, but unfortunately, owing to the poor quality of the materials and the lack of an efficient planning, the building is now crumbling and rain falls through the openings. Some of these are large enough to drive a car through. In February 2013, part of the roof covering reactor 4 collapsed under the weight of snow as the reactor can still reach temperatures of 1,000°C. More than 2,000 cubic metres of water falls inside the sarcophagus every year increasing 10 times the weight of the foundations. The basement has sunk 4 metres, allowing the radioactive material to infiltrate into the water-bearing layers, which are linked to the rivers Pripyat and Dnepr. These, in turn, carry the contamination into the Black Sea. After the accident at reactor 4, the other three reactors continued to produce energy due to an energy shortage in the country. In 1991, a fire broke out in reactor 2 so the authorities declared it was irretrievably damaged and the country discontinued its use. Reactor 1 was decommissioned in 1996 as part of an agreement between the Ukrainian government and international organisations such as IAEA, which stands for International Atomic Energy Agency, to end operations at the nuclear power plant. On 15th December 2000, Leonid Kuchma, the Ukrainian then-president, personally turned off reactor 3 in an official ceremony, shutting down the entire site. In 2007, the planning for the building of a new sarcophagus made with safer materials started. Its costs are estimated to be around 1 billion dollars. The new structure would bring the site into a safe condition for 100 years. Nobody knows when the work will begin and end. According to the UN, there were 65 proven and 4,000 estimated deaths due to the disaster.

Fukushima. It is well known that the islands of Japan are located at a

tectonic plate margin. This is the reason why terrible and frequent earthquakes occur as well as tsunamis, originated by seaquakes. You may feel appalled at the very thought of a nuclear plant being built in a such an extremely high seismic region. However, the reality is that 62 nuclear power plants have been built in Japan, without any apparent logic or reason. Public opinion felt strongly that Japan could use its very modern technologies and advanced aseismic systems to evaluate and fight the negative effects of the most devastating earthquakes and tsunamis that might occur. The major accident at Fukushima plant was a nasty surprise for all. As a matter of fact, on 11th March 2011, a sub-marine quake occurred at the shear zone about 100 km/60miles off the coast of Japan's main island Honshu. The under-sea quake, measuring 9.0 on the Richter scale, triggered a 30-metre-high (100 feet) tsunami, which hit Miyagi Prefecture, washing away people and things. There were more than 15,000 deaths. The seaquake and a resulting tsunami also devastated Fukushima nuclear power plant. Within seconds after the violent earthquake, the six nuclear reactors shutdown immediately and the inner temperature started to rise. The plant's emergency generators failed to operate cooling systems as they were also damaged by the seawater. Therefore the extremely high temperatures in reactors 1, 2 and 3 caused uranium dioxide to melt in the days following the seaquake and this triggered a core reactor fusion. Several explosions occurred and released large amounts of radioactive gases and particles into the air. The total evacuation of the population within a 30 km radius (about 18 miles) around the plant was ordered and many villages were abandoned involving 170,000 people. Unfortunately, as Chernobyl, the Japanese government did not immediately provide the world with information on the severity of the situation. At first vague answers were given, as authorities did not want to admit that the complete meltdown of the nuclear fuel rod had occurred. Moreover, the data concerning the level of radiation around the plant was published late. If the area had been evacuated immediately, the inhabitants would not have been exposed to such high levels of radiation. Japan's Nuclear and Industrial Safety Agency temporarily classified the Fukushima disaster as a level 7 accident, the highest possible level, which had only been given to the Chernobyl disaster so far.

What is a nuclear power plant? Nuclear power plants are essentially power stations and are therefore used to generate electricity. There are different kinds of power stations such as thermal power stations, which produce electricity by burning natural gas, coal or petroleum. Nuclear power plants use uranium oxide as a fuel instead. It is held in metal containers called fuel rods, which are lowered into the reactor core. The type of nuclear reaction used in nuclear power plants is called nuclear fission. It is basically a process where the uranium nucleus splits into two similar-sized smaller nuclei, releasing more neutrons and heat. The nuclear fission (splitting) of the uranium nucleus can occur artificially so that energy is released at a steady rate. For this to happen, a nuclear reactor must be used, where a chain reaction can be controlled. Once the process has started, it is repeated continuously as it develops a chain reaction. The neutrons generated by the nuclear fission collide with more uranium nuclei causing them to divide. The energy released by the nuclear chain reaction is used to heat a liquid – generally water in most power plants – that in turns generates high pressure steam. Like in any other thermal power stations, the total energy contained in the water vapour, turning partially into mechanical energy, is able to turn a turbine. Mechanical energy is turned into electrical energy by means of an alternator. Only a few materials can undergo nuclear fission. They are called fissile materials. In nature, two types of uranium – called isotopes – exist: Uranium-238 (^{238}U) and Uranium-235 (^{235}U). Only the latter (^{235}U) is fissile but this only accounts for about 0.7% of naturally occurring uranium. It is not economically sustainable to separate uranium ^{238}U from ^{235}U , so the process of enrichment is used. This is usually accomplished by means of centrifuges that concentrate ^{235}U at the centre of the mineral. In this way, enriched uranium is obtained and it is used to build uranium bars that are later placed in the core of the nuclear reactor. Once the chain reaction process has started, the more uranium nuclei are hit by neutrons, the more melting heat is developed. Nuclear fission is more efficient when moderators such as metal bars and water are used inside a reactor. They slow down the neutrons, which makes collisions more likely. Nuclear power stations need cooling systems to prevent uranium from becoming too hot. The reactor core is usually cooled by a pipe of circulating cold water. This is the reason why most nuclear power plants are built next to water courses. However, cooling and safety systems might not work

adequately owing to unforeseen events. When this happens, uranium overheats and reaches its melting point, the reactor core fusion occurs and the chain reaction can no longer be controlled. As a consequence, radiation is released.

Starting from Einstein. Albert Einstein, the famous German scientist, was the first to understand that energy could be released by splitting the nucleus of an atom. However, it took more than 30 years for an Italian scientist to fathom its real functioning. Enrico Fermi was awarded the Nobel Prize in Physics for this discovery in 1938. Four years later, during World War II, the American government financed the Manhattan Project with the aim of creating the first "chain reaction" in a laboratory in order to develop the first atomic bomb. Fermi was one of the scientists taking part in the research. However, this chapter does not deal with atomic energy associated with wars and its military use, as stated above. The first nuclear reactor to produce electricity for civilian purposes was the Experimental Breeder Reactor 1 (EBR-1) in the USA in 1951. It was also the first reactor where partial core fusion occurred in 1955. There was a rapid and intense development of technology between the 1950s and the 1970s when several larger and more powerful nuclear power stations were built, which was also due to the 1973 oil crisis. Some countries such as France and Japan, which would produce energy mainly by burning petroleum, started to invest heavily in nuclear power stations owing to the exponential growth of crude oil prices. Today 75% and 30% of their electricity is generated through this source respectively. After some nuclear disasters such as those occurred at Three Mile Island in 1979 and at Chernobyl seven years later, many countries stopped developing nuclear technology. Long-standing public concern about the safety of nuclear energy banned nuclear development in Austria, Ireland, Sweden, New Zealand, Poland and Italy. In contrast, countries like France and Japan kept on investing in technological research in order to build new generator plants designed to be safer and more efficient than the previous ones. As time went by and no severe nuclear accidents occurred, public confidence in nuclear energy raised again and there was a general tendency among nations to invest large sums of money in nuclear power plants. Yet, the Fukushima disaster destroyed the enthusiasm again and prudence has been the new attitude to nuclear energy

since. Many present and future projects that had been already initiated, were cancelled and several working nuclear power plants were shutdown. In May 2011, Germany announced that all of its 17 plants would be definitively shut by 2022; 9 of them have already been closed. Also Japan decided to stop planning the building of 14 new reactors.

Nuclear reactor generations. You may have heard of generation I, II, III and IV reactors. This classification means that they belong to different times. However, it must be stressed that all of them exploit the heat coming from the atom fission indiscriminately, producing, conversely, inevitable and undesirable radioactive waste. Generation I reactors were developed in the 1940-50s, but they were simply small experimental or proto-commercial reactors. Only few prototypes were produced but they were useful to get accustomed to this ever- changing technology. Generation II reactors come directly from generation I reactors and they have been used since the 1970s. Almost the majority of the reactors being used are generation II reactors. There are various reactor types, differing in the kind of fuel used (natural uranium, enriched uranium and plutonium), the type of moderator (water, heavy water, metal bars and graphite) and the coolant used (water, carbon dioxide and liquid sodium). The 6 reactors at the Fukushima nuclear power plant were built in the 1970s and they are therefore generation II reactors. Generation III reactors have been developed since the 1990s and they are an evolution of generation II reactors. Presently only 4 generation III reactors are being used. They have also improved on safety, which should enable them to avoid external contamination in case of accidents. Partial progress has been made in radioactive waste. On the one hand, the process of burning fuel has become more efficient – the mass of waste per kw/h of product has decreased – but on the other hand combustion residues are more radio-toxic than in the past. Finally, it is important to highlight that a research program started in 2001 and it is analysing the design of generation IV reactors. Their strength is their intrinsic safety: a law of physics – the so-called Doppler Effect – would prevent core fusion. In particular, the more the atoms overheat the more they move away from each other so that a neutron finds it harder to hit their nucleus. Generation IV reactors may be available for commercial applications not before 2050.

Doubts about safety. Accidents are not the only problems related to the safety of modern nuclear power stations. In 2008, the German Governmental Organisation for Nuclear Safety (Bundesamtes für Strahlenschutz) carried out an exhaustive inquiry on the effects of nuclear power plants on human health. All the nuclear power plants on the German territory were examined. All of them are generation II type of pressurised-water reactors known as (PWR). It revealed that their activity and the risk of developing leukaemia in children under the age of five are strongly correlated. This study showed that the risk of developing blood cancer may be increased by 76% in children living within 5 km/3 miles of reactors compared with children living far away from nuclear power plants. This risk drops to 26% for children living between 5 and 10 km/3 and 6 miles, to 10% for children living between 10 and 30 km/6 and 20 miles and to 0.5 if the children live between 30 and 50 km/20 and 30 miles. This study was evaluated by the German commission on radiological protection (SSK). In particular, the report of this commission said that some studies carried out in other countries showed discordant outcomes and no statistical evidence could be found for the increase in leukaemia sufferers living near a nuclear power plant. The reason for the increase in leukaemia cases in children is not clear and as the possible causes and risk factors for leukaemia are manifold, several incidental reasons could have been responsible for the results obtained. Why do children tend to develop leukaemia if they live near a nuclear power station then? When operating, modern nuclear power plants release small quantities of radioactivity in the form of liquids or gases and these emissions can even last for decades after the shutdown of the reactors. Several studies suggest that reactors not only release water vapour but they also emit some radioactive isotopes such as tritium carbon 14, radioactive noble gases such as krypton, argon, xenon and that these substances are absorbed by the soil and vegetables and are therefore present in the food chain. Pregnant women who are exposed to these radioactive substances could transmit them to their fetuses, resulting in cellular imprinting, which would lead to the development of cancer early in life.

Wastes. One of the major and still partially unsolved problems related to the civilian usage of nuclear power plants is waste. As a matter of fact, a

reactor inevitably produces some radioactive substances, namely unusable residue from nuclear fission. An insignificant part of waste usually scatters into the environment with no harmful effects to human beings. For example, radioactive coolant liquids are sometimes directly discharged into rivers as they are not considered to be dangerous for the environment. The term “nuclear wastes” usually refers to third-level wastes namely to high-level radioactive wastes. They contain tons of ashes produced from the burning of uranium fuel and some substances placed inside or around a reactor, contaminated with radioactive elements. High-level wastes can remain radioactive up to 100 thousands of years. The atoms of these radioactive substances have transmuted, namely have “caught” one or more neutrons without “splitting” and have therefore become “heavier” atoms. In Europe, nuclear wastes are generally carried to waste storage tanks near the nuclear power plants or to surface storage facilities. European surface storage facilities are all “temporary”. Globally there is only a site which is considered to be safe and where it is possible to store the disposed of high-level waste in deep geological formations for thousands of years. This site is located in a desert area of New Mexico in the USA and it took more than 25 years to be implemented. Nevertheless, there is still uncertainty about it. Actually, states choose the location of suitable nuclear waste disposal sites no matter what people living nearby think about it.

The dismantlement of nuclear power plants. A nuclear power plant can usually operate for about 25-30 years, even though new plants are being planned to operate for 60 years thanks to the periodic replacement of important components. At the end of the life of any nuclear power plant, the plant needs to be dismantled, the land where it is located needs to be decontaminated and nuclear wastes must be adequately carried to storage facilities. Decommissioning the power plant takes far longer than its building and functioning. For example, the British Nuclear Decommissioning Authority ([NDA](#)) claims that the reactor at Calder Hall, situated on the Sellafield site in the UK was closed in 2003, but decommissioning operations will last until 2115.

Where to live? At present nuclear power plants use fission to produce electricity so, in case of a major accident, the more one is distant from the

site, the less the risk of radioactive contamination. The Chernobyl case has been the most studied. Its radioactive cloud travelled all over Europe. The areas surrounding the plant are not suitable for human life even today (the population was evacuated within a 30 km/18 miles radius of the plant) but life in the rest of Europe has not suffered such dramatic changes. This is due to the different kinds of radioactive emissions. The heavier elements such as uranium, thorium, plutonium, neptunium and actinides in general, are long-lived or very long-lived and tend to concentrate close to the plant. On the contrary, very radioactive relatively short-lived or very short-lived light elements such as caesium, iodine and, in general, fission products tend to fly more easily and therefore to travel long distances. However, while travelling they lose their detectable radioactivity so the more the distance from the site involved in an accident the less the radioactivity on that place and its inhabitants. In view of this, it is important to highlight that nuclear power stations located at hundreds of miles from where you live and new plants that may be built next to your house have different levels of dangerousness. As shown above, in case of a severe accident, the farther from the plant, the less the risk of being contaminated with the radioactive cloud. It is estimated that the most dangerous areas are those within 50 to 70 km (30 to 45 miles) from the site. However, it is advisable to live much further away from the site to be completely safe.

The map. Now that the topic has been discussed in depth, would you like to have a nuclear power plant next door? Today there are 443 global active nuclear reactors, which are situated in 32 different states. Currently they produce about 10% of global electricity. The majority of plants are to be found in the USA, France, Japan and the United Kingdom. The *world map of nuclear power plants* shows the location of all the plants being they operational, under construction or permanent shutdown. If you do not want your earthly paradise to be located next to a nuclear power plant, all you have to do is choose a location far away from it. However, if you trust the techniques and safety of present and future nuclear power plants, you may disregard the data. In any case, now you have knowledge of this burning issue that most people often ignore.

NUCLEAR POWER PLANTS

OPERATIONAL



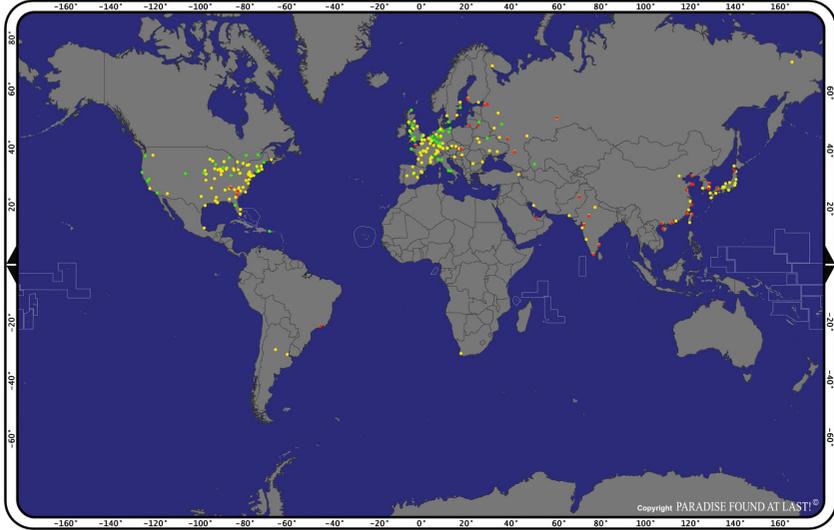
UNDER CONSTRUCTION



PERMANENT SHUTDOWN



WORLD MAP OF NUCLEAR POWER PLANTS



[Open the World map of independent states to see the names of the states](#)

ON THE FOURTH PART OF YOUR JOURNEY

From one man to humanity

This part of the journey in search of your personal Eden is a complex adventure in line with the world situation and its multiple problems. Now the journey takes us into the wilderness where an occasional oasis is to be found: here you will admire the diversity. The crucial problems of living in an organised society are going to be discussed. The dream of living an ascetic lifestyle in a blissful state of mind and mystical ecstasy dissipates as you need to be part of a community. Only an organised society can satisfy basic necessities. You are about to consider inalienable needs such as healthcare, education and access to a water supply. Then, you will explore the reality of Internet, which is becoming more and more important in a world where information is growing and communication an essential value. The following analysis will allow you to comprehend how different countries tackle and solve or disregard these vital themes.

Chapter 27

Health is everything

Whatever destination you may choose as your possible Eden the local healthcare service is essential. Nobody is immune to diseases and even though sanitary and hygienic conditions are excellent in some countries, they are definitely lacking or even extremely poor in others.

If you compare people aged 25 with people aged 65, they are likely to consider different issues before moving abroad. The former do not consider healthcare issues to be so important as it is not one of their current needs whereas people in their mid-60's tend to put it at the top of their priorities as they are aware that they will need medical assistance sooner or later. An efficient healthcare system, which can be available to all citizens, is a priceless asset.

Types of healthcare systems.

Any civilian society should guarantee the respect of people's rights and the performance of duties for all without distinction of race, religion, political opinions and social status. Equity is a basic principle and when humans fall ill, they should receive treatment and special attention and not left alone. Similarly, any civilian society is expected to achieve and improve preventive treatments as much as possible when it comes to harmful diseases that could damage the community and its single individuals. Only a few countries in the world carry out successful prevention measures. Most states have systems that are not sufficiently organised and do not guarantee all citizens the right to healthcare.

History of healthcare as a right for everybody. Today citizens of the international community are aware that universal health care is essential.

However, things were different in the past. With the discovery of America in 1492, specific diseases started to spread globally but it took almost three centuries before mankind realised the risks related to the spread of these diseases. Even though new health problems had been noted, it was only in the late 19th century that scientific medicine started to progress and international agreements were made in order to prevent, or at least reduce, the spread of these diseases. Moreover, social insurances and other forms of collective health protection started to be promoted or guaranteed by the individual countries themselves. It was just in the early decades of the 20th century that the concept of human healthcare was considered as a fundamental task for governments to pursue and a primary target for the international community to achieve. Human health was gradually perceived as a fundamental right. The end of World War II significantly contributed to the development of this new way of thinking. The high number of deaths led the international community to condemn recourse to war for the solution of international controversies and to promote the establishment of international organisations, in particular healthcare structures.

World Health Organisation. The World Health Organisation (WHO) has been working for many years to ensure that at least the so-called “primary health care” can be available to every citizen. This should be based on practical, scientifically sound and socially acceptable methods and technologies. The catchphrase is “health for everybody” to be achieved through a universal health coverage guaranteed by the National Healthcare System. Basic essential healthcare must be universally accessible at affordable prices at every stage of its development. According to the WHO, the greater financial setback towards a universal health care coverage is direct out-of-pocket health payments. If countries do not provide people with a healthcare system covering the costs, citizens must personally pay medical services and treatments and many people cannot afford it. A large number of people spend huge amounts of money to pay for healthcare treatments for themselves and their family but many are pushed to despair of a financial disaster! For this reason, it is estimated that annually 100 million people fall below the poverty line. It does not only happen when curing serious and rare diseases, but also for more basic medical treatment such as qualified birth assistance or for common childhood diseases. Even

though medical treatment may not be very expensive the costs are prohibitive for the poor who do not have access to a universal healthcare system and, as you can imagine, there are too many of them! If these inequalities were removed through universal health coverage, more than 100 thousand maternal deaths due to birth-or-pregnancy related complications and more than 3 million of under-5 deaths would be prevented. All citizens should have the same rights! Moreover, raising funds through required pre-payment is the most efficient and equitable basis for increasing population health care coverage. The best approach is when pre-payment involves the largest part of the population and the funds are pooled so that the costs of health care are covered for all. It is therefore important to replace the widespread system based on direct, out-of-pocket payments with generalised pre-payment systems. This can be achieved through different forms of compulsory insurance for all, possibly involving healthy and wealthy people whose contributions would be essential to raise sufficient funds for healthcare. In other words, it means that healthy people provide financial support to ill people and that the rich support the poor. This is not iniquity but a sign of civilization! Remember, those who are healthy today may be ill tomorrow.

Healthcare systems. As this book has shown so far, all countries have their own peculiar social aspects, which often stem from their history and customs. So healthcare medical services vary substantially from country to country. This is the reason why people need a sound and effective healthcare system able to offer quality services and to meet the special needs of the population of a given country. Regardless of the different kinds of diseases that may occur in a country, a reliable functioning healthcare system is characterised by a robust public financing mechanism and by highly qualified well-trained and well paid medical staff, who constantly learn and keep up-to-date regarding the best clinical practices. Moreover, it should rely on medical data analysis and make it available for quality improvement purposes and should have modern equipment and well-maintained facilities. If any one of these important factors is missing, the country may be unable to manage public health adequately.

Universal Healthcare Systems provide all citizens with universal coverage of

health services. There are essentially two ways:

1. the first way can be defined as National Health Service financed through general taxation. A country is able to cover healthcare costs for all citizens thanks to this fund-raising system.
2. the second way refers to Mutual Health Funds or Mutual Health Insurance Systems, which combine some aspects of the first way – for major medical treatments – with supplements based on cooperative insurance.

Actually, a National Health Service, which Italy, for example, has adopted, achieves better overall results than Mutual Health Funds or Insurance Policies. This because a non-profit management can offer reduced costs whereas the other systems are run by private companies earning profits for their owners, which inevitably weighs on their final costs. The saying: *“The more you spend, the less you spend”* is not valid here as higher costs provide benefits only to those operating in the Health System and its branches. Unfortunately, most of the world’s health systems are based on this logic of economic self-interest.

The USA case. This appears to be an important moment for healthcare system funding. Two important nations such as China and USA, which have always based the financing of their healthcare system on the market, are undergoing an historical healthcare reform. China has already started organising its healthcare system whereas the American healthcare reform, due to start in 2014, is still slogging. The current American healthcare system is based on a capitalistic bipartition between public and private systems. President Obama has experienced its drawbacks directly. Obama’s promise to reform America’s healthcare system was his campaign pledge. He undertook an engagement mainly with himself, with the American history and, in particular, with a woman whose name was Stanley Ann Dunham. This person died at 53 from ovarian cancer and, during the last days of her life, she had to fight not only against her diseases, but also against the private healthcare insurance companies that did not allow her to access the best and obviously more expensive medical treatments, as they looked after their own economic interests. That “ordinary” American

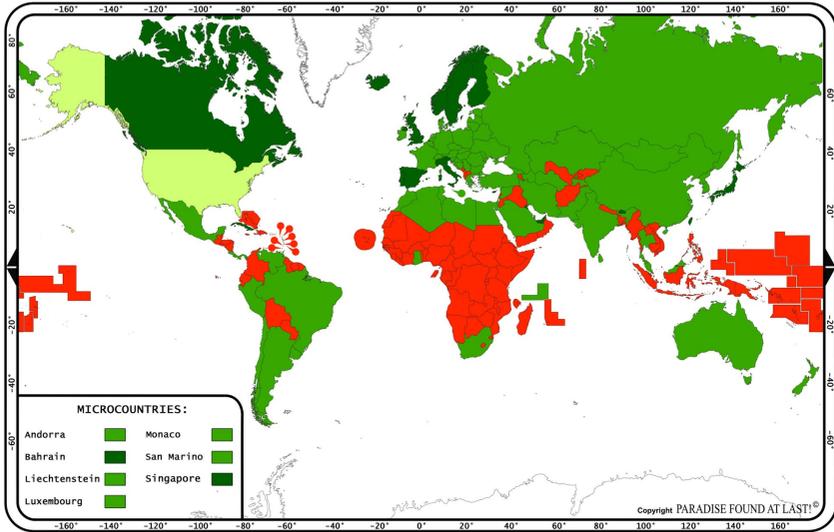
citizen was Barack Obama's mother. Obama's mission aims at giving universal health insurance coverage to more than 45 million people who are still without a health insurance policy. Who are the American people without a healthcare insurance policy today? They are illegal immigrants, the unemployed and those who do not simply want to have one. The malfunctioning of the American National Health System annually leads to the death of thousands of people simply because they do not have a healthcare insurance policy. On the contrary, even though the American Health System will be run and financed by private companies after this reform, a compulsive health insurance will be introduced for everybody. It is important to highlight that American society is characterised by a strong sense of individualism that does not match with universal health insurance, which, on the contrary, is adopted in the main European countries. Victor Fuchs, a leading American health economist, anticipated what has happened in America. In 1998, he said: "*America is likely to introduce the National Health System too due to a general political change, which is often associated with conflicts, economic depressions and social tensions on a large scale*".

The map. The *world map of typologies of health systems* will show you the nation that guarantees universal health coverage without distinction of any kind such as race, gender, birth, status or social origin. You will also learn about the countries that do not provide their citizens with universal health systems, namely those that do not ensure public health coverage in case you need medical treatment.

TYPES OF HEALTH SYSTEMS

UNIVERSAL NATIONAL HEALTH SYSTEM	
UNIVERSAL HEALTH SYSTEM WITH MUTUAL HEALTH FUNDS AND/OR INSURANCE POLICIES	
HEALTH SYSTEM IN TRANSITION	
NON-UNIVERSAL HEALTH SYSTEM OR NO AVAILABLE DATA	

WORLD MAP OF TYPOLOGIES OF HEALTH SYSTEMS



[Open the World map of independent states to see the names of the states](#)

Health system quality

Regardless of the typology of a health system that a country may adopt, whether it is public or private, with universal health coverage or not, those who move abroad should be offered high-quality medical care if they fall ill. This can be achieved only if a country has reliable clinical wards that are fitted with high quality standard and professional experienced doctors, nurses and health staff.

The relationship between the quality of the health system and the death rate. This is an incontrovertible fact: lower the quality of a health system, the highest the number of people die of disease. Patients cannot be adequately treated in low quality healthcare systems. Consequently, the death rate shows that the first victims are to be found among children and parturient women. The fact is that it happens in developing countries. As a matter of fact, here the high mortality rate is not only due to the extreme debilitation affecting patients, which is caused by malnutrition, but also to the shortage of high quality medical doctors and the lack of sufficiently reliable healthcare facilities. One aspect which is often underestimated is the cleanliness of the healthcare environment as well as the use of sterilised syringes and hospital equipment. It is not uncommon that a patient hospitalised for a minor problem may catch a serious infection due to the lack of cleanliness, a sign of negligence of the part of the healthcare staff. On the contrary, when the health system is well-functioning and efficient, people are healthier and therefore life expectancy is higher. At present, our planet seems to be living two different realities. Nearly half of the world's population enjoys at least sufficient, often good or even excellent healthcare services. Unfortunately, the other half of the human population lives in lands that cannot provide even basic health care. The countries with high quality healthcare systems have well-developed economies so that they can plan and maintain modern medical facilities together with new medical devices. They provide their population with high quality medical treatment, first-class medical equipment and the best medicines. The thought that money makes things easier in life seems to be true in this case. If you can afford it, you can have the best medical treatment in the best

health care centres. Even in countries with low quality healthcare systems, you can rely on first-class highly specialised private hospitals.

The Maldivian case. A true-life event, that happened recently, may be an instructive example. A pregnant woman was hospitalised for what seemed to be the simplest and most natural event in a woman's life: giving birth to her baby. Unfortunately, after 18 days of real suffering a terrible thing occurred. A series of medical complications led the physicians to decapitate the baby in the woman's belly in order to save her life. The healthcare staff said that they had no choice but to behead the baby to save the woman's life. It was the first time it ever happened anywhere. The media reported this event with sensational and creepy details but they disregarded two important aspects. First, they did not highlight that the woman received poor quality health service. Second, during a normal delivery, complications may arise that require the doctors to perform an early c-section. The physicians and specialists of the largest hospital in the country did not know how to respond to these complications to protect both the woman and her baby so they failed to act appropriately. The world of medicine was dumbfounded by this terrible event. Many doctors say that modern ultrasound scans can detect in advance the complications that may arise during labour. If the woman had been assessed as being high risk for complications in the weeks before delivery, this terrible event would never have occurred. Medical negligence and failure to recognise the complications that may arise during an ordinary delivery are the real problems of this story and of many others. Think about the anguish of this poor mother when she gave birth to a beheaded baby due to a poor-quality health service!

To downplay the issue... some jokes about doctors. Sometimes doctors are the leading cause of troubles for patients. This is the reason why there are a lot of jokes about doctors:

- Most people were born thanks to a doctor; thanks to a doctor most people die.
- Latest news: Huge inconvenience due to doctors' strike. Undertaking operators complain a steep drop in business.

- When you see a doctor walking behind one of his patient's coffins, it is the cause following the effect.
- Desperate cases call for... extreme unction.
- Doctors wear gloves not to leave their finger-prints on patients?
- Doctors do not have their tonsils, adenoids and appendicitis done.
- An apple a day keeps the doctor away, so take aim carefully.

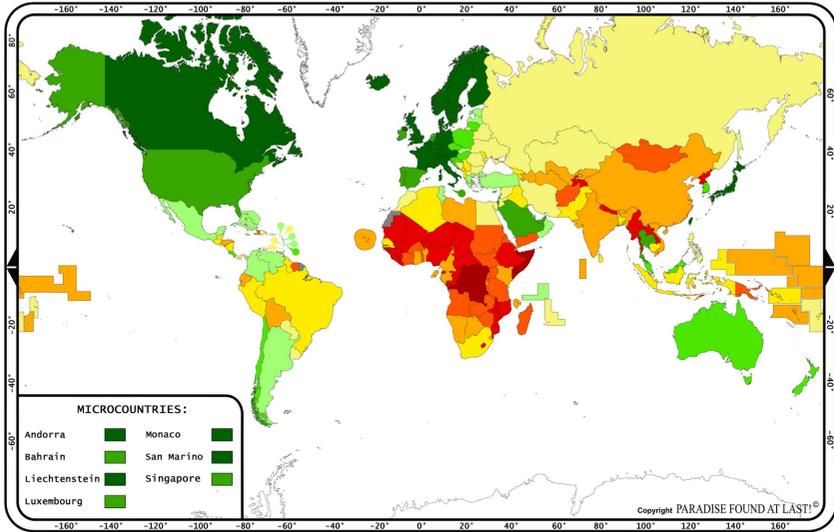
The map. The *world map of health system quality* allows you to make a virtual tour around the globe to learn the attitude of the world's countries towards health care. This map has been created through the correlation of the data coming from three authoritative sources: the WHO, the National Centre for Medical Intelligence and the Italian Foreign Office. Each country is characterised by a colour corresponding to a score which, in turn, shows the quality of the health system supplied by a given country. When the score falls, it means that the economic resources that the state assigns to support its health system progressively diminish. As a result the quality of the country's infrastructures and health services decrease and are only provided to a smaller part of population. The quality of medication becomes progressively lower and are less available, mostly in rural areas. The lowest scores refer to states where a real health system does not exist. They can only provide medical treatment to a small part of the population because they are often supported by humanitarian organisations.

A comparison between the maps. If you compare the *world map of health system quality* with the previous *world map of typologies of health systems* you can easily note that the countries with high scores adopt a universal health system, namely a legislative and insurance system allowing all citizens to enjoy private or public medical treatments through a universal health coverage. Even though the USA can offer a good health system in most cases, it still does not provide medical services to all citizens.

HEALTH SYSTEM QUALITY

EXCELLENT	
VERY GOOD	
GOOD	
FAIR	
SUFFICIENT	
INADEQUATE	
VERY INADEQUATE	
INSUFFICIENT	
VERY LOW	
AWFUL	
NO AVAILABLE DATA	

WORLD MAP OF HEALTH SYSTEM QUALITY



[Open the World map of independent states to see the names of the states](#)

Chapter 28

Educated and uneducated countries

Your journey towards Eden continues. We are now ready to analyse a basic theme: education. The cultural development of a country depends on its educational achievement. The higher the level of education, the higher the level of cultural development and, consequently, its strength, autonomy and democracy. Being well-educated is not only an advantage for yourself but also for the people you encounter. Living with people who have reached a high level of education will enrich your knowledge and experiences. This does not mean disregarding uneducated people, but simply to recognise that the cultural level of a population plays an important role in its life and development.

Illiteracy, a serious handicap. It is obvious that if a country has high average educational attainment rates, its illiteracy rate decreases with all the negative effects it may involve. Those who are illiterate are unable to fully understand what is going on around them, they are unable to support and defend their rights, they cannot vote for a political party to represent themselves and they cannot have a voice in anything; they are usually exploited by influential people and doomed to be slaves in the power of their masters. Being illiterate is a serious handicap in everyday life as many activities can be very difficult to handle without a minimum level of education. If you are unable to read instructions provided with medicines, you cannot cure yourself adequately. If you are unable to read a newspaper or use a computer, you cannot be correctly informed. If you are unable to write an inquiry and, at the same time, are void of having a standard curriculum, there will be very little hope of finding a job. If you are not even able to vote, how can you expect to exercise your citizen's rights? In short, those who are not able to read and write are inevitably forced to live on the fringes of society, namely to be ignorant and ignored. Actually, illiterate people may be good craftsmen, valid artists, strong farmers,

fishermen or hunters, but always below their own skills and, mostly, without sufficient autonomy. This is the reason why it is essential for every child to have access to primary school education. In fact, it is considered the second of the eight “Developmental Goals of the Millennium” launched by (UN). The eight goals are a series of targets that were to be achieved by 2015, among which universal primary education. Even though this goal has not been fully achieved attempts are still being made for children to receive compulsory and free schooling. It is essential that children learn how to read, write and do sums to meet their primary needs.

Advanced studies. Once students have finished primary and secondary school education, which are usually compulsory in developed countries, they should have the chance of continuing their education through a specialised school in order to obtain skills for their future career. As a rule, education systems offer different options and courses. As a matter of fact, there are High Schools specialised in different sectors so students may decide to have a technical, commercial, professional, artistic or techno-agricultural education. In USA High Schools, on the other hand, in addition to mandatory subjects, students can choose “electives”, that is, optional subjects. Students thus are able to expand their knowledge and discover their specific aptitudes in order to continue their education attending Colleges, Polytechnic Institutes or Institutes of Technology. In developed countries, primary and secondary education is compulsory, but parental socioeconomic status tends to affect quite heavily a student’s school life though not in terms of school attendance. In most cases, wealthy families want the school to offer best quality learning so that their children can be culturally stimulated to continue their studies at university or at other higher education institutes. These families create friendships with their children’s friends’ parents and discuss future projects that they would like their children to embrace. Moreover, they get involved with a social network ranging from teachers to friends and also acquaintances. In contrast, middle-lower class families are less involved with the schools social context and if they are summoned by the teachers, they may find it difficult to fully understand the implications of what they are being asked including the targets that the school proposes. In the choice of university education or advanced studies the less fortunate families should encourage their children

in word and deed by building a wider social structure that can support them and be of help in the future.

Effects of education. There are diverse advantages of education in many fields including the understanding that it is inalienable for our children.

Now let us make an analysis of these effects.

Education and child death rate

There is a strong association between educational attainment and child death rate. In the developing countries, evidence shows that if a girl attends at least primary school, she will be a better mother in the future. Children of educated mothers are less likely to die early in life. As a matter of fact, girls learn the basic knowledge of healthy nutrition, hygiene, the importance of child vaccination as well as the rules of prevention of the most widespread diseases. Actually, AIDS hits mostly poorer and uneducated people. Education, especially in the developing countries, can really save human lives.

Education and economic growth

Several researches have shown that imposing school attendance on boys and girls have positive effects on the whole community and their country of origin. A close relationship between economic growth and teaching how to read and write has been proven. It is estimated that an increase by 1% in the literacy rate can result in an annual per capita economic growth by 0.37%.

Education and population growth

Widespread education represents a sort of population stabiliser. Employment rates increase for women with high school education. As a result, educated women tend to get married later in life and to have fewer children than less educated women who, on the contrary, get married very early in life and have a larger number of children.

Education and civil rights

There is also a strong correlation between educational level and the respect of civil rights. A totalitarian regime, for example, can take advantage of the lack of education of a large number of the population to impose its tyranny and limit democracy without any opposition.

Education and culture

The word “Culture” comes from the Latin word “*Cultura*”, which means “to cultivate”. Subsequently, it was used in a broader sense to refer to all the activities and situations involving “care”, including the care of human beings, namely their education. Actually, its modern meaning stems from it. It includes all the knowledge and traditions considered to be basic for a country and therefore worth being transmitted to future generations. It goes without saying that the culture of a country can be better spread when a collective education is achieved. Western civilisation has always associated knowledge with books and therefore those who have read many books tend to be considered educated. However, in modern culturally developed societies, culture is no longer identified with written traditions but with the new multimedia technologies: this is the reason why the mass-media are responsible for mass culture.

Knowledge as a privilege. In contrast with the reality of the western world today, for centuries literary knowledge was the prerogative of a select few belonging to wealthy families, who were often the holders of political power. It was only with the Protestant Reformation and the Catholic Counter Reformation, dating back to the 16th century that the situation began to change thanks to a very important plan allowing sacred texts to become more accessible to all citizens. However, the majority of ordinary people could still not read. In the late 18th century, thanks to the reforms pursued by the so-called Enlightened Absolutism and to the influence of ideologies stemming from the French Revolution, the issue of education started to come to the fore, although not everywhere. This was the prelude to the great leap forward that occurred in several western countries throughout the 19th century. In these nations, the Industrial Revolution led to a dramatic increase in the mass literacy rate, which was also due to the help of willing people, mostly churchmen, and to the development of an

active social conscience. It is important to note, however, that the upper class has always tried to prevent the lower class from becoming educated. Non-democratic and mostly totalitarian regimes have always exploited the lack of education. Actually people without education are less likely to revolt against tyranny and can be easily manipulated. This was what the white citizens understood during the American Civil War (1861-1865). Laws against widespread education were promulgated and slaves were not allowed to learn how to read and write so as to prevent them from changing their lowly condition and so as not to aim conquering a slice of power. Consequently, when the civil war ended, only those who were already literate were allowed to vote to maintain the same status quo whereas the black slaves were excluded. Even quite recently there have been many abuses of power. For example, Paulo Freire, who was a teacher, was arrested and exiled because he had begun a remarkable program of education and had taught farmers how to read. This happened in Brazil in 1964 when you had to be educated to be allowed to vote.

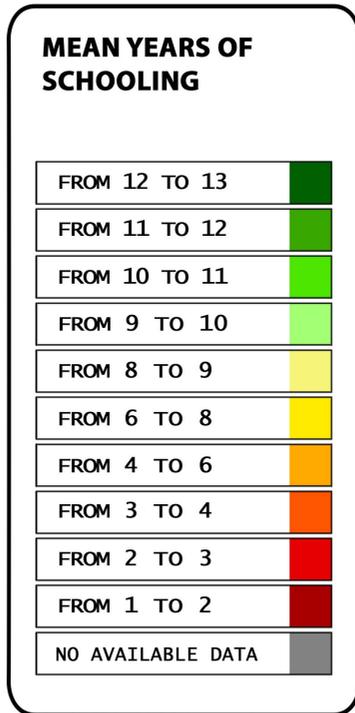
Present situation. In developed countries, most people take primary and secondary education for granted nowadays. However, there are still too many countries where education has not been institutionalised so that it is the prerogative of a few citizens. Just as it happened in Europe four centuries ago. The minimum standard of literacy – being taught how to read and write – should be an inalienable right for everybody. In spite of this, the poorest countries find it hard to create an educational system and compulsory education. A very large number of children belong to families who cannot afford to send them to school. Moreover, the school is often located far away from home, public transport is inexistent and when available, it is too expensive. Therefore, children are usually forced to start working early in life in order to provide enough food for their family. Children are the wealth of the poor. Uneducated parents are not likely to understand that their children's education is important and that they should support it. Parental illiteracy and their extreme poverty multiply the risk of non-schooling, mostly for girls. Actually, at least two-thirds of people who are illiterate are female. In contrast, in the developed countries, the majority of citizens have an even access to secondary education – the so-called “middle school” – and tertiary education – high school, college,

university, advanced education. Here most students are women and they tend to perform better than men in higher education schools. This proves that if women have the chance of attending school, they study harder, they are faster learners and, in many cases, they even achieve better results than men.

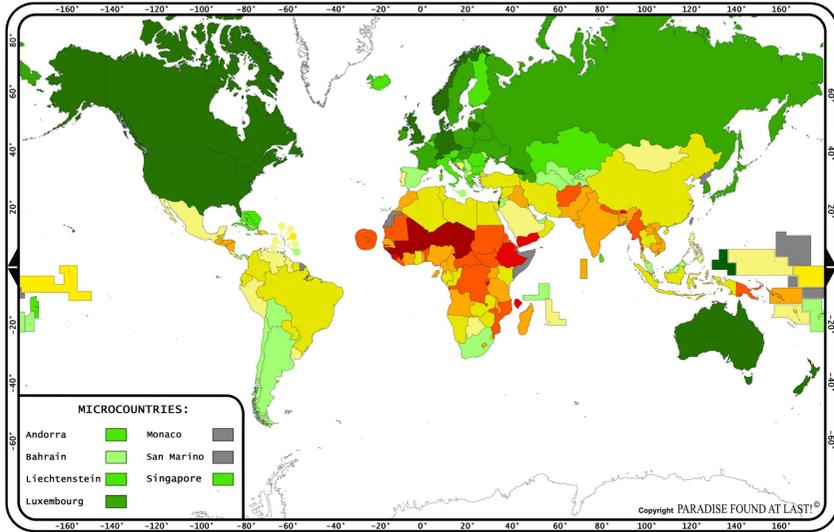
Figures are explicit. At present worldwide it is estimated that about one billion people are illiterate. Considering that the world's population is made up of over 7 billion people, it can be inferred that about one person in 7 is illiterate, and as a result, cannot participate in the civil life of her/his country. Most of those who are illiterate are to be found in the Southern Hemisphere where people may attend school for only one or two years. People are forced to work to survive in these countries and one third of the children who start school do not finish it due to economic reasons. Lack of education is more common in rural areas rather than in urban ones and higher education is predominantly the prerogative of the rich. Sometimes it is the people themselves who prefer not to change. Just think that schools still make people reminisce the great injustices they suffered from colonialism in Sub-Saharan Africa. Yet globally, the situation is slowly improving and school attendance – the average years spent in education – increases by one year every decade. Even better results are registered. For example, in 1980, in Colombia the average school attendance years were 4.3, but they rose to 7.3 in 2010. An opposite trend is to be found only in Chad, Guinea and Madagascar, where there has been no improvement in education.

The Map. The countries with a higher educational attainment have higher cultural levels. More books and newspapers are read in culturally developed societies and also the media are used in a better way. In short, schooling plays a leading role in people's wellbeing not only to measure the quality of life but also the economic development of a country. The *world map of mean years of schooling* has been created thanks to the data supplied by the United Nations Organisation for Education, Science and Culture (UNESCO). If you read it carefully, you will identify the countries providing their citizens with more years of schooling to fight illiteracy. These nations have a large number of people who can be involved in social activities;

consequently, their economic development increases and democracy is stronger.



WORLD MAP OF MEAN YEARS OF SCHOOLING



[Open the World map of independent states to see the names of the states](#)

Chapter 29

Your onward journey to life-giving water

As this journey is full of remarkable surprises and unexpected scenarios your emotions will be stirred. We are now going to focus on a vital topic. If you consider moving abroad, make sure that local drinking water supplies are safe and available. Clean drinking water is essential for life. The availability of and access to safe drinking water should be a priority in identifying your Eden. Your choice, however, is personal and must be respected. It is essential though to be enlightened on the situation.

A special but delicate planet. Earth is the only planet in our solar system that can develop life, because it contains water. According to a research carried out by the Wood Hole Oceanographic Institution, 97% of the Earth's ocean water is made up of salty sea water, about 2% is frozen in polar ice caps whereas the remaining amount, which is less than 1%, is fresh drinking water. Despite this very small percentage, superficial and underground fresh water would be sufficient to meet human beings' needs. The problem is that water is unevenly distributed due to the different kinds of climate and land features. Consequently, there are large areas where fresh water is in short supply and places that suffer from drought and water shortages. Clean water, however, can be easily polluted, if not protected from contamination.

Diseases. At present more than 1 billion people lack access to safe water; the result is that 3.4 million people – men, women and children – die every year. This is not due to water shortages but to diseases caused by drinking dirty water. Unsafe drinking water may be infected with viruses and bacteria. The most dangerous form of pollution is water that has been contaminated with waste products – faeces – from infected animals or people. As the chapter on human diseases shows, pathogens such as bacteria, viruses and protozoa can cause very dangerous infectious diseases

like cholera, amebiasis and typhoid fever whereas other micro-organisms can lead to less harmful diseases such as diarrhea and gastroenteritis. Many countries of Sub-Saharan Africa lack adequate sewerage systems and sanitary appliances particularly in rural areas. Other developing countries are growing very quickly and building huge peripheral areas, which are characterised by the lack of reliable sewerage as well as inadequate water supply systems. Moreover, special attention should be given to water purification. Chlorine is one of the most commonly used disinfectants for water disinfection. However, scientific evidence shows that there is a strong association between chlorinated water consumption and the onset of some types of cancer, mostly bladder and rectal cancers as well as other harmful effects on human health such as spontaneous abortion and congenital malformations. Chlorinated water is dangerous even after it being boiled. Chlorine is found in national water supply systems (for disinfection) as stated above. Although it can be dangerous for one's health it is possible to eliminate chlorine from tap water by using a depurator in your home. The best ones are reverse osmosis depurators that utilise microfiltration as well as carbon filters.

Warning. Industrial pollution and the use of pesticides and fertilisers in modern farming are gradually reducing safe drinking water. Moreover, WHO states that the availability of water is decreasing faster in developing countries than elsewhere. This is mainly due to two factors. Firstly, strong population growth affecting mostly Asia and Africa. Secondly, the so-called greenhouse effect. According to several scientists, there has been a significant increase in the atmospheric temperature for many years. Doctor Mark Smith, who is the head of the global water program at the International Union for Conservation of Nature (IUCN) announced that the global water crisis is worsening not only in the world's poorest countries, which suffer from a perpetual water shortage, but also for the wealthiest Western countries. Global warming, due to the greenhouse gases, mostly carbon dioxide, is considered to be the main cause of climate change. These pollutants have anthropogenic origin and, like a greenhouse's glass walls, prevent heat from dissipating. Scientists say that, by 2020, the intensity and frequency of the rainfall, from which Africans obtain water, could be reduced by 50%. If this happens, there could be severe consequences for

agriculture as 80% of rural areas are irrigated by direct rainfall. Consequently, the North-South divide will increase further. The greenhouse effect is a global issue as it afflicts the wealthiest countries too. The effect of temperature rise is getting worse even in the USA, particularly in California, as well as in Australia and Spain where water supplies have decreased due to climate change and poor rainfall. To give you an idea of the situation, just think that the Swiss glaciers have lost about 30% of their volume since 1850 and, if greenhouse gas emissions continue at this level, it is estimated that glaciers in the Swiss Alps will disappear by 2050.

Herodotus. Many centuries ago, Herodotus, the great Greek Historian, stated that clouds were the source of the Nile. Today the course of rivers is well-known and we can affirm that Herodotus was practically right. Heat from the sun causes water to evaporate from the surface of oceans, lakes and rivers. When it is turned into water vapour in the atmosphere, it falls back to Earth as rain or snow. Some of the water that falls on land may filtrate deep into the soil, flowing underground and between rock particles for many miles until it reaches an impermeable layer of rocks or soil which halts its downward flow. This is the way an aquifer layer is formed. It may contain safe drinking water, namely mineral water. Groundwater in an aquifer is a renewable resource and is often easily accessible. An aquifer is recharged only when new surface water seeps into it so it is important to appreciate the balance between inputs and outputs from groundwater. If groundwater extraction rates exceed recharge rates, water quality alters and consequently aquifers become depleted. There are also fossil aquifers, namely water supplies stored deep beneath the ground which take thousands of years to develop and which recharge very slowly. Excessive extraction can lead to a fossil aquifer depletion and fossil aquifers take a very long time to replenish. In the regions where aquifer layers containing mineral water are not sufficient to meet the people's needs, nondrinking water, coming from contaminated sources such as aquifers, rivers, lakes and artificial basins, is purified at water treatment plants so as to be drinkable. Drinking water that is treated has the aim at removing harmful pollutants and at correcting some chemical and physical properties of the water. These drinking water purification processes include sedimentation, coagulation, filtration, aeration, biological treatment with active mugs, activated carbon

filtration, reverse osmosis filtration, water softening and disinfection. The amount and type of treatments applied vary with the toxicity of the water, therefore these operations will not occur simultaneously. Less contaminated water may need simpler treatments whereas more contaminated water will receive more drastic measures. In any case, the goal of these treatments is to provide safe and reliable drinking water.

Packaged water. Even though the wealthiest countries have reliable water systems throughout the territory and the water supply checked daily, there is a huge industry that, with incessant advertising campaigns, tries to persuade consumers to buy very expensive bottled water that appears to have “miraculous” effects. Drinking bottled mineral water is an “induced consumption” considered to be a valid alternative to tap water due to clever marketing, which is big business worldwide. Transport costs is what affects most bottled water prices as variable costs are marginal. These include the cost of a single bottle and fixed franchise fees. One litre of mineral bottled water costs from 200 to 1000 times more than tap water. In this case, one litre of bottled water costs like one thousand litres of tap water. Bottled water is said to have special therapeutic or nutrient mineral properties with respect to tap water in order to justify its high price. Sometimes this is true but tap water can be of good quality even better than bottled water. However, bottled water coming from a given country is considered to be chic. People say: “*It costs more but is worth it for the quality...*”. People do not realise that its higher cost is due to transport costs! Think about Iceland, which literally means “Land of Ice”, an island situated in the Polar Circle. Tons of bottled water are exported annually. Before reaching the consumer’s glass, these bottles travel for thousands of kilometres by sea and land. You may think that the water cost is higher because it is from Iceland but actually it includes shipment costs such as crew shipping rates, fuel for the trucks, motorway tolls as well as the driver’s wage.

Water properties. Drinking water is a primary need for human beings. Water has always been considered to be a common good belonging to humankind. It belongs to everybody and to nobody. Actually it is a common heritage of mankind. This is an incontrovertible principle of democracy but not all agree. Private companies are perfectly aware of the

fact that water represents a very lucrative activity. Multinational companies in this sector would like it to become a big business. The phenomenon of privatisation is increasing. It would be profitable for a State to transfer the management of the water supply system to enterprises in exchange of large amounts of money. However, if this is not well-regulated and carefully monitored, there could be an abnormal increase in prices that would lead to very strong social conflicts. In the UK, water privatisation has increased water supply costs by 55% over the last five years. They have also considered quoting water on the stock exchange which was totally unexpected! A few conservation groups, which are also supported by international organisations, think that quoting water on the stock exchange could be a way to save the total water resources. This is based on the assumption that “individual interest” is equal to “collective interest”. As a matter of fact, if the share value had a high-return due to the increase in the quantity and quality of water, it could be inferred that not only shareholders could have a personal benefit but that also they could make an indirect profit for the community. However, quoting this common good belonging to mankind and the whole biosphere on the stock exchange could encourage speculation with negative consequences. Is it right to consider water as a product? Can it be subject to the same rules applying to competitive markets and free markets? Is it right to consider water as a source of income? Is this ethically admissible? Unfortunately, human rights have always been sacrificed in the name of profit. An extreme example is buying and selling weapons; do those who are involved in this business have moral principles? Ultimately, if water supply were to be privatised, could it become an instrument of power, and not only in the poorest countries?

Global situation. As already stated above, fresh drinking water resources are not uniformly distributed on the planet depending on the climate conditions and orographic features of a country. Actually less than 10 countries hold 60% of the global natural water resources. There is a chasm between the wealthiest countries such as Europe, North America and Japan and the rest of the world. Obviously water consumption is much higher in the wealthiest countries than in the poorest. However, the fact that the wealthiest States have higher water consumption rates does not affect the

water availability of the less developed countries. There are also countries that are rich in fresh drinking water but lack the necessary infrastructures to carry water where it is needed even though they are located at the centre of large fluvial systems such as Brazil and Congo. Brazil ranks first in water resources availability but lacks an adequate system of water supply. The countries with higher water shortage have generally a slower economic development. In these countries, many people have to walk long distances to collect water every day as they do not have water facilities at home. Israel is an example of a country that depends on technology and that has invested substantial financial resources to meet all its water needs. The comparison between Israel and its neighbouring countries is illuminating. Saudi Arabia and Libya are other examples. The economic growth is usually slowed down by water shortage in the Middle East but both Saudi Arabia and Libya rely on fossil aquifers. Unfortunately, as seen above, fossil aquifers will inevitably run dry one day as they cannot be replenished.

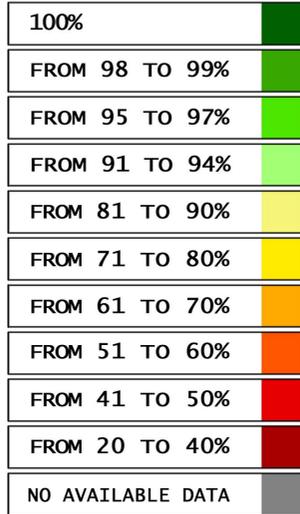
Future prospects. Today more than 1 billion people live without access to safe drinking water. It is estimated that, in 2020, they will be around 3 billion as global population growth follows an exponential curve. There were around 1,6 billion people on Earth in 1900; in 1970, they were 3,7 billion and today they are over 7 billion. It is estimated that the global population will reach over 8 billion in 2025. The problem is that the global water consumption rate increases much faster than the population growth rate. This will double in about 40 years whereas water consumption rate will double in 20 years, namely at a double speed. This occurs with economic growth, namely when a country's national income increases so that people can afford to have higher water consumption with respect to the minimum quantity of water used for basic survival needs. In other words, water is wasted. A well-balanced development of a civilisation has never been found in history; and in many cases it has led to the exploitation of the resources without fully appreciating its underlying mechanisms. The World Bank estimates that increased drought will hit mostly the Middle East, where more than 90% of the population may be left without water. However, even though drought will affect all world's countries, it can easily be inferred that the countries that lack well-functioning water supply systems today and that do not provide all citizens with drinking water

facilities are likely to suffer most. Water supply is an important issue so countries should understand that remedial measures are more expensive than preventive actions. These countries should be able to solve the problem at its source, namely the building of the essential water supply infrastructures to provide all citizens with safe potable water. The WHO calculated that water shortage costs nine times more than building infrastructures and that an investment of 700 billion dollars is required to meet water demand in the next ten years. Major efforts should be concentrated in Asia and Africa, but the World Bank is unable to afford such a huge investment so it seems that the problem will persist. The countries that are able to provide a large part of the population with safe drinking water will not be affected. The reason why is because their structured economy will allow them to face any possible water shortage. They may even take and distribute safe drinking water from their neighbouring countries thanks to their already well-functioning water supply infrastructure. Water business may become a major source of territorial conflicts that could lead to commercial, industrial and economic fights. In the future conflicts could fester for this vital resource.

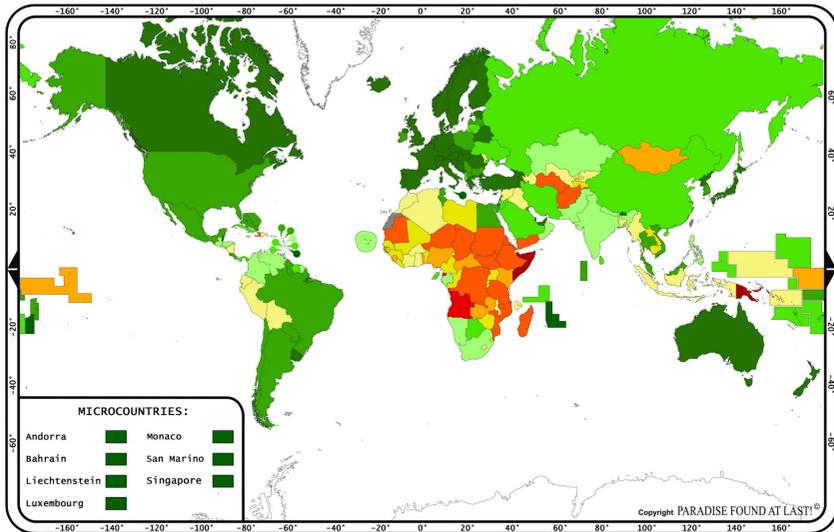
The map. What is the current situation globally? Knowing the facts is essential while you are searching for your personal Eden. Which countries can provide all citizens with drinking water? The *world map of access to safe drinking water* has been created thanks to the data supplied by WHO and will enable you to learn this basic information. The percentage of the population having access to drinking water sources is shown for every single country. The data represents an average between urban and rural areas. It is important to point out that there are great disparities in water supplies between urban and rural areas. When the percentage shown is 100%, this means that water supply facilities cover urban and rural areas equally. If the percentage is, for example, 60%, it is likely that in urban areas the percentage is still high, often near 100%, but it may be quite low in rural areas.

ACCESS TO SAFE DRINKING WATER

PERCENTAGE OF POPULATION USING
SAFE DRINKING WATER



WORLD MAP OF ACCESS TO SAFE DRINKING WATER



[Open the World map of independent states to see the names of the states](#)

Chapter 30

Worldwide web

An incredible milestone in the history of mankind was when, in 1969, the first man walked on the Moon. If people at that time had been asked what to expect 40 years later the majority would have answered that one-day man would land on Mars, develop a stable base on the Moon and even build a space station where people could live. These events have never happened. However, back in 1969 nobody would have ever thought for a moment that today a large part of the world's population would own a personal computer. Moreover, nobody would have thought that people would have a personal cell phone that could be taken everywhere and that, finally, that they could surf the Internet, the global wireless network that allows people of different nationalities, cultures and religions to be constantly inter-connected. You are making this exclusive journey that has the ambitious aim of identifying your own Eden. It is unavoidable to explore these technological achievements particularly of the last two decades – mostly the last few years – as the opportunity to surf the Internet has dramatically changed people's needs and lifestyle. An analysis of how Internet developed will explain the mechanism underlying its usage in different countries and may even help you choose your preferred place to live. The spread of this mass communication medium can be considered to be an effective tool showing personal self-sufficiency, and modernisation of a country.

What the Internet represents. The Internet represents the third great communication revolution in human history. The first one was carried out by Johann Gutenberg, who invented the mobile characters for the printing press. Before its advent, the only way to duplicate a book was to copy it by hand so books were rare, expensive and only rich people could read them. Thanks to the printing press, ordinary people could read books and increase their knowledge too. The second communication revolution

occurred with the invention of the television, which was able to take sounds and images into people's houses as the physical limitations of manual signal propagation were overcome by the development of radio waves. Internet is the third revolution, namely the wireless network able to reach the four corners of the earth, which introduces the concept of reciprocity. The information source and the user are on the same level and can mutually operate with no hierarchical differentiation. The most remarkable thing is that, thanks to the Internet, information cannot be controlled by the authorities and this is unique in human history. Actually this is a paradox, as this means of communication was invented by the American Army and was a secret! At present, the Internet network has developed and spread so fast that it has become the major mass communication medium.

Last famous words. The success of an invention cannot always be predicted. When, for example, television was introduced to the public for the first time in the 1920s, the New York Time, an influential newspaper, wrote that the new invention was totally inessential. The reporter said that the typical American family was very busy and had much to do so that it could not remain idle and watch the images broadcasted by that new device, which had a cathode ray tube. According to that review, that new technological monkey business would not be successful. On the contrary, the radio was considered to be an asset because people could attend to their business while it would play music, and offer other entertainment programs. In spite of this short-sighted prediction, television has become synonymous with domestic amusement. A television set is inevitably one of the household items everybody has nowadays, being the mass communication medium that has mostly changed our lifestyle. Actually, it has stuck loads of people in front of it undermining family and social relations but supplying them with an open window on the world. This above résumé indicates the difficulty of making accurate predictions with regards to the success of a new invention.

Computers. If you were asked what a computer is used for, you would certainly list various activities but probably you would not say: "*It is for arithmetic calculations*". This is because you hardly ever use it for this purpose. Nevertheless, computers were first created for performing

arithmetic calculations and they were actually used for providing long and complex calculations for many years. They were not personal computers, but cumbersome machines taking up a lot of space and were used only by large organisations such as universities and institutes for advanced research. Conceived as very expensive calculating machines, computers have progressively developed to perform many other different tasks that had never been thought of or considered to be possible before. Video writing software, which replaced the old type-writers, computer-assisted programming, computer graphic functions, computer simulation functions, applications in medical diagnosis and videogames are only some examples of the many modern applications that a computer can perform today.

History of computers. The word “computer” comes from the Latin term “computare”, meaning “to calculate”. Great calculations are required mainly by astronomy. The Antikythera mechanism is the most ancient mechanical calculator ever known and dates back to 150 BC. It is a sophisticated device made in bronze, which has the shape of a book. It was activated by about 20 indented gearwheels assembled to a differential gear-system. It was used to calculate the rising of the sun, the phases of the moon, the movements of the five planets known at that time, the exact time of Spring and Autumnal equinoxes and the months and the days of the week. Now it is stored in the National Archaeological Museum of Athens. The evolution of the so-called “computing machine” was slow but inexorable in the following centuries. In 1833, a vapour computing machine was developed. It was programmable and it was the first example of a computing machine able to process data – input and output operations – with a memory unit, calculation units and a data storage register. It was only in the early 1900’s that modern computers appeared. The first was built at Pennsylvania University during the World War II. It weighed 30 tons and it covered 180 square metres/1900 square feet of floor space. It was mainly used to build computing ballistic fire tables for the US army. It could perform thousands of additions per second. From then onwards, there were many attempts to reduce its huge size. During the 1960s, computers characterised by fairly cheap prices were launched on the market so that every small firm or single department of research could afford them. A computer was the shape of a wardrobe. These calculators were very slow.

Standard practice was that the machine would take several hours or even days to obtain the results of the calculation process. About twenty years later, computers were named “microcomputers”. Their size and physical features were similar to those of a typewriter. The most representative computer of this category was the Commodore 64, of which more than ten million machines were sold.

Recent revolution. Three young American pals strongly believed that, to be really successful, the computer should be used as an electrical household appliance, should be aimed at everybody and should start working when plugged to power. Their names were Steve Wozniak, Steve Jobs and Ronald Wayne. In 1976, they created the Apple Computer. It was an unequalled marketing success. During the 1980s, people with limited computer science knowledge could use a computer thanks to the early Apple Macintosh’s user-friendly interface with very easy-to understand features such as the trash can, the desk, the windows and the notes. The personal computer was born. The Macintosh model was globally successful so many of its innovative features were pirated by Microsoft when “Windows”, its operative system, was created. They even went to court to define the property rights. The fight lasted for more than a decade. Ronald Wayne, a co-founder of the Apple Computer Company, is famous for a tragicomic episode. As he was concerned about a possible failure of the company, he sold his shares for 800\$ only a few days after the beginning of the business. If he had waited for no more than a couple of years, he would have gained about 2 billion dollars!

How the Internet has really changed the world. The advent of Internet has dramatically changed the world of the personal computer in ways that we would have never imagined. Internet and social media networks are significantly changing the way people communicate and also the way knowledge is transferred. It is not only a technological but also a cultural change. The “Web” dates back to the 1960s, when ARPANET, the first network, was created. This was composed of processors that were interconnected but dislocated in different places, designed to fight against a possible nuclear attack coming from the Soviet Union. Alike the Internet today, the ARPANET network had a decentralised system where all the host

computers were inter-connected through different kinds of links, sometimes even double. Thanks to this expedient, the network could survive many attacks as a hypothetical attack to one single host could not stop the general functioning of the network; the redundant connections would replace the ones which might be destroyed. In 1993, CERN, in Geneva, put the World Wide Web (www) software in the public domain. The Internet and the technologies linked to it have evolved at a such rapid pace that this phenomenon has been defined as the “digital revolution” and the traffic on the Web, which means network in the sense of global connection, has multiplied in geometric progression, at an annual rate of over 300%. Today, thanks to the Internet, those who have a PC and a connection to the web can share information. Anyone with a telephone line can be connected to Internet.

Digital spreading. What will the effects of this massive diffusion of the personal computer and the Internet be on individual life? The fact is that the Internet usage is significantly increasing globally. The Internet has rapidly become a huge medium of information. An ever-growing number of users connect to it for longer periods of time and it has amazingly spread to many different countries. Globally, at present, 3 billion people have an Internet connection. It is important to note that the sources of information and communication such as books, newspapers, magazines and the Internet tend to be more inter-connected. Now Internet users read more books and newspapers than ever before and this thanks to the web. Moreover, it is worth making a distinction between the rich and those who do not have ample resources at their disposal. The latter are left at the margin of the global space and keep on relying on the omnipresent generalist model of television. As a matter of fact, the Internet is a new modern medium of communication which is drastically changing society and its lifestyle not only among adults. Children are the so-called “digital natives” as they have used technology since they were born so they are usually more digitally confident and skillful than adults. In the past, children used to play with a ball, toy soldiers and cars or dolls. Today they prefer tablets and smart-phones. Actually technology has remarkably changed the way children think and, consequently, their lives. Is it for better or for worse? This is the problem. The computer is an interactive tool so it is very fascinating.

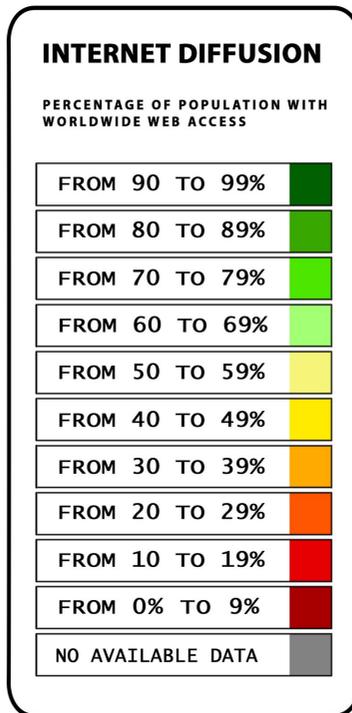
Adults should monitor the amount of time their children spend at the computer and supervise their children's Internet use. If a child is left alone at the computer, it may become a substitute for a playmate. Moreover, there are many dangers that children may encounter while surfing the Internet on their own. They may easily find offensive and threatening websites because of their contents. Sex is the most popular topic on the Internet. Pornographic and pedopornographic materials can even be casually found. At present, parents have the opportunity to use content control software such as Cyber sitter or Cyber patrol to protect their children from predators on the Internet. The computer and the Internet used as learning tools can provide great educational benefits but with moderation and great caution. Internet now is the largest library in the world. You are surrounded by books, newspapers, journals, catalogues, pictures, videos and sound recordings relating to any subject. Not only recent information can be consulted, but also classical literature and the history of ancient times. This colossal library has no librarians: parents should thus recommend the best documentation for their children.

Web services. The Internet provides an abundance of services and different kinds of communications. It is used in private or public life, for entertainment or business, for scientific or commercial purposes. E-mails, chats and social networks are only a few examples of what the web can offer. Today you can buy everything online, you can take part in forums, you can create a network of contacts. You can also use the Internet to engage in politics and for many other things. However, any service can be positively or negatively used. In conclusion, the personal computer and its new virtual world can be of help only if you make good use of it.

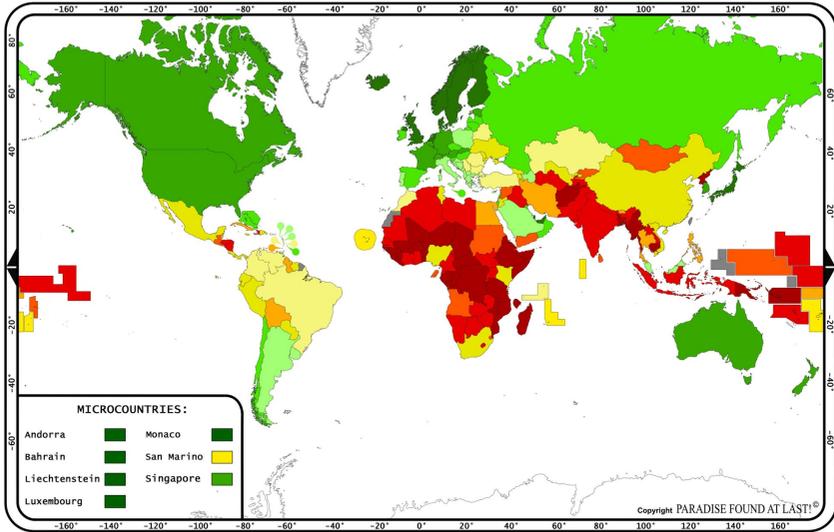
Users. Globally the Internet usage depends on the users age, gender and level of education. Men over 50, mainly those who do not have children, and mostly women are less inclined to learn how to operate a computer quickly. In many cases, cultural and traditional reasons prevent women from using the Internet and this occurs mostly in Muslim countries where women are still considered principally mothers and housewives subject to their husbands. Internet diffusion across the world can be a valid parameter to assess the economic development and modernisation of a country.

Digital technology is synonymous of modernisation.

The map. Many readers will appreciate the possibility of being virtually connected with the rest of the world while relaxing in their earthly paradise. Today 3 billion people have an Internet connection; Internet penetration has occurred mostly in North America and Europe. However, the personal computer and Internet marketing will dramatically increase in the next decades thanks to the great demand coming from the emerging markets, primarily India and China, but also Brazil. The *world map of Internet diffusion*, whose data are supplied by the World Bank, is up-to-date, even though the next few years will be full of surprises.



WORLD MAP OF INTERNET DIFFUSION



[Open the World map of independent states to see the names of the states](#)

ON THE FIFTH PART OF YOUR JOURNEY

Injustice anywhere is a threat to justice everywhere.

(Martin Luther King) *Letter from Birmingham Jail*, Alabama, USA.

Your journey towards Eden is now becoming more spiritual. This fifth part concerns the fundamental values of human beings, which make them superior to any other creature on Earth. If you follow this ascetic course you will have a lot of food for thought, examining issues such as political rights, freedom of information, respect for other people's beliefs, rights of women and outcast groups such as gays. A just and objective society should protect and safeguard human rights and create an egalitarian system so that everybody can be treated equally by the Law.

Chapter 31

Liberté, égalité, fraternité

We all have the right to our dignity and to be respected on equal terms. This concept is based on the principles of liberty, equality and fraternity of the French Revolution., without discrimination whatsoever such as race, gender, religion, culture, political opinion or sexual orientation. Human rights must be granted to every single person and are essential on the journey that has the aim of identifying your personal ideal paradise. Consequently, we will examine countries that guarantee human rights and countries that violate them. A country that does not respect the dignity of all people or where discrimination occurs should be ethically unacceptable. However, the choice is yours.

Is your Eden a democratic place? Political rights allow citizens to participate in the political life of a country. In particular, they include the right to vote and be voted, the freedom of thought, the right to assemble and the right to have access to public political life. In a democratic society, political rights must be guaranteed as this is an expression of one's individual freedom. The right of all citizens to vote for their representatives by universal suffrage in free general elections is fundamental for democracy. Unfortunately, there are still many countries that do not guarantee these basic rights; some are biased, discriminating against different groups, granting privileges to a few social classes, races, religions, gender etc. These countries violate basic human rights and the Law, so in reality they are against real democracy.

What is politics? The first definition of the term “politics” goes back to Aristotle and it is linked to the Greek word “*polis*”, which means “town” with the sense of community embracing all citizens. According to the Athenian philosopher, “politics” was the administration of the polis for the common good and identified a public space where all citizens could gather

and talk. Politics generally refers to all the people belonging to a society and not only to those engaged in politics, namely the so-called politicians. Political involvement refers to the administration of the state or its territorial substructures. Consequently, those who protest against political authorities, even if not performing correctly, are in politics. A real democracy allows peaceful protests. In short, politics must be considered as the Art of Governing society and refers to the way used to administer it for the common good.

The way to tyranny. However, those who are elected by the people to be their representatives tend to lead and control people's lives with the primary aim of obtaining enormous benefits for themselves. Consequently, it is essential that all citizens can choose, through democratic elections, the most honest politicians that demonstrate great moral integrity and managerial skills, able to elaborate and execute transparent programs. In other words, politicians who shun the pursuit of gaining personal profits but work for the common good. Living in a country where you are not allowed to choose your political representatives means that any decision in your life will be taken by the authority and therefore you will be forced to accept whatever, be it right or wrong. A number of people have been born in countries where the lack of freedom has limited their movements. Today, but more so in the past, many have been governed by leaders who have established absolute authority. These forms of governments are called autocracy, in which one person or one government body, usually composed of an exclusive circle of people, has unlimited authority over the country. There are no laws, no constitution or other social or political factors within the state that can limit this power. In this situation, the cult of the leader, be it sovereign, emperor, or president, is often to be found. These leaders are fanatically admired, with rites chosen and imposed by the dictatorship itself. When the government is based on political ideologies that act as a leader, something similar happens. For example, the Italian Fascism Movement, the German National Socialist regime or Communist regimes have always imposed their celebrations such as a ritualised show, whether sport, artistic or cultural activities. Practically nothing is allowed without "ritualisation". A tyrant usually comes into power in an ambiguous and dubious way or through a military takeover, the so-called coup d'état. He

uses violent methods to seize power and refuses to recognise democracy to perpetuate his system of government. It is almost impossible to fight the supremacy of a dictator as it is guaranteed by the armed forces and by the power he holds. Moreover, the political opposition has an absolute minority which is, in many cases, suppressed.

How democracy is achieved. The aim of this chapter is to speak about political rights and to understand what political rights involve.

- Political rights enable people to vote and participate in fair elections based on universal suffrage.

The right to vote is now recognised to be untouchable in almost all countries but this has not been easy to achieve. This fundamental principle is based on Jean-Jacques Rousseau's words. He was one of the most famous followers of the Enlightenment and considered to be the father of the so-called universal suffrage. Thanks to this all male and female citizens aged eighteen or over and free from statutory limitations due to penal reasons can participate in political and administrative general elections as well as in other public consultations promoted by the state such as referendums. Universal suffrage for men and women was first introduced by New Zealand in 1893. Countries which do not recognise the right to vote have dramatically decreased today. There are several emblematic cases like Brunei, where the 29th sultan is in office, or the United Arab Emirates, where 7 royal families reign the country. In these nations, the sovereigns hold the political power which is transferred in direct line by hereditary right and the people have no right to vote to choose a different governor.

- Political rights means that the whole procedure concerning general elections must be free, regular and transparent.
- Political rights means that you live in a country where people can make their political choices which are not influenced by totalitarian parties, military powers, religious hierarchy or economic oligarchy.

In contrast to this fundamental right, there are places where you are not free to have a different political idea with respect to the

government's. Zimbabwe, which is a country situated in the Southern Africa, is a good example. According to Amnesty International, continuous violence and threats occurred before and during the last general presidential elections in 2008. Robert Mugabe, who has been president since 1998, has repeatedly been accused of setting up an undemocratic regime and the last general elections proved it once again. His electoral campaign was characterised by aggressions, tortures, murders against those who were suspected to be linked to opposition groups. Once again his deliberately despicable strategy allowed him to achieve his goal.

- Political rights means that each citizen must enjoy the same electoral opportunities, cultural, ethnic and religious minorities included.
- Political rights means that those who do not agree with the Government can organise themselves into an opposition party and, if the opposition wins the general elections, it is allowed to govern.
- Finally, political rights mean that the government, which has been democratically elected, must govern with transparency, responsibly and with open methods in order to meet voters' requirements. Too often voters are not informed of what the government and opposition are actually doing after the general elections. A democracy should aim at informing all citizens about the life of a state. Transparency is a basic factor in a democratic government. The USA is a good example. Thanks to president Obama's administration and to the parallel diffusion of the Internet, the Open Government has become popular. It means that the Government must be transparent at all levels and its work checked. An Open Government informs citizens openly and transparently about its projects and new technologies. Citizens are entitled to know the authority's acts, decisions and data in real time so that they can interact, giving their opinion, briefing and new data. Through this direct exchange, the government is able to make decisions based on the real needs of the people. Collective intelligence of a society improves the performance of the institutions.

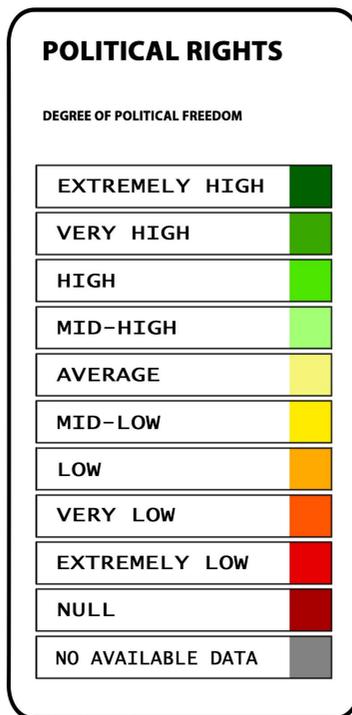
More open governments. The American case is not unique. An ever-increasing number of governments are trying new systems of open governments so that more efficiency, transparency and responsibility are guaranteed. In the United Kingdom, as the data of the public administration are available to everybody online, a no-profit organisation has been founded. This is able to supply high quality information about the regional and central public administration costs by processing the data. This initiative is called “Where does my money go?”. This policy should be considered the right way of handling things, enabling effective governing that actually represents the symbol of a society founded on democracy.

A different way to use the web. There will be more political transparency in the future and Julian Assange, the most famous member of WikiLeaks, an international organisation, is well aware of this. This website receives classified and secret documents submitted by anonymous sources, regarding state or military secrets, as well as industrial and banking secrets. Since 2006, more than a million reserved diplomatic documents have been published that have tainted some of the most famous political world’s leaders. WikiLeaks is considered to be a dangerous tool particularly for corrupt leaders who are obliged to hide their misdeeds. Undemocratic governments that do not allow their citizens to enjoy political rights are afraid of this instrument. In fact, the publication of public censored documents revealing deceptions, frauds and lies involves mostly countries with dictatorial regimes. Transparency is one of the basic principles of a democratic Government; therefore, WikiLeaks can help global democracy grow. All the world’s citizens are invited to send and share unethical behaviours of governments and enterprises.

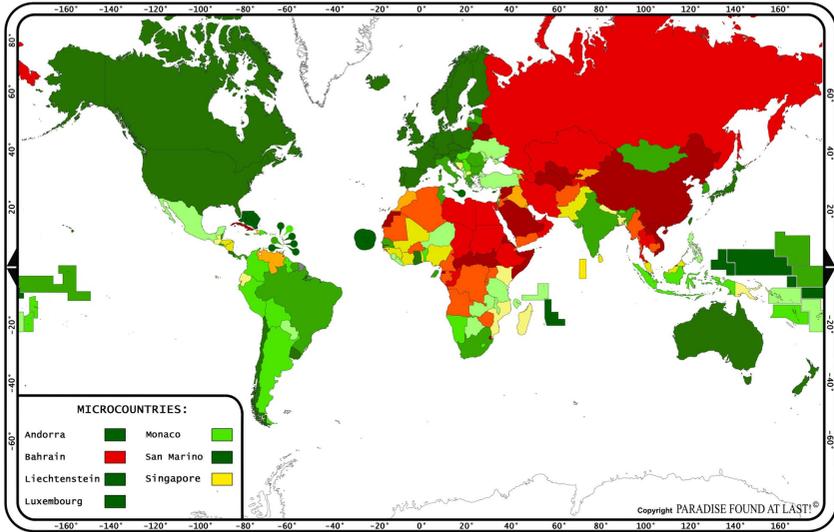
Conclusions. Freedom House is a non-governmental organisation that supports the expansion of freedom in the world. It was founded in 1941 by Wendell Wilkie, Eleanor Roosevelt, George Field, Dorothy Thompson, Herbert Bayard Swope and other famous celebrities. In the past, it was a way to react to Nazism; today it favours global democracy and freedom. Although Freedom House has branches in leading cities around the world, it is still to be considered an American organisation. Actually it is independent, not associated with the Democratic Party nor with the

Republican Party. Every year, it publishes a report showing the world's countries political rights. Therefore, it is possible to monitor the evolution globally. Almost 40 years ago, more than half of the world's countries were governed by some sort of autocracy limiting freedom. Today the majority of the world's citizens live in democratic countries. In the last decades, there has been a steady improvement, then something happened, a change, which has led to an inversion. Lately, this tendency has worsened.

The map. Thanks to the data collected by the Freedom House, the *world map of political rights* has been created. On observing it, you will appreciate in what countries political freedom can be enjoyed. You will see to what extent citizens are free to make decisions and to act in accordance with the procedures allowed by their governments.



WORLD MAP OF POLITICAL RIGHTS



[Open the World map of independent states to see the names of the states](#)

Chapter 32

Freedom of the press

Information is so essential today that it has been called “The Information Era”. In the past, it took time to deliver messages by hand but today news sweeps rapidly around the globe. Information is vital for making decisions and being so readily available it is having a significant impact on everyday life. From one extremity of the earth to the other extremity people are bombarded with information about what is happening. However, there are still some countries that hide the truth. Totalitarian regimes have undisputed control over the populace by restricting access to knowledge. Even several seemingly democratic and liberal states engage in information manipulation and rule the country through a biased one-sided press.

Freedom of the press guaranteed. Freedom of the press is a fundamental human right that a democratic government should concede to all citizens. Everybody should be allowed to receive full, detailed and correct information on what is happening in their own country, without government censorship. The national and local media such as newspapers, radios, televisions and Internet providers are supposed to report true and crystalline news. Diverse points of view should be expressed as there is not one single truth. Everybody should be entitled to express their opinion without restraints or fear of being punished. In fact, the principle of freedom of the press means that everybody should have the right to express their thoughts or opinions in writing or in any other form. Another important point to discuss is that freedom of the press is closely linked to independent press. The members of press agencies and their publications should not be subject to external influences and have freedom of expression.

The first battles to obtain freedom of information. The concept of freedom of information and expression developed in England. John Locke,

a philosopher and physicist from North Somerset, was the first to express his ideas as opposed to monarchical tradition and the divine right of kings among the so-called liberal thinkers. He elaborated the notion of a social contract between single citizens and their representative organs, so that the fundamental rights could be guaranteed to all including free circulation of ideas. In the meanwhile, thanks to other currents of thought, and mainly to the Enlightenment, this new concept of freedom spread rapidly to major European countries. However, after the Congress of Vienna (1814-1815) there was a rapid reduction in the concepts of freedom, due to the restoration of absolute monarchies and antidemocratic enforcement of inequitable statutes. Several decades passed before civil consciousness reawakened.

When freedom is violated. History is full of violations of freedom, which usually is associated, but not always, with totalitarian or antidemocratic regimes. There are still nations where this fundamental right is denied. When the free circulation of ideas is totally forbidden or limited, citizens are unable to express their thoughts. Conversely, regimes maintain their power more easily. The freedom of correct information was violated even in ancient times but it is worth analysing more recent examples.

In Nazi Germany, journalists were not allowed to contradict or even to express their opinions against the Fuhrer, Nazism and his followers. Those who violated this rule would be sent to prison, would be segregated into concentration camps and sometimes their family members would also be punished. In extreme cases *culprits* were immediately executed as traitors. Adolf Hitler totally abolished the right to free information. Nazi propaganda was an attempt to counterfeit systematically the whole German History, mainly glorifying the martial and war-like aspects since the ancestral time of the first Germanic tribes. The Fuhrer constantly encouraged hatred against France, USA and UK and aimed at creating the myth of a superior German race, known as the “aryan” race. He endeavoured to mislead people in believing that other races were inferior such as the Jews. He also had the aim of eradicating the German Christian faith replacing it with a series of neo-pagan myths melted with esoteric beliefs regarding reincarnation. The absence of freedom of information in

Nazi-Germany led to the Holocaust, which was its most harmful effect. The Nazi Party spent huge amounts of money in order to spread propaganda, with the aim of keeping the German people in total ignorance of what was really happening. Actually, most Germans believed that the Jewish population would only be moved somewhere else or deported to forced-labour camps at first. As everybody knows, the reality was totally different. Actually it is thought that many German people began to realise what was really happening but the unwholesome ideologies that the Nazis transmitted did not allow the Germans to fully understand the dire situation so as to prompt them to rebel against the dictatorship. Internal opposition and resistance against Nazism came only from isolated groups and was characterised by weakness, despite some attempts to kill Hitler. Moreover, the lack of freedom of information led to other terrible consequences for the German people themselves. The Nazi propaganda kept on presenting the campaign as though the Germans were winning the war, even when they were practically defeated militarily. This ideology almost destroyed the nation.

European communist regimes, which developed with the October Revolution in 1917 and spread to Eastern Europe after World War II are illuminating experiences demonstrating that a totalitarian regime is usually associated with no freedom of information. Even here, information was only aimed at glorifying the party, praising its past and present feats, suppressing any divergent opinion, filtering or eliminating news from foreign sources and opposing them with the regime propaganda. In the Soviet Union, the juridical subject to protect was not, like in the Western World, the single individual and its institutions, but a whole social class. Anyone attempting at the revolutionary conquests of the working class would be criminally prosecuted. This was valid for Stalin's Soviet Union as well as Chruscev's or Breznev's. During that period of terror, this interpretation was so rigid that it became paradoxically crazy and horribly brutal. The courts would act as organs of class-struggle as the law protected, at least theoretically, the proletariat. For a long time, the only newspaper that Russian citizens could read was the Pravda – meaning the Truth – where only news that the government approved could be reported, together with the interpretation imposed by the government itself. The situation

started to change slightly when Gorbaciov came into power in 1985, but then, in more recent years, it deteriorated mostly due to the wars in Chechnya.

Today there are many undemocratic societies that use state press agencies to promote propaganda. In these countries, reporters are forced to work below standard conditions and are often subject to considerable threats by state representatives. Being a journalist is a dangerous occupation; just think that in 2003, 42 reporters were killed and at least 130 were sentenced to prison for criticising totalitarian regimes. Over the last few years, the global situation has remarkably worsened.

Freedom of the press. In developed countries, freedom of information means that all citizens should have the right to express their opinion freely in writing, speech or any other kind of expression. This objective can not only be achieved thanks to a series of rights that are mainly given to the press and their publications, but also to citizens, who should feel free to express their thoughts and feelings.

In the USA, these rights were guaranteed by the First Amendment of the Constitution. In it, the Founding Fathers gave information the protection it deserved in order to play its leading role in American democracy: “The Press must serve citizens, not governors”. The power of the government to censure the press has been abolished so that information can always be freely expanded. Information has been protected so as to uncover the government’s secrets and keep the people well informed. Only free press can effectively disclose a government’s deception.

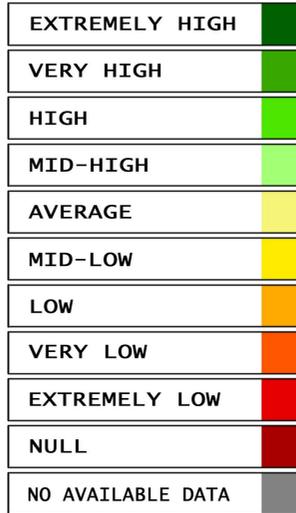
A global view. Freedom House, has discussed political rights for over 30 years now, studying the general economic and political environment of every single nation. It is informed if reporters are submitted to business potentates that limit, in practice, freedom of the press. In addition to Freedom House, there are other non-governmental organisations that sometimes apply different criteria to assess freedom of the press worldwide. Reportes Sans Frontiers – also takes into account the number of reporters who have been killed, expelled or threatened as well as the possible

existence of government-owned television and radio monopolies. Moreover, it registers the existence of censorship and self-censorship in the media, so that a global evaluation of the media independence can be achieved. It also provides the degree of difficulty that foreign reporters may be forced to face. By analysing the reports of these organisations, it can be inferred that there has been a considerable reduction in freedom of the press for the twelfth consecutive year. Less than 15% of the world's population can legitimately say that they live in countries where full freedom of the press and consequently speech are guaranteed. There has only been an improvement in Asia, whereas the situation appears to be particularly serious in the former Soviet Union, starting from the Russian Federation itself but also in Africa and in some countries of South America such as Venezuela. The situation is fortunately different in other countries. Pluralism and freedom of the press are not only restricted to the privileged healthier developed countries. Freedom House's report, for example, shows that Costa Rica is considered to be superior to many other European countries. The most virtuous are two Scandinavian countries, Norway and Sweden. Iceland is well placed too, a country where accurate information permits its citizens to discover, beforehand, the deteriorated financial situation of their public expenditures. In this way, they were able to understand how their Icelandic banks carried out "murky" operations.

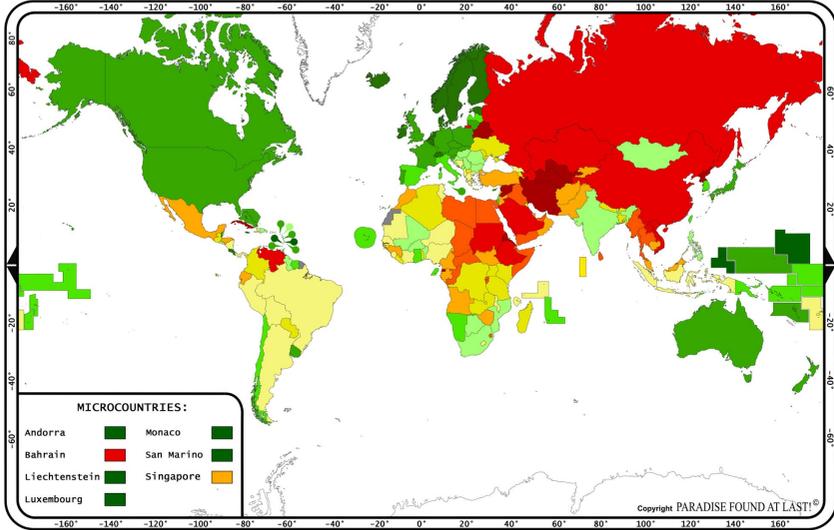
The map. The *world map of freedom of the press* refers to 2015 Freedom House's report. It shows that 62 countries are rated as "not free" and their detriment. Among these, a group of dictatorships such as North Korea, Uzbekistan, Turkmenistan, Eritrea, Belarus, Cuba, Syria, Iran and Equatorial Guinea occupy the lowest positions. Independent media does not exist or are unable to operate freely.

FREEDOM OF THE PRESS

DEGREE OF FREEDOM OF THE PRESS



WORLD MAP OF FREEDOM OF THE PRESS



[Open the World map of independent states to see the names of the states](#)

Chapter 33

Slavery

Now that we have entered into the 21st century you most probably think that slavery is something of the past, completely abolished and not part of our reality. But the reality today is different; slavery still plagues several countries. As many people are unaware that slavery still exists today how can they voice their dissent in order to protect basic human rights if we do not know the facts? Not voicing our dissent means that the situation could worsen in the future.

Past situation. History testifies the two-fold aspect of slavery, the denial of human rights and the phenomenon of emigration. Slavery has always existed. We mostly remember the African slave trade dating back to the 1500's, violent years when people were forcibly taken away from their homeland and carried to the American colonies by ships, chained like animals, to be sold to big landowners who forced them to work in the cotton plantations. Now, let us go back in time to consider the Roman era. Prisoners of war were condemned to hard labour. Many readers will remember the slaves' revolt guided by Spartacus. Slavery was also to be found in the Greek and Egyptian civilisations where the exploitation of slave labour was common. In reality slavery was pandemic in past societies.

Only an apparent abolition. In the late 1700's, a few countries such as France and the UK, declared to be against the slave trade and slavery. At first they were isolated cases, then other countries followed. In the early 1800's the slave trade was abolished in Europe. In America it took a few decades more for slavery to be abolished. The League of Nations and UN signed two important declarations in which slavery was formally condemned in all its forms, respectively in 1926 and in 1948. Saudi Arabia and Mauritania were the last two states that officially abolished slavery in 1962 and in 1981 respectively. Since then, slavery has been completely abolished, at least in

theory. Unfortunately, the reality is quite different.

What is modern slavery? The first observation to make is that things have taken a different course and have been messed up. True, slavery has lost its connotation of legitimacy linked to its abolition, but it is now controlled by the murky dealings of the criminal underworld. As slavery is no longer recognised by the law, the right to own a person is not contemplated and it cannot be claimed because all forms of slavery are illegal. It is a paradox: as slavery is illegal a person is not the property of an owner anymore! However, slavery is rampant and at present slaves are cheap and are exploited as long as they are young and strong, but then abandoned and easily replaced by “fresher goods”. This vicious cycle never ends. Consequently, today the relationship between a slave-driver and a slave does not last for long. Slave-drivers are not even interested in spending and investing on slaves as in the past. Exploiters easily gain very high profits. For instance, it is estimated that slavery linked to prostitution is the third most profitable commodity in international criminal organisations, after illegal weapons and drugs. Some modern forms of slavery share the fact that they have become hereditary and that the children or grand-children must pay off their parents’ or grand-parents’ debts.

An authoritative opinion. According to Kevin Bales, co-founder of Free the Slaves, an organisation opposed to the exploitation of human trafficking, the difference between ancient and modern slavery as far as the status of a slave is concerned is similar. The difference is that nowadays millions of people are lured to slavery through false promises of a better life as a way of escaping poverty. Excessive population growth in under-developed and developing countries increases the number of poor people and, therefore, the number of potential victims. As a result, the price of a single slave is decreasing. In the USA, in 1850, a black man was sold for today’s equivalent of 40 thousand dollars! At present, you can buy a slave for only 90 dollars. The trading of human beings is not only for cheap labour to support the huge development in countries such as China and India, but also to produce cheap goods such as clothes, cell-phones and TV, which are sold in developed countries. To fight this exploitation of defenseless people only a strict and coordinated international effort

including punitive stringent laws is needed.

New forms of slavery. Current slavery has many forms and involves people of all ages, gender and race. Modern slaves, even if not legally owned by others, are controlled by their masters/employers and are obliged to work under physical or psychological threats. Modern slaves are deprived of their human dignity and are treated as a commodity and, in many cases, illegally bought and sold, as private property. They are continually influenced by their masters physically and/or psychologically. They cannot act independently as their freedom of movement is very limited. The new form of slavery is manifold, cruel and distressful. First of all, there are debt slaves, accounting for at least 20 million people globally; these people have been deceived into contracting a very small loan such as simply buying medicines for their ill children. People are forced to work hard to pay off these debts 7 days a week, 365 days a year. Many bonded labourers receive a meager wage to survive and poor housing but are still unable to pay off their debts, which may be transmitted to their future generations. Another form of slavery is hard labour. These “slaves” are illegally recruited by governments or political parties and obliged to work, usually under the threat of violence or other punishments. There is also the “classical” slavery involving human trafficking where people are often kidnapped from home, inherited or given as a gift. Human trafficking is a reality today, even in countries that regard themselves as modern and democratic. Human trafficking affects mainly women and children being brought into slavery through the use of deception or violence. Migrant women are often deceived and forced to work as servants and mostly as prostitutes. This kind of slavery is evident on the roads of our crowded and civilised towns. Slavery is a menace, particularly child labour. There are a large number of children who are exploited and forced to work in dangerous conditions. Globally there are tens of millions of children who cannot study nor play as they are forced to work full-time. The situation of children who are kidnapped, bought and involved in the sex trafficking trade is even worse. They are exploited for their commercial value through prostitution and pornography. Forced marriages are another form of slavery. Women and girls are forced to marry against their will to live as servants and to experience physical violence. In many cases, girls as little as 10 years old are

involved. Possibly may have ignored the phenomenon of modern slavery before reading this article but now you are beginning to understand the plight of today's modern slaves..

Slaves working for you. Globalisation can be misleading and deceiving entrapping us in a one-way reality. We live in a world made of things, objects and food. We buy them and we are at peace with our conscience, as we have bought them with the money we have honestly earned: this is our one-way reality. What we cannot see – and often what we do not want to see is what is hidden behind a simple object. We may not have an idea of the material it is made of, or who made it, the efforts and energy needed to produce it, and how many ills it might have caused. If we like it or not, slaves are being exploited to meet our desires. How many slaves do you think are working for us now, in this moment? Slavery Footprint is a non-profit organisation, founded in 2011 in Oakland, California, USA. It published an [interactive text](#) online which is able to show us concisely how many products in our daily life are produced with forced labour, taking into account our food, clothes and hi-tech.

Children as soldiers. Currently more than 300,000 children under the age of 18 are engaged in armed conflicts. Hundreds of thousands of children have fought over the last decade; some were regularly recruited in the armed forces of their country, some in paramilitary troops opposed to governments. Most teenagers are between 15 and 18 but even children under 10 are recruited and there is a gradual tendency towards recruiting even younger ones. The recruitment of children is extremely high in Africa and Asia but according to [Human Rights Watch](#), it is particularly high in Afghanistan, Myanmar, Sri Lanka and Cambodia. Over the last ten years, it has been ascertained that children between 10 and 16 took part in armed conflicts in 25 countries. As the conflicts are often ongoing, new child soldiers are always needed to replace the dead.

But how many slaves are there today? There are really large numbers of men, women and children living in modern slavery. According to [Walk Free Foundation](#), there are at least 36 millions. This number is much higher than it was in periods when slavery was legal. The problem is that

this exploitation is not called with its real name – slavery – so that the phenomenon is commonly ignored, the topic omitted and the worst thing is that nothing is being done to improve the situation. Actually, one of the biggest problems of our society is the clear understanding of when a person is to be considered effectively a slave. This is due to the fact that slavery has taken many forms, to the code of silence of those who practice it and to the high number of people who protect it. The deep-rooted tendency for human beings to establish their own leadership on others is the leading cause.

Countries with the highest number of slaves. Five countries alone represent 61% of the total number of those living in modern slavery. Below you will find the melancholy list:

1. India.

There are 14.3 million slaves. India has the highest number of people living in modern slavery. As in other countries belonging to the Asiatic continent, slavery increases due to the speculation over poorly qualified and cheaply paid jobs. In India, entire families are forced to work in building sites, plantations, brick manufacturing and the clothes industry.

2. China.

There are 14.3 million slaves. Many have been enslaved owing to its rapid modernisation and urbanisation, mostly in building and mining industries.

3. Pakistan.

There are 2.1 million slaves, about 1% of its population. The most common form is debt slavery which is usually perpetrated by employers. If workers tend to increase their debts, then other members of the same family are forced to work for the employer without compensation.

4. Uzbekistan.

About 4% of the population live in the condition of modern slavery. It is among the highest percentage in the world. Every year more than one million are forced to pick cotton for the state without compensation. It is a custom dating back to the earliest

days of the Soviet Union and it is still in force today. It is likely that the cotton clothes that you are wearing now have been made by exploiting forced labour of children in Uzbekistan.

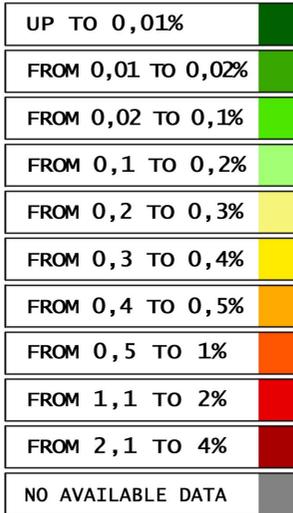
5. The Russian Federation.

It is estimated that there are about one million people living as modern slaves in the country. These people are foreign workers who were born in the former Soviet Union countries. They usually emigrate to the Russian Federation to work in building, textile and agricultural industries or as lumberyard workers. They work hard, in dangerous conditions and with very low wages. However, their modest wages allow them to send money to their homelands and to support their family.

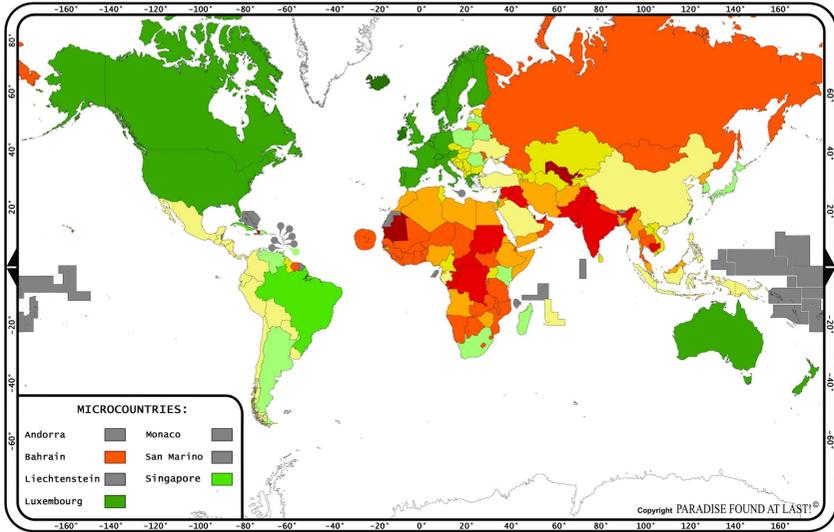
The map. There are 36 million slaves globally. Asia alone counts for 2/3 of them but unfortunately this phenomenon inexorably increases with time. The *world map of slavery* has been created thanks to the data contained in the Global Slaver Index published by the Walk Free Foundation and it shows the percentage of people living in modern slavery for each of the 167 countries considered in the report.

SLAVERY

PERCENTAGE OF PEOPLE LIVING
IN MODERN SLAVERY



WORLD MAP OF SLAVERY



[Open the World map of independent states to see the names of the states](#)

Chapter 34

New horizons for women

Let us continue on our journey. We are now going to discuss an ethical theme. The topic is the rights of women. As at least half of the readers of this book are likely to be women, this chapter is expressly dedicated to them. Many women are mothers, giving birth and raising children, thus we should give them the dignity they deserve. Yes, women are equal to men in dignity even though they have been segregated, denigrated, even abused and tortured over the centuries. It is still a reality today. They have nearly always had a subordinate role. Women are still suffering injustices in many parts of the world and this is an open wound. We trust that readers of any gender have a clear notion of human rights and consider equality of the sexes to be an inalienable right, keeping in mind that men and women are the two different but complementary sides of each other. This chapter describes in detail the countries where unfair gender discrimination is still to be found.

Real differences. There are mainly biological and sexual differences between men and women. They have different reproductive organs as they play different roles in creating human life. They also have different behaviours and attitudes due to differences in hormone production related to their diverse sexual roles. Women's biological role is to give birth, and to raise children. During pregnancy and subsequently nurturing their children mothers become vulnerable and need their partner's assistance. Women have less physical strength than men but they are endowed with greater human gifts such as kindness, generosity and a self-sacrificing spirit. Men are much stronger physically and their traditional role is to defend their families and the community.

Male opportunism. In view of this, men have always predominated on women. Domestic violence against women has extremely negative effects

on their lives. Many cultures impose domestic roles only on women so that secular employment is out of their reach. Discrimination is mostly on the basis of gender in education and females are not allowed to attend school in some countries. Even today, women do not have the right to vote in many parts of the world; some professions are only open to men; and women cannot own land, inherit or be economically independent. Male dominance is an ever present concept in our society as men have always had leadership roles throughout history supported by religion and tradition. Males have always ruled over cultural, political and economic organisations using physical force and power to subjugate females in order to enhance the existence of men in power

Religion discriminates women. Religions have often played a leading role in creating or maintaining discrimination against women. Islam, Christianity and Judaism are patriarchal religions where women are considered to be inferior to men. In particular, Muslim men have more rights and privileges than women and are allowed to have more than one wife. Divorce is unequal in Islam too. According to the Koran, men can repudiate their wives for any and every reason whereas women can only do it if their husbands are violent or indifferent to them (IV, 128). The condition of Muslim women is worse in more conservative societies and in countries where attempts to reintroduce Sharia law have been made. Sharia law is believed to be inspired by God and according to it, assassins, blasphemers and apostates are sentenced to death. In Afghanistan, women who were under the Taliban rule did not have the right to be educated, have the right to health care and to have a job. They could neither drive, smoke or go to a restaurant unaccompanied. They are usually segregated and victims of violence. India is another country where religion has imposed female submission and where Shankaracarya and his Brahmin followers determined the fate of women in the 7th Century. These oppressive systems have been abolished recently, in the 20th century, but their psychological component is still present. Parents arrange and decide when their child is ready to get married and brides have to give dowry to prospective husbands. Dowry is an essential part of marriage in India and it is the cause of several divorces; many deaths are caused by voluntary acts, which allow a husband to remarry and obtain a larger dowry. The murderer

– the husband – rarely stands trial as this is a common practice in India. There are also ancient and merciless customs such as the practice of Suttee, a medieval law that forced widows to die with their husbands. It still has supporters in the 21st century. In some regions, a woman who throws herself into the flames of her husband's pyre is worthy of admiration. There are also other victims. About five thousand females die prematurely every year, a shocking reality for a country with well over one billion inhabitants. In Indian society, where male chauvinism prevails, females are not always welcome and are eliminated before birth. These victims are the foetuses that mothers decide to kill after learning that they are bearing female babies.

Tribal rules. In the Middle East and in many African countries, tribal cults replace the State religion. In the name of tradition, indescribable suffering occurs. Girls undergo infibulations, that is external genital mutilation, celebrating their entry into womanhood, according to ancestral rites. This surgical operation is not carried out by doctors, but by people who are invested with the power of performing the rite and it is performed in poor hygienic conditions. Infibulation involves removing the clitoris, small lips and parts of the large lips, stitching and narrowing of the vaginal opening for the passing of urine and menstrual blood. This practice is aimed at preventing sexual intercourse until deinfibulation occurs. This is the term given to the procedure to reopen the closed vagina which, in these cultures, is performed directly by the groom before the consummation of the marriage. Owing to the removal of the clitoris, women cannot have any pleasure but feel pain during sexual intercourse. After each birth, reinfibulation is performed to restore the woman's body to its premarital condition. It has been estimated that about 130 million female teenagers have undergone this harsh torture. This brutal act is practiced in several states such as Egypt, Sudan, Eritrea, Ethiopia, Somalia, Sierra Leone and Mali.

The inconstant female emancipation. It is very interesting to go back in time and examine and take a look at the condition of women such as in some ancient cultures. In some cases, early men and women were equal whereas other cultures considered women to be inferior.

- 2500-500 BC

Women in ancient Egypt were ahead of their time. They were housewives but there were also female Pharaohs, namely Empresses. Egyptian women were very refined and were famous for their particular make up and sophisticated garb. In ancient Egyptian writings, it was strongly recommended that men should love and respect their brides.

- 1700-800 BC

Cretan women were allowed to participate in public life, were greatly considered and enjoyed great freedom. They were well-dressed in embroidered skirts, very close-fitting bare-necked corsets and elaborate hairstyles. Cretan religion had the cult of the goddess and female priests.

- Around 800 BC

In the Homeric society, women married according to their fathers' will and marriages were the tangible alliances between two families. The Homeric society was patriarchal so that women could only be ladies of the house.

- 500-200 BC

In classical Greece, Aristotle, the famous philosopher, helped towards the foundation of the male chauvinism, relegating women in their roles of wives and mothers. He claimed that women were biologically inferior to men, a theory which has been proven to be totally wrong from a medical point of view. When a girl reached the marriageable age, that is when she was 14 or 15, her father would choose her husband, who was usually much older. Actually, a woman was first under her father's authority and then under her husband's authority and for much of her life lived segregated in certain areas of the house. On the contrary, in Sparta, women enjoyed equal rights. In this city, women could enjoy the open air, improve their physical health by training to run and fight. They were responsible for the family and the house, they were allowed to own their own movable property or land. The Etruscans gave their women great freedom and importance too. Etruscan women were independent, relaxed and enjoyed equal rights with men.

- 200 BC-400 AD

Roman women imposed a revolution. For many years, a “matron” was the ideal Roman woman but later women fought for their right to make their own choices. Women became fickle and bossy, stopped wearing simple clothing, and started to wear bikini’s in thermal baths, using heavy make-up and to love luxury. They stopped being moderate and caused a proliferation of betrayals and intrigues.

- 400-600 AD

Viking women were nomad and were treated with great tenderness by their men, even though they were forced to follow them in dangerous fights and battles. The Roman historian Tacitus says that female barbarians were good hunters exactly like men. Moreover, they were venerated as they were considered to be enlightened by gods.

- 476-1492 AD

The condition of women drastically declined during the Middle Ages, when women were considered inferior to men. The Edict of Rotary, which was the first collection of written laws by the Lombards, stated that women were not able to take care of their properties so they were confined to their traditional roles and expected to be subordinated to men. Religion played a leading role claiming that men and women were equal before God in heaven but that women were inferior to men here on earth. Daughters were often forced into convents against their will.

- 1400-1500 AD

During the Renaissance, women started to learn the powers of herbs and used them to create healing medicines. However, they were considered to be witches by the Church. The papal bull of 1484 ordered witch-hunts. Many women were burned at the stake even for banal reasons. If a woman picked up a child in her arms and then the child fell ill, she was arrested and burned as a witch. Inquisitors thought that the witch had an insensitive spot so needles were stuck into her body to find the area insensitive to pain. The victims were coerced into confessing their crimes

through inhuman tortures. The practice of witch-hunts came to an end only with the Enlightenment.

- 1700-1800 AD

The Industrial Revolution helped women to leave home and become workers. However, the economic exploitation of women and children began. Women were paid much less than men owing to their physical weakness. Moreover, women could not own properties, could not inherit and thus totally depended on men. They did not have the right to vote and to be represented in Parliament. The issue of women's rights started to be successful only in the late 1700's and with the French Revolution in 1789, a new social, cultural and political movement was created questioning the gender differences in power and asking for equality in rights and opportunities. Feminism was born!

- 1800-1900 AD

In the UK, Mary Wollstonecraft wrote a "Vindication of the Rights of Woman" saying that an equal education from childhood could eradicate the distinctions between the sexes and give men and women the same opportunities in life. Moreover, thanks to Kate Sheppard's projects, in 1893, New Zealand was the first country in the world to grant the right for women to vote.

- 1900-2000 AD

Women have obtained the right to vote in most countries over the last 100 years. Only six countries have not yet come into line with it. In Bhutan, only the head of the family, who is generally a man, can vote; in Lebanon, proof of elementary education is required for women, but not for men, to vote. The United Arab Emirates and Brunei do not have an electoral system so neither men nor women vote.

The American conspiracy. After World War II, a consumerism society developed in the USA and, subsequently, spread to Europe. Cheap mass production of high-technology consumer products was launched on the market. The average middle-class family dreamed of owning a detached house with a lawn. There was pressure from the public opinion that

expected girls to marry and be satisfied with raising children and taking care of their husbands. Women would give up studying and working and find personal fulfillment in the family. In 1957, Betty Friedan interviewed many women who had chosen to be housewives. She asked them about their education, their experiences and the fulfillment of their wishes. She wrote articles on what she called "The problem that has no name", then she collected them and published the book "The Feminine Mystique" six years later, where she dealt with the suffering condition of these women. Her book/survey was very successful and disproved the stereotype image supplied by the "expert" of advertisement, sociology and psychology who had caused that condition. Friedan's research on American women showed that a woman needs to find a job and try to combine professional and house commitments to feel fulfilled.

Modern psychology in the western world. Sigmund Freud believed that men were superior to women, claiming that conscience is less developed in women, who are also more narcissistic. Freud's assumption that women are inferior to men strengthened this belief among males. This Freudian concept is almost universal and it may still be taught in textbooks, which are usually back a generation. In spite of this and beyond any reasonable doubts, the condition of women is better in western countries than in mid-eastern or eastern countries, although it still seems that society is largely dominated by men.

Negative effects of feminism. Socialist feminist currents gave enormous stimulus to women's independence as they supported the radical idea that the upbringing of children should be carried out socially, freeing mothers from their biological ties with their children. Nursery schools were thus created; they can be useful for parents but they are sometimes traumatic for children who are separated from their mother very early in life. This is still an open problem.

In the most egalitarian countries, women can make the same career choices as men. However, successful women still have unresolved inner issues due to their emancipation. Female inferiority is paradoxically to be found in gender equality in western countries. Women tend to compete with men to

demonstrate they are no longer inferior as in the past but they should reveal their own personality and peculiarities which make them different but complementary to men. The biological differences between men and women that make the world a better place to live in. Women should try to work on their capacities and gifts instead of trying to imitate men's behaviour. Gender differences in character and attitude enrich people. What matters most is gender equality for all indistinctively, not equality in behaviour.

Global commitments. The universal declaration of human rights adopted in 1948 and the Convention for the Elimination of all forms of Discrimination Against Women (CEDAW) adopted in 1979 are legally binding international agreements aiming at gender equality. These documents prohibit gender discrimination and establish equality of rights between men and women. Despite the fact that the CEDAW is one of the most highly ratified international conventions among the 179 member states, the reserves, evasions and violations are so generalised that an optional protocol had to be added. It took effect from 2001 allowing non-governmental organisations and individuals to denounce the violations occurring in different states to the appropriate commission. This commission, in turn, is qualified to provide an investigation procedure and to formulate recommendations to the government which is responsible for that violation.

Pay gap. Practically everywhere women earn less than men for doing the same job. This is due to a number of factors but the main reason is that female job skills and achievements are not considered to be equal to males. The reason is that women run the risk of taking maternity leave or needing more leave for family reasons. Moreover, it is important to underscore that in many cases women find it harder to obtain employment because in some kinds of roles men are preferred.

A strong sign of emancipation: women in parliament. Being Prime Minister or the President of a State is the most honorary position that a person can achieve. If such an honorary position is held by a woman, that country is expected to promote women's rights. On 31st January 2016, 23

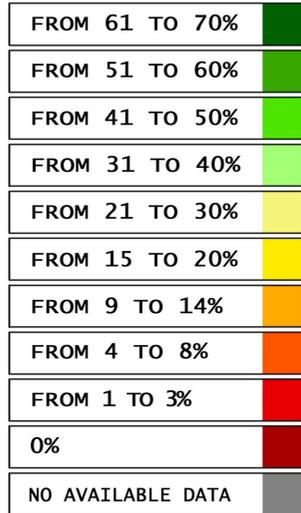
out of the 196 world's countries had a woman as Head of State or Prime Minister. They include: Bahamas, Bangladesh, Brazil, Chile, South Korea, Croatia, Germany, Jamaica, Grenada, Marshall Islands, Latvia, Liberia, Lithuania, Malta, Mauritius, Namibia, Nepal, Norway, Poland, Central African Republic, Saint Lucy, San Marino and Switzerland.

Another important position is being a Member of Parliament. According to the General Assembly of the United Nation, one of the Millennium Developmental Goals was to include females as members of Parliament. The number of seats in global National Parliaments held by women was expected to reach the target of 50% in 2015. This goal was far from being reached (except for two cases), but “pink chairs” increased considerably, but not always for special merit. In some countries, the facade of the building is repainted but there is always the same reality inside. The countries with the highest corruption rates reveal a deep-seated male chauvinism and high-offices are likely to be offered to women complying with sexual innuendos, which infringes women's dignity. This is not the case in Rwanda, the country with the highest proportion of women in Parliament. This extraordinary event occurs in a country experiencing horrific violence over the last twenty years. An estimated 800 thousand people were massacred in the Rwandan genocide of 1994 when the number of women doubled that of men. Even if this gap has been gradually reduced, more than one third of families are still guided by a woman.

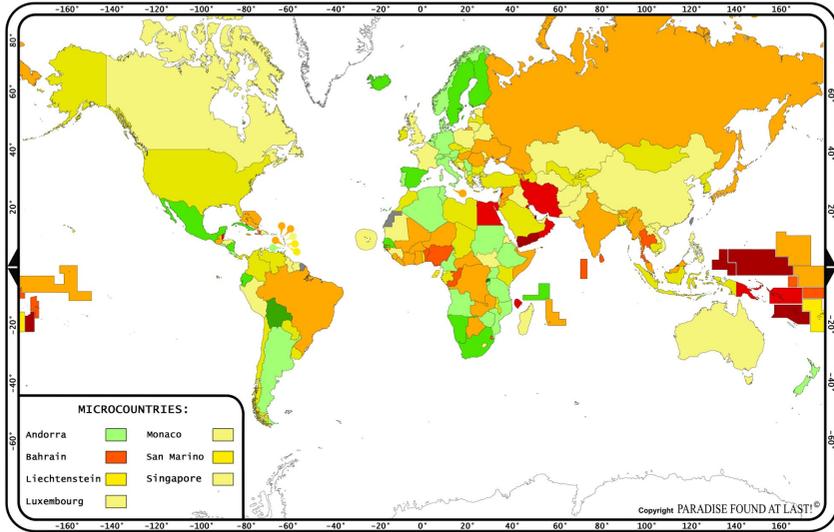
The map. The *world map of women in parliament* shows the ratio of women holding a seat with respect to the total Members of a given Parliament, according to the data provided by the Inter-Parliamentary Union (IPU). Women's emancipation and the general progress of a society are strictly linked. Oppressed women are synonymous with underdeveloped countries. It is comforting to know that the percentage of women who hold a seat in Parliament is higher in countries where women's rights are recognised but vice-versa in other lands.

WOMEN IN PARLIAMENT

PERCENTAGE OF WOMEN IN PARLIAMENT



WORLD MAP OF WOMEN IN PARLIAMENT



[Open the World map of independent states to see the names of the states](#)

Chapter 35

Let us pray in peace!

Your journey has delved into stimulating and complex ethical subjects such as human rights, and the guarantee to live in a totally free and better world. Now you are on the brink of a precipice, similar to a deep gorge. You may suffer from heights and feel dizzy but the journey must continue. Now essential themes such as intolerance and non-acceptance of what appears to be different are going to be discussed. People tend to shy away from such topics. What is perceived as different is often considered as alien and tends to be discriminated, isolated and refused. It may even trigger a destructive response and heedless violence. Is not your personality the result of the moral values you have gained from your family, education, culture and personal experience? You may be following a traditional religion or otherwise. In any case, you are rich in ethical values that make you what you are. You cannot renounce what you believe as that would no longer be you. You might be afraid of those who see things differently from you. Intolerance is an ugly concept which is difficult to fight. The term xenophobia refers to the fear of what is different, foreign or strange: it is a frightening thought. Xenophobia ignites religious intolerance. Would you live in a country that does not allow you to practice your religion? This chapter aims at providing accurate information about the world's countries where religious intolerance is predominant and often ruthless.

Persecutors and their victims. Freedom of religion and belief is safeguarded by the majority of countries through their own constitutions and internationally thanks to the Universal Declaration of Human Rights signed by the General Assembly of the United Nations in 1948. Paradoxically, almost all the world's countries, in theory, are in favour of religious freedom, but, in practice, the facts tell another story because freedom of speech and worship is not sufficiently safe-guarded. History repeats itself: times change along with what is discriminated. During the

course of history, several religious groups acted alternatively as oppressors and victims of persecutions. Christians today, for example, are victims oppressed and slaughtered in many nations. Prestigious non-governmental organisations claim that between 130,000 to 160,000 Christians die every year due to their beliefs. However, history teaches that the churches of Christendom were the persecutors of the past. The Crusades were an example of intolerance. Christians believed that the Holy Land belonged to them so they wiped out the heathen who undeservedly owned it and took control of the territory again. Religious intolerance and incivility were the cause of the conquest of the West Indies – the modern North America – and subsequently of the countries that form the present Latin America. South American Indians were forced to accept the Christian faith and often under threat of death. The cross and the sword have always lived in symbiosis and not in antinomy, as it would be expected. At present, it is Islam that fights against Christendom.

First cause of the present conflict between Islam and Christendom. The laws denying religious freedom generate persecutions and affect citizens. When the laws of a country control the religious life of a nation they often favour one particular faith and denigrate the other, which means that the majority of people tend to look on religious minorities as outsiders. Many governments have chosen a religious creed as their official state religion and this has always caused troubles. When a state perceives a particular religious group as a threat to its own interests, it takes steps to limit the rights of that particular religion imposing both laws and violence. As a consequence, the people who support the dominant ideology revolt against the religious minority by taking the law into their own hands. Even so-called religious zeal may occur against what is considered to be “different”. When governments use religion as a tool to exploit the feelings of masses some groups become radical and a threat to global safety. Currently Christians are being killed by fundamentalists who have coldly decided to impose their Muslim culture over others as they consider Islam to be the only true religion.

Second cause of the present conflict between Islam and Christendom. Culture reflects a country’s way of life. Modern societies are characterised

by capitalist culture and by a “new cult” driving people to display their economic superiority. The Western World, with its capitalist culture, has been a disadvantage to weak cultures and has undermined the Muslim world. Muslims have felt attacked as they consider western modernity and the Christian religion to be the same thing. Actually, the materialistic attitude of western modernity full of vices and moral decay is the opposite of true Christianity. Islamic extremists have identified Christianity with western culture and have excluded the Christian minority from public life. The most violent Islamic extremists attack Christian churches and their parishioners whereas Islamic fundamentalists hit civilians through terroristic attacks.

Third cause of the present conflict between Islam and Christendom.

Intolerance and violence against Christians has religious and political roots. Many terrorist attacks are perpetrated against the western world for how it performs in Africa and Asia through exploitation policies. The western world has always acted and acts as a parasite, stealing economic wealth distribution and giving very little in exchange. Colonialism has undoubtedly been a failure. The main cause of today’s troubles is to be found in the inequalities of global wealth distribution. It is difficult to have a feeling of sympathy, mutual acceptance and therefore freedom, freedom of religion included, without economic justice and equity. On the other hand, the western world seems to act unwisely not maintaining peace. It is worth noting that the term *dar al-Islam*, which literally means “the home of Islam” – and peace – implies that the so-called “people of the Book”, namely the three monotheistic faiths based on the same holy book – the Old Testament – can live together in the same nation. They refer to Islam, Judaism and Christianity. This kind of culture, which is basically tolerant, allowed Christians to integrate and take part in the political and public life of the Muslim world. It was the period of the rightly criticised Islamic-socialist regimes. Many Christians collaborated with these governments and some of them even held important positions.. Recall the case of Tariq Aziz who, for years, was minister in the Iraqi regime. He had Greek origins and was a Chaldean Catholic. However, things radically changed when the USA and its counselors declared war. In 2001, a deranged, and insensate policy initiated towards the Near and Middle East. Actually not all western

reasons were totally wrong. The Taliban regime in Afghanistan was connected to Al-Qaeda whereas Saddam Hussein's Iraqi regime had wiped out the Kurdish minority using chemical weapons. The USA and its allies should have acted with extreme caution, avoiding an armed intervention. It seems as if the western world – mainly the USA – acts out of a concern for its own economic interests, namely when oil is involved, resorting to political expediency and Machiavellism. The war against these regimes, open towards the “people of the Book” led to their failure and fall. Nowadays they have been replaced by Muslim forces coming into power from Pakistan to Algeria. They are extremely intolerant and violent towards Christians as they want to hit western policies, considered to be exploitative. Christians living in Muslim-majority countries are wiped out by groups of fundamentalists, assassins or fanatic extremists as they think that these Christian minorities collaborate with western exploitive forces.

Intolerant countries. In many countries, some people are not allowed to work, attend university and, in some cases, are even sentenced to prison because of not belonging to the mainstream religious creed. A great number of these countries are Muslim-majority countries. In Iraq, Christians are fleeing from the country. It is estimated that at least half of the Christians which were in Iraq prior to 2003 have already left the country. The situation has worsened in Egypt over the last few years and the Coptic Orthodox Christians and other religious minorities such as the Jews are violently persecuted and even killed. The government is not willing to take measures against these discriminations and repressions; on the contrary it seems to tolerate them. The means of communication are under the direct control of the state and they always broadcast humiliating information about the Jews. In Iran, the Ayatollah government has restricted freedom of religion since the 1979 Islamic Revolution. Other creeds, except Islam, are hardly accepted (there is a historic Armenian Christian religious community at Esfahan and Tehran accepted by the regime). In extreme cases tortures and even death sentences are implemented. Northern Nigeria has a Muslim-majority, where Shari'a has been introduced in the penal codes: Christians and Muslims alike are victims of aggressions. There has been a real massacre since 1999: men, women and children have been killed by machete and then thrown into wells. It is estimated that around 13,000

Nigerians have been killed this way but not a single criminal has appeared in court or convicted for such a crime. Moreover, there have been numerous terrorist attacks against Christian churches with tens of hundreds of believers wiped out. The situation is no better in Asia. In Saudi Arabia, mosques are the only public places of worship and Sunni Islam is the only religion allowed. Intolerance and violence towards those who do not accept the official religion of state are even to be found in school textbooks. What is not Sunni is to be fought so Shiite and Ishmaelite Muslims are persecuted and sent to prison too. Pakistan is another example. This state was born from the division of India after the end of World War II when religious minorities were tolerated for a while. Later, however, the state introduced laws aiming at supporting Sunni Islam in the attempt to undermine other religions which lead to religious conflicts, violence and persecutions particularly against Christians. What about Burma now renamed Myanmar. In this country human rights seem to be violated more than anywhere else. The military regime has been in total control of all social activities and organisations including religion. It is a standard practice for the authorities to destroy places of worship using violence against believers and their leaders. Ethnic minorities are forced to convert to Buddhism, the dominant religion. Buddhist monks themselves, who organised a mass protest against the military government in 2007, Muslim followers, ethnic minorities, and those belonging to local protestant churches are the most common victims of religious intolerance in Burma. However, the fact that Aung San Suu Kyi, who won the Nobel Prize for Peace, has been recently elected Head of the Government is a positive sign. People can hope that the evil military tyranny, which has lasted for over 40 years, will come to an end, and that the meandering paths to democracy will gradually lead to religious tolerance. As far as China is concerned, the state controls the activities of religious groups mainly in the regions of Tibet and in the autonomous region of Xinjiang. The government keeps a close watch on Tibetan Buddhists, Uighur Muslim minorities as well as Christian activities by selecting their heads and controlling their movements. Tens of Catholic bishops, faithful to the Vatican, have been arrested or have disappeared. Thousands of local protestant churches have been forced to close down particularly over the last few years. Moreover, the authorities have stated their opposition to those who declare loyalty towards non-Chinese religious leaders, mostly towards the Pope and the

Dalai Lama.

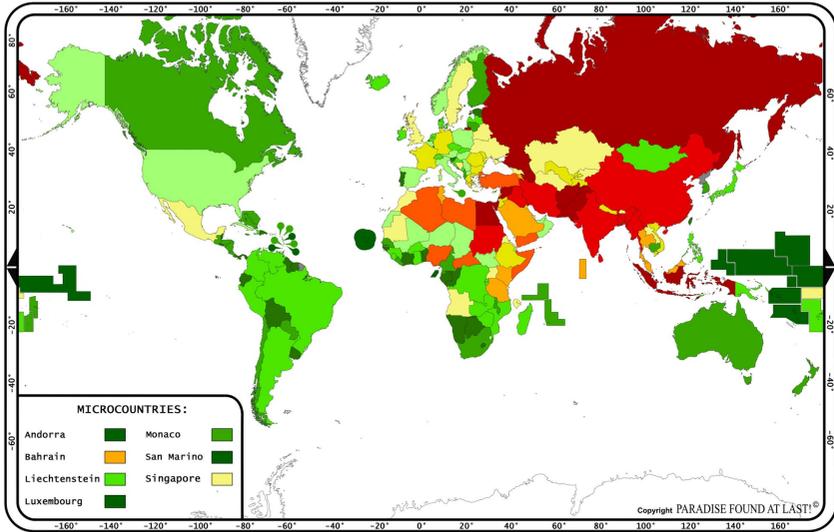
Conclusions. The current conflict between Islam and Christendom has become a conflict of civilisations rather than a religious dispute. Nowadays unjustifiable acts of terrorism occur. Western people consider them to be the expression of irrational bitter hate. It is no longer a religious but a cultural clash. Western religions are of Christian matrix. However, true Christianity should not be associated with western culture. Christians should not crave for material possessions and should not exploit other countries' economic resources. Christians should not kill and should not use their guns to fight other people. Christians, and first of all their leaders, should return to the roots of Christianity and be separated from capitalism. Former Pope Benedictus XVI stated that religious freedom is not simply a part of a long list of freedoms, but it should be the first on the list. Countries allowing a high level of religious freedom also enjoy freedom in many other things. A famous anecdote says that in the past, coalminers used to lower a cage with a couple of canary-birds into their mine before lowering themselves. If the birds died, it meant that the air was toxic so the workers would not lower themselves into the mine. The Jewish jurist Michael Horowitz claims that the Jews have represented the unconscious canary-birds that were sacrificed in the mine of fundamental freedom. Where Jews were persecuted there was no freedom of religion or any other freedom whatsoever. In the 21st century, Christians are the canary-birds sacrificed in the mine. Countries massacring Christians because of their faith deny any form of freedom.

The map. The *world map of religious freedom* has been created thanks to the data collected and processed by the [Pew Research Center](#), a no-profit organisation. If you observe the data carefully you can identify the countries that allow citizens to practice their faith freely without hindrance by the state or by the population., Conversely you will see that in a number of countries it can be dangerous to profess your faith.

RELIGIOUS FREEDOM

EXTREMELY HIGH	
VERY HIGH	
HIGH	
MID-HIGH	
AVERAGE	
MID-LOW	
LOW	
VERY LOW	
EXTREMELY LOW	
NULL	
NO AVAILABLE DATA	

WORLD MAP OF RELIGIOUS FREEDOM



[Open the World map of independent states to see the names of the states](#)

Chapter 36

“I am gay and that’s OK”

As this part of your journey is dedicated to human rights it is proper to discuss a controversial issue. 95% of human beings are sentimentally attracted to the opposite sex whereas the remaining 5% experience same sex attraction. The purpose of this chapter is to discuss the rights of homosexuals. They have been discriminated throughout history and are still discriminated today, severely in some countries. Homosexuals are entitled to fundamental rights but many find it hard to accept. In 1948, the already mentioned Universal Declaration of Human Rights stated that the inherent dignity and the equal and inalienable rights of all human beings is the foundation of freedom, justice and peace in the world. This important document reveals that all countries have the obligation to safeguard the equal rights of all human beings, without discrimination of any kind. In particular, people genetically different must be protected.

Most common definitions. There are a great number of common nouns to identify the 5% of the population having a different sexual behaviour to the majority. Many of these definitions are offensive and have a derogative connotation. This shows that the equal dignity mentioned in the Universal Declaration of Human Rights is still far from being achieved. The most appropriate terms, which are universally accepted, are currently two. The word *homosexualitat* (homosexuality) was coined in 1869 by the German-Hungarian Kardy Maria Kertbeny, who was a man of letters. This term puts together the Greek word “Omoios”, meaning “similar”, with the Latin word “sexus”, which means “gender”. In 1969, another word became popular, coined in the USA: “gay”, the acronym for “good as you”. Female homosexuality is a less common condition, and less subject to derision. The most appropriate term to refer to it is “lesbianism”. Insulting terms have been coined but it is inappropriate to mention them here. Lesbianism comes from “Lesbos”, the Greek island where Sappho, one of the few

known female poetess' of the ancient world, lived in the 7th century BC. She mainly wrote about female beauty and eros between women. Actually, the term "gay" can refer either to men and women who are sexually attracted to people of the same sex. It has become the street name for homosexuals, with no distinction between male or female.

Discrimination. Many cultures describe 95% of the population as "straight" because they are sentimentally and sexually attracted to the opposite sex – the so-called heterosexuals. Heterosexuals may tend to be aggravated for the presence of gay in society which can generate prejudice and the unconscious assumption that they belong to a sort of superior kind. This attitude of prejudice can lead to the violation of the human rights of a minority. Authoritarian personalities, who are basically strict and insecure, feel threatened by what is "different from themselves" and consequently they tend to shun it and show their irrational fear through anger and arrogance. Their homophobia can result in physical violence and even crime. In some countries, governments punish homosexuality as an offence. Sometimes homosexuals are sent to life imprisonment or even sentenced to death in some places. It is therefore hard for gays to come out in homophobic countries. Actually, "coming out" about your sexuality is always a very difficult process even in more tolerant countries. Being gay has always been a difficult condition and it is still a heavy weight to bear. It is important to stress that human beings realise their sexual orientation and gender identity in different periods of their life. When you realise that you are attracted to people of the same sex, "coming out" is a painful decision as you fear the disapproval of others.

Is homosexuality a mental disease? When homosexuality was first described in medical literature, it was often associated with a psychopathology, which was considered to be its main cause. Actually, gay people have often suffered psychological problems since adolescence. Those who discover to be part of the gay minority start having difficulty in their relationships and problems at school. They tend to isolate themselves, to use drugs and, in the worst cases, to attempt suicide. In the past, many attempts to change sexual orientation using therapies such as hypnosis or medication were implemented. Subsequently, doctors discovered that

homosexual psychic suffering was not due to a mental disorder, but to unfriendly negative social attitudes and to people's biases. Gay people, mostly the youngest, are often forced to live in unfriendly environments where they are rejected and isolated not only from their family members, but also from acquaintances and schoolmates. When gay people come out to their family they usually experience physical and verbal abuses, which dramatically affects their development. This could damage their mental health. They do not suffer from mental disorders. This was discovered in 1973 and the American Psychiatric Association (APA) removed homosexuality from its Diagnostic and Statistical Manual of Psychiatric Disorders where it had previously been defined as a mental disorder.

If not a disease, then what? There has been a lot of talking about the reasons leading to homosexuality and there are several theories. One theory affirms that traumatic events occurring during the gestation period are likely to affect the neural development of a fetus. Some research speculates that sexual and romantic behaviour may deviate due to unlucky events occurring during childhood. A few psycho-biological studies suggest that homosexuality stems from emotional needs that are not fulfilled during childhood. It should therefore be considered as a symptom of a disorder occurring in the development of gender identity as sexual desire starts to develop between the ages of 5 to 10 years of age. Research has demonstrated that deviant sexual behaviour may even occur in old age due to hormone imbalances; therefore a physical cause. Other recent studies suggest that homosexuality may have a genetic or biological basis. According to this theory, genes influence people's chances of being homosexuals; therefore sexual orientation would be "fixed" and transferred from mother to child. Genetic analysis has been carried out on twins and on brothers/sisters. They provide evidence in favour of a biological cause for homosexuality. Chromosomes would lead to a specific conformation of the nervous system and hypothalamus. All this would generate natural inclinations similar to the ones that lead some people to be left-handed rather than right-handed. The X Chromosome, in the Xq28 band specifically, would be transferred from mother to child affecting their sexual orientation. Consequently, this theory declares that people are born gay. The American Psychiatrist Association (APA) stated that "some people

believe that sexual orientation is innate and fixed; nonetheless, sexual orientation develops during a person's lifetime". In support of this theory, a report from the Centre for Drug Addiction and Mental health (CAMH) says: "*For some people, sexual orientation is continuous and fixed throughout their lives. For others, sexual orientation may be fluid and change over time*". In conclusion, no official theory can explain the reason why a person is homosexual and another heterosexual. It is likely that this difference is due to a number of factors. Current research suggests that the genetic component may be dominant (30-40%) but the other causes are to be found in hormones during pregnancy, linking troubles to social background and upbringing and in general attitudes of modern society. The WHO defines homosexuality as a natural variation in human behaviour but it has no certain proof of its possible causes.

Duration of a love affair. Same sex and different-sex couples do not have different feelings with regards to satisfaction and engagement in love affairs. Heterosexual and homosexual people share similar hopes and ideals. Age and gender – male or female – are mostly involved in satisfaction and engagement in a romantic relationship. A distinction could be made between young or senior couples. Love affairs between young couples usually last less than those between older ones. Female couples last longer than male couples. This is due to men's behaviour in love relationships characterised by inconstancy of feelings and sexual adventures.

Is it right for a child to have a couple of gay parents? A couple formed by two men or by two women cannot obviously give birth to children whereas a heterosexual couple can procreate normally. This is the reason why people have always thought and still think that homosexuality is a crime against nature. When this occurs, adoption or artificial insemination may be chosen. The latter is not considered to be morally acceptable but this particular subject will not be discussed here. Gay couples have two ways to become parents: either they can run for adoption or artificial insemination, in particular artificial insemination – a donour of different sex is essential – but these techniques invariably rise moral questions. Apart from that, the question is if it is right or wrong for a gay couple to bring up a child. Several cases of gay couples have been evaluated over time and experts

concluded that parental sexual orientation is not associated with emotional, psycho-social and behavioural adaptation of a child. Experts suggest that children brought up by gay parents are no different from those brought up by heterosexual parents. No empirical research has suggested the exact opposite so far. Therefore, it appears that gay parents would be able to act morally as much as heterosexual parents. In view of that, in 2008, the European Court of Human Rights ruled that same-sex couples are entitled to adopt a child.

Global homosexual marriages. Gay people, like heterosexuals, feel the desire to get married so that their bond can become officially recognised by the state they live in. On 1st April 2001, the labourist Job Cohen, Amsterdam's mayor, officially celebrated the first four gay marriages simultaneously. Subsequently, other states have authorised same-sex marriages. They include Belgium (since 2003), Spain, Canada (since 2005), South Africa (since 2006), Sweden, Norway (since 2008), Portugal, Iceland, Argentina (since 2010), Brazil, Uruguay, France (since 2013), Luxemburg and Ireland (since 2015). Moreover, gay marriage is legal in most regions of Denmark, Mexico, New Zealand, UK as well as in most of the states in the USA.

Subcategories. We have discussed so far gay people, male and female. However, the homosexual reality has many aspects. Bisexual people have the capacity for romantic and sexual attraction to both men and women. There are also cross-dressers who usually dress in clothes associated with the opposite gender, mostly privately but sometimes even publicly, which does not necessarily imply sexual pleasure. Both men and women can engage in cross-dressing, no matter what their sexual orientation is. Moreover, intersex people such as hermaphrodites, have sexual chromosomes, genitals and/or secondary sexual characters that are difficult to define as male or female. This may be due to congenital or acquired alterations as is the case of some hormone imbalance. There are also transgender who were born male but psychologically feel they should be female or vice versa. This is a psychopathology known as Gender Identity Disorder (GID) that can develop early in childhood, adolescence or, seldom, in old age. From the late 1800's to the first two decades of the 1900's, transsexuals were treated

through psychotherapy and were supplied with hormones of their gender so that the “disorder” would disappear. These attempts were disastrous and led to a very high number of suicides. It was only around 1960 that physicians start to understand that the body had to be adapted to the mind and not vice versa. It is important to highlight that it is the only psychiatric disorder that it is not treated psychiatrically.

What religions say about it. Religion has always played, and still plays, a leading role in the development of public morality. The three great monotheistic Abrahamic faiths – Judaism, Christianity and Islamism – consider homosexuality to be against God’s created order and against morality so that they firmly condemn homosexual acts. In particular, orthodox Judaism, which is to be found mainly in Israel and is faithful to the original faith, disapproves of homosexuality whereas reformed or liberal Judaism, whose larger community is in the USA, blesses same-sex unions even though they are not real gay marriages. Liberal Judaism is open to homosexuality and allows gay Rabbis and the establishment of gay synagogues too. As far as Christianity is concerned, Catholic and Orthodox churches, as well as minor denominations, are absolutely against homosexual relationships. However, they are not against homosexual people as they are human beings who deserve respect and dignity. Homosexuals are called to chastity according to the Holy Scriptures. There are very liberal Protestant Churches within Christianity that represent an exception and allow gay marriages and ordinations of homosexual priests with no vow or promise of celibacy. Islamism has a hostile attitude towards homosexuality. Sunnah contains the actions and sayings of the prophet Muhammad and is the second source of Islam after the Quran. Many passages of Sunnah say that homosexuals are sentenced to death. The relationship between homosexuality and Hinduism is complex and full of contradictions. Homosexuality can be found in ancient Vedic religions and philosophical books but it is socially considered to be a negative phenomenon, even though not officially condemned. Buddhism has also contrasting opinions about homosexuality. The Dalai Lama, who is the highest spiritual authority in Tibetan Buddhism has recently condemned homosexual acts. Even though ancient Buddhist scriptures say “to abstain from sexual misconduct”, homosexuality is tolerated.

The most intolerant countries. Let us ignore atypical countries such as North Korea, where nobody, heterosexuals included, can exchange effusions in public. Human rights against homosexual people are mostly denied in the Islamic States. Same-sex relationships are officially punishable with the death penalty in Islamic regions. Among them, the country with the highest number of executions is Iran. Since the 1979 Islamic Revolution, the government has sentenced to death more than 4,000 people charged with engaging in gay sex. In Saudi Arabia, public execution is the strictest penalty for homosexuality. However, the Government usually adopts alternative punishments such as pecuniary penalties, incarceration or lashes. Punishment though is particularly extreme if homosexuals voluntarily participate in manifestations against the authority of the State, such as public protests in defense of gay rights

Many other countries, such as Bahrain, Algeria and Maldives, where Islamic rules are only partially followed, condemn homosexuals to imprisonment or corporal punishment. Among Muslim-majority countries, only Lebanon – a melting-pot of different countries – is making attempts to stop punishing homosexuals. The situation has improved in Afghanistan where, after the fall of the Taliban regime, homosexuality has become punishable with financial penalties and imprisonment. Before that, it was considered to be a crime punishable with the death penalty. However, today's society is against this criminalisation. At present, most countries think that gay people deserve respect and tolerance. They tend to disapprove of states that adopt severe punishments and financial penalties against homosexuals.

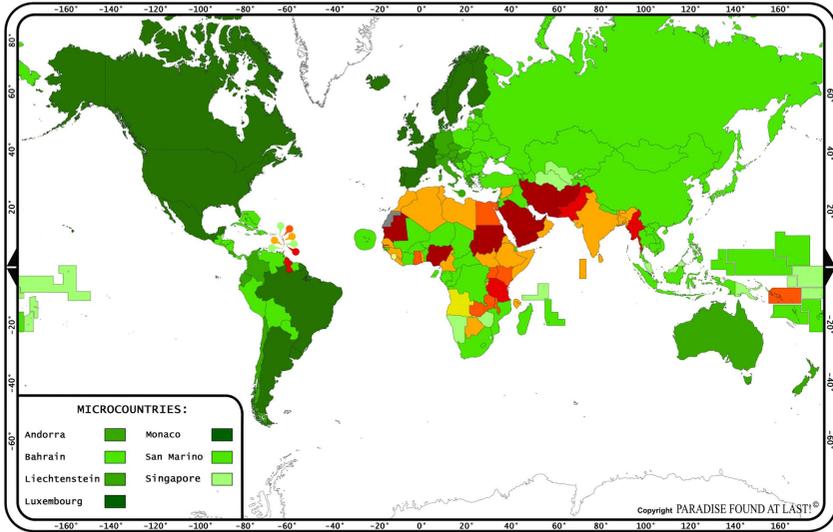
The map. Thanks to the data collected by the [ILGA](#) (the International Lesbian and Gay Association) that aims at achieving equal rights for lesbian, gay, bisexual, trans and intersex people, *the world map of homosexual rights* has been created. Therefore, you will be able to identify the nations punishing homosexuals and those who do not. The map also displays the different degrees of legality. The map will help you to know what countries have legalised same-sex marriages.

HOMOSEXUAL RIGHTS

LEGAL STATUS OF HOMOSEXUALS (GAYS AND LESBIANS)

LEGALISED MARRIAGE	Dark Green
LEGALISED COHABITATION	Light Green
LEGAL RELATIONS	Light Green
LEGAL RELATIONS FOR LESBIANS	Light Green
ILLEGAL RELATIONS FOR GAYS PUNISHABLE BY 1 TO 20 YEARS SENTENCE	Light Green
LEGAL RELATIONS FOR LESBIANS	Light Green
ILLEGAL RELATIONS FOR GAYS PUNISHABLE BY UP TO LIFE SENTENCE	Light Green
ILLEGAL RELATIONS PUNISHABLE WITH PECLINARY SANCTIONS	Yellow
ILLEGAL RELATIONS PUNISHABLE BY 1. TO 10 YEAR SENTENCE	Orange
ILLEGAL RELATIONS PUNISHABLE BY 10 TO 25 YEAR SENTENCE	Orange
ILLEGAL RELATIONS PUNISHABLE BY UP TO LIFE SENTENCE	Red
ILLEGAL RELATIONS PUNISHABLE BY UP TO DEATH PENALTY	Dark Red
NO AVAILABLE DATA	Grey

WORLD MAP OF HOMOSEXUAL RIGHTS



[Open the World map of independent states to see the names of the states](#)

Chapter 37

Condemn the death penalty!

We are now going to discuss another ethical subject on your journey to Eden: the death penalty. This subject may revoke gruesome medieval executions. Since then things have radically changed. Among the 196 independent countries, there are still a few arrogating the right to execute human beings. Should a state inflict the death penalty? Is it a serious violation of human rights? Can a state offer itself as a paradise and then impose the death penalty?

The reason why the death penalty is implemented in some countries. Today there are still countries that impose the death penalty for horrendous crimes. The reason for death penalties may differ from country to country; but there are five main aspects related to the use of the death penalty:

1. To prevent criminals from committing similar crimes again. The only way to be totally sure that criminals will not repeat their crimes is to execute them.
2. To dissuade the civil population from perpetrating similar crimes. The death penalty acts as a restraint.
3. To prove that justice works in behalf of civilians. Executions instill a feeling of safety as they represent strong measures that seem to be decisive and that can put an end to a feeling of social insecurity.
4. In the case of murder, the death penalty responds to the victim's relatives' cry for justice. The death penalty is the revenge that relatives want.
5. A few dictatorial countries use the death penalty as a repressive tool either to physically eliminate a political opponent or to squash dissent.

The method used. Every form of execution is cruel and agonising. Over the last two centuries, the method of capital punishment has changed. In the past, some methods tended to maximise prisoners' suffering; today there are more modern and functional ways. However, these systems always raise ethical issues and can cause a lot of suffering. The most common forms of execution today are shooting and hanging. Executions by electric chair, lethal gas or lethal injection are only applied in the USA. Five countries sentence prisoners to death by decapitation and other seven countries by lapidation, according to Islamic laws.

A moral issue. Once capital punishment was supported unanimously as it did not offend people's conscience. In the past slavery, racial discrimination and lynching for example were normally accepted but today they are considered to be a serious violation of human rights. Consequently, at the turning of the last century, the death penalty was universally accepted. Back then only three countries opposed the death penalty. At the beginning of 21st century two thirds of the world's countries have abolished capital punishment as uncivilised and antisocial. Nowadays citizens living in countries where capital punishment is inflicted may feel insecure. In such countries those who take the lead tend to think that the death penalty is the only way to dissuade criminals from committing heinous offences. In reality the death penalty is not synonymous of a well-functioning system of justice. Countries adopting capital punishment often tend to postpone real problems and to focus on severely punishing those who are considered to be offenders. The suffering of family members who are indirectly victims of a crime must also be taken into consideration. Put yourself in their shoes. When a family member is murdered revenge is the first reaction. It is a natural reaction due to an extreme state of anger and sorrow. It must be highlighted however that when a death penalty leads to an execution the criminal's family suffers too, a family composed of mother, father, partner, children who are not guilty but completely helpless, like the victim's family. Currently there is the tendency for countries that still apply capital punishment to replace it with a life sentence. Life imprisonment costs are obviously much higher than execution costs. The data relating to USA shows that amongst 2.2 million prisoners, about 3,000 (0.1%) were sentenced to death. It may therefore be inferred that if all those 3,000 prisoners

sentenced to death were executed, the difference in costs between execution and life imprisonment would not be significant. It is important to remember that the decision to execute a human being should not be based on economic but on ethical reasons. Life imprisonment is as terrible as capital punishment, but it is certainly less cruel. Research was carried out by Sodokata Kogi, a Japanese psychiatrist, who followed 145 assassins for two years. It showed that none of the respondents had taken into account the risk of being sentenced to death before committing their crime. The reason is that criminals were heavily influenced by violent emotions such as rage or spirit of revenge. Many crimes are committed under the influence of alcohol and/or drugs or by panic-stricken people who realise the crime they have committed and its negative effects only later. This is the reason why the conscience of a criminal does not make any difference between life imprisonment or death penalty. Criminologists say that professional killers are not afraid of being punished with the greatest severity but are afraid of spending their whole life in jail, which from a psychological view is like being sentenced to death. Nobody can question life imprisonment ethically whereas several religions and the conscience of many human beings consider the death penalty to be an abominable act.

Doubts and shadows. As mentioned above, the death penalty is not only inflicted to murderers. Take for example Malaysia and Singapore, where if you are caught with more than 15 grams of heroin you are sentenced to death. Actually it is a very small quantity that anybody could put in their pocket. In less democratic countries where freedom is heavily violated, capital punishment is inflicted as a way to eliminate political dissidents opposing the regime. In these cases, convicts cannot defend themselves. For example, Amnesty International declared that, in Iran, political prisoners running the risk of being sentenced to death have not been allowed to be defended by a lawyer since 1979. In this country, the defendant is considered to be guilty, which means that the trial lasts just a few minutes. Consequently, as soon as the charges against the defendant are read, the jury's sentence is unappealable. That is not the sort of morality you would expect of civil countries. In 1984, an Iraqi physician reported that he was forced to take part in the execution of prisoners who were left bleeding to death. He was also told that between 1982 and 1983 the blood of 1,000

prisoners who were sentenced to death had been sent to the Iraqi national blood bank. Even in the most democratic countries tragedy may lurk just around the corner. In fact, infallible justice does not exist, as judges can err. This has happened too many times. Even in the American civilised system of justice, if an inexperienced counsel appointed by the court errs, for example he/she forgets to give evidence for the defense in time, a defendant may not be granted an acquittal. There are also a few very striking examples that could be easily forgotten by public opinion. Think about what happened in the USA. Carlos De Luna, a 26-year-old Spanish man, was sent to prison and executed as he was accused of killing a shop-assistance during an armed robbery in a retail-shop. The young man always pleaded not guilty but he was sentenced to death and executed as there was evidence against him. Some years later, another Spanish young man was arrested as he was charged with a crime. The man confessed to the murder but he also admitted that he had committed the murder for which Carlos De Luna had been convicted. Unfortunately, there are hundreds of similar cases where the system of justice fails.

How many people are executed worldwide? Totalitarian governments do not provide official statistics on death penalties so their executions are likely to be higher with respect to the data that may be collected. Chinese and Vietnamese governments are notorious for keeping statistics secret so the news reported by local newspapers or independent sources are only a small part of the phenomenon. Therefore, the reality is worse. There are about 1,200 executions a year in China. Criminals that are charged with murder, robbery, organisation of secret societies or even promoting pornographic films are executed. In the 1980s, trials were even suspended in order to execute more defendants. Secret capital punishments also occur elsewhere. In North Korea, Mongolia, Singapore, Saudi Arabia, Botswana and Japan, prisoners are secretly executed. Their family members, lawyers and the prisoners themselves are not informed of their executions until the very day the execution is carried out. One of the reasons why the death penalty is considered to be valid is that it dissuades the civil population from committing the same crimes and that is why it is so important to publicise it. On the other hand, in some countries, the death penalty remains secret where the victims are dissidents or political opponents in order to prevent

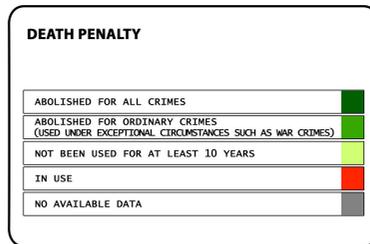
popular uprisings. Moreover, they do not want the intervention of other states or international organisations meddling in their affairs and fighting for human rights.

The death penalty is an abnormal solution. More people are becoming aware of this. Take for example Italy. In the 1980s, the death penalty was supported by 52% of the population whereas 48% was against it. During the 1990s, there was a global tendency to abolish it. It has been abolished for any offence since 1990 in 60 countries. Several organisations around the world work to protect human rights such as Amnesty International and the Italian organisation Nessuno tocchi Caino (May nobody touch Cain!), as well as others. They are among the most efficient and active organisations in the world, developing strong actions to abolish the death penalty. In 2007, 2008, 2010 and 2014, the General Assembly of the United Nations approved a resolution calling for a moratorium on the death penalty. Things are gradually changing thanks to its great political and moral weight. European states, except for Belarus, have abolished the death penalty from their penal codes. In countries where the death penalty is still in force, executions and death sentences have dramatically decreased. It is still hard for certain parts of Asia to conform to this tendency.

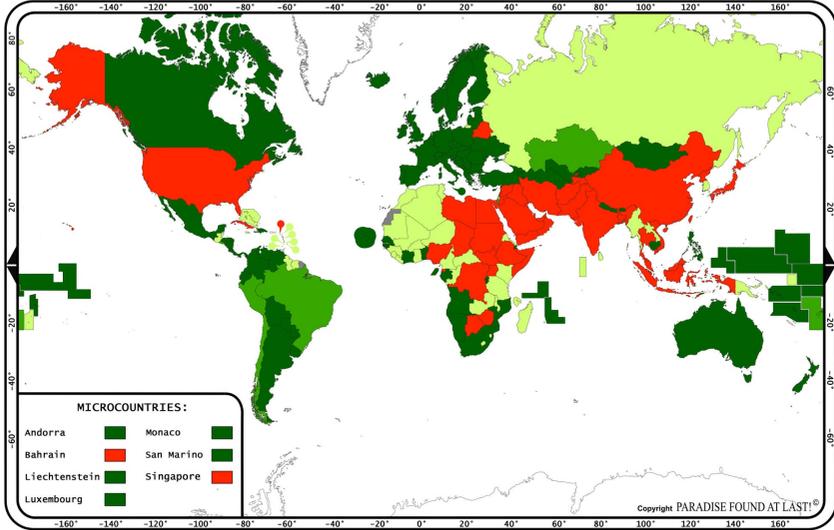
Conclusions. First of all, being opposed to capital punishment should be a moral duty. The death penalty is inhumane, not only the execution itself but the excruciating years of anguish waiting for it to come. Nobody, nor individually or collectively, should arrogate themselves the right to kill another human being, no matter what he/she may commit. The death penalty is against the principle of non-revenge. The culprit should not merely be punished but re-educated from a human and social point of view. How can a dead person be re-educated? Prisoners spend a long time in prison before they are executed so their personality changes radically. This means that the person who is executed is very different from the person who committed the crime. Moreover, it is important to underscore that the death penalty is not a deterrent as criminals do not consult the penal code before committing their crimes. The death penalty is not an effective tool against organised criminality either; other ways have been implemented to fight it, mostly aiming at hitting its economic profits.

There are also other two important reasons why the death penalty should be shunned. First, judicial errors are likely to occur. Second, an innocent person may be executed unjustly. This could justify its abolition.

The map. The *world map of death penalty* will show you the countries where it is in force, the countries where it is out of use, the countries that have not used it for at least 10 years and finally, the countries inflicting it only on specific occasions. The data is collected from “Nessuno Tocchi Caino”. Globally it is worth noting that among the 37 states where the death penalty is in use, 31 of them are undemocratic, authoritarian or illiberal regimes.



WORLD MAP OF DEATH PENALTY



[Open the World map of independent states to see the names of the states](#)

Chapter 38

The silent massacre

While exploring the world of human rights we cannot avoid discussing the subject of abortion, which is considered a matter of conscience. One of the great moral debates centres on abortion; it is a complex and painful choice, which is never a solution. Is it right to suppress the life of a new-born baby or an unborn child developing inside a mother's womb? Does life begin at conception, shortly after or even later on? The following pages contain important facts and consideration. It will help you to decide which country meets your personal ethical standards.

Why an abortion? Many factors may lead to an abortion. It is a very difficult choice: to abort or not to abort. Women bearing a new life, often experience emotional anguish and inner torment. Abortion is mostly the result of an unplanned pregnancy. In many cases, abortion occurs amongst promiscuous underage teenagers. These girls may have unprotected sex often under the effect of drugs or alcohol and with people they meet by chance. They are afraid of an unwanted pregnancy so abortion could seem to be the solution. Other girls, are aware of the chance of getting pregnant by having unprotected sex. When they get pregnant their families may abandon them without any financial support. This is the reason why they choose to have an abortion. Even extramarital intercourse may result in unplanned pregnancies. In other cases, abortions are sometimes needed to save the mother's life or her health. These are ethically the most difficult situations. Then there are raped women who become pregnant being victims of a horribly violent and morally reprehensive crime. They experience shock, a sense of disgust and the violation of their most intimate sphere. Such cases are not infrequent. In addition, it is worth noting that married couples who do not want to bring up another baby decide to have an abortion. Last but not least, sex-selective abortion is widespread in certain countries and this is a dramatic situation. They have a deep-seated

cultural preference for males over females.

Different attitude. In the past, abortion was illegal, even when it was required to save a mother's life or her health. Women who wanted or were forced to abort had to have backstreet abortion. This was very dangerous for their health as it was performed by unqualified providers. This is the reason why a new form of legislation was absolutely necessary and, in the late 20th century, the legislation of many countries legalised abortion. Today, however, something bizarre is taking place. There is an ever-growing sensitivity towards important issues such as the death penalty and civil rights, but on the other hand there is the tendency to legalise abortion, which does not contemplate the fact that it is a hidden crime.

Those in favour of abortion. Some feminist movements consider abortion to be a sacrosanct right. They reason that if women have this additional "burden" biologically, they must also have an additional "authority" to make any decision about their pregnancy. Therefore, women must have the right to abort if they wish. In 1968, "the womb is mine and I will look after it" was a fashionable byword and Italian Women's Movements defended women's rights to make decisions about their own bodies as a fetus was considered to be an appendix of a woman's body. They claimed that women have the right to choose to abort. According to this extreme feminist view, only women can decide whether to abort or not whereas men do not have a say in the matter even if they agree to take on the responsibility as 50% of the babies genes are theirs.

Those against abortion. Actually those who are against abortion are in favour of a new life. However, what plays an important role in abortion is not a woman's right but the unborn baby's right to live. Regardless of the cases in which abortion can be ethically accepted, always proceeding with extreme caution, it is important to understand that abortion means to dispose of a life, namely to suppress a human being. In the 20th century, just a few years ago, there were 1 billion victims, namely one billion lives were killed in their mother's womb. According to the WHO, 50 million abortions are performed annually worldwide. Currently the number of innocent victims is similar to those who died in World War II (1939-

1945). Actually this is a new holocaust under the form of a collective hypnosis. This occurs amidst general apathy and short-sightedness in complicity with the state legislation where people are unable to perceive the massacre of such a large number of innocent victims. Abortion is a huge phenomenon that is systematically removed from the conscience of modern day society. Will people realise the seriousness of this matter one day?

Change in attitude. Some ancient cultures believed that killing a new-born baby still sucking milk was not a crime. They did not think that these very young human beings had a conscience so they could be suppressed. For example, unwanted babies were thrown from the Rupe Tarpea in ancient Rome. In this city, piles of infants' bones belonging to new-born babies were found in ancient sewerages. They were the remains of infants who were abandoned and then thrown away like trash or garbage. Today the killing of a newborn baby is globally considered murder. Can you explain why the killing of babies who are still in their mothers' wombs is not also considered to be a crime? It is a contradiction. Just think that the current British legislation allows abortion to be performed even at the sixth month of pregnancy (24 weeks). Is there anyone who can deny that a 6 month-old baby can have a life of its own? Premature infants are born and can survive. Abortion is allowed even at the sixth month of pregnancy but it appears that the time window is going to rise.

Scientific aspects. When a sperm cell meets an egg cell and their nuclei fuse, the process of fecundation starts and 23 male chromosomes join with 23 female chromosomes. After a female egg is fertilised, the resulting one-celled organism is known as a zygote. This rapidly divides into many cells and these cells double with each division while the fertilised egg travels down the fallopian tube towards the uterus. By about a week after fertilisation the zygote, which is now a cluster of embrional cells, implants itself in the uterine wall where it is provided with nutrients. It begins to grow in size as its cells divide and multiply. By the end of the second week, the primitive streak – the beginning of the central nervous system – appears. By a month and a half after fertilisation, namely at six-week gestation, what is now called an embryo has a beating heart of its own. The head becomes distinctly visible and is the most prominent part of the tiny

body; fingers start to develop but its arms are still too short for the little hands to meet. The eyes develop together with brain cells. At 8 weeks of gestation, namely two months after fertilisation, all major internal organs are formed and the ultrasound scan reveals a “real baby”. At 20 weeks, namely at the end of the fifth month after fertilisation, the baby is usually about 500 grams/1/oz in weight and almost 25 cm/10inches in length. Scientific evidence says that fetuses are not likely to survive outside their mother’s womb before reaching this stage of development.

How is abortion performed. Abortion occurs through medical intervention. There are two categories of abortions: surgical and chemical. By the first 12 weeks, namely by the first 3 months of gestation, it can be performed under local or general anaesthesia. The gynaecologist inserts a cannula within the uterus and the embryo or fetus is removed by aspiration. Cervical dilation is usually accomplished using mechanical dilators. Then a plastic tube with the external part connected to a vacuum aspiration machine able to suck both fetus and placenta is inserted into the uterus. This procedure usually takes about 10 minutes. After that, the health care provider scrapes the inside of the uterine walls with a spoon-shaped surgical device, to make sure no placenta is left inside. 80% of abortions take place within the first 12 weeks (three months) of gestation.



A 12 week-old fetus

A different method of abortion is used from the 13th to the 15th week of gestation. Doctors use forceps to grasp the fetus and take it slowly out of the uterus. After that, a spoon-shaped surgical device is used to scrape the inside of the uterus and check that nothing is left behind. After the first 15th weeks of pregnancy, induction abortion is considered to be the safest way for a woman to dispose of her fetus. Induction abortion involves medications causing uterine contractions that eventually lead to the natural expulsion of the fetus. Substances – often salt water solutions – are directly injected into the amniotic sac surrounding the fetus. This is usually expelled after about 12 hours during which patients are given painkilling drugs. It is noteworthy to report Gianna Jessen's story, the little girl, who is now a woman, who managed to survive an induced abortion by injection of saline solution. You can watch her video through you-tube if you like: (www.youtube.com/watch?v=ZFGRIVGRFXQ). By the sixth month of gestation, the fetus is quite big. However, some countries generally practice abortion using a kind of medical intervention where the baby is partly extracted from the uterus with forceps that allow the fetal cranium to approach the cervix. Subsequently, a suction machine empties the cranium so that the fetal head can be crushed and extracted through the uterine cervix. Nowadays new sophisticated and modern techniques are being developed. Drugs inducing the detachment of the fetus from the womb chemically have been introduced to prevent women from undergoing surgical operations. Actually it is not rare that a fetus can survive surgical abortion leading to further moral problems: shall I choose to keep it alive or suppress it. In many countries, medical institutions require pregnant women to sign an informed consent where they are asked if doctors should resuscitate babies or not in case they survive the attempted abortion.

Psychological effects. Women who have abortions experience severe psychological effects, mental stress and emotional suffering. The negative consequences may be long lasting with depression and anguish. Not only can mothers suffer from heavy psychological problems but also fathers. This could be caused by the sense of powerlessness they feel when they are excluded from this crucial decision. Psychological distress is also to be

found when abortion occurs for natural causes. One pregnancy in five usually ends with a spontaneous abortion. This is mainly due to chromosomal abnormalities even though there are many reasons why a woman's pregnancy ends in miscarriage.

Religions' attitude to abortion. Christianity believes that a zygote – a woman's egg fertilised by a man's sperm – represents the beginning of a new human life where the soul, meant as vital force or first spark of life, is to be found. Accordingly, adult and fetus rights are equal and it starts from conception. Judaism allows abortion to occur in the first week after fertilisation. According to the Talmud, a collection of rabbinical traditions, an embryo is not considered to be a person until it is 40 days old, namely one month and ten days after conception. After this period, abortions performed to save the mother's health must be authorised according to the circumstances. Judaism says that when a mother's life is danger during a pregnancy, her life has priority over the fetus but it must be subject to the approval of rabbinical authorities. Islam believes that the soul reaches its fetus only after 120 days from conception, namely at the end of the fourth month. However, the embryo is worthy of respect so abortion is not generally allowed, except for rapes or in case the health of the pregnant woman is at risk. After the fourth month of conception, abortion is considered to be a crime. As for Hinduism, there is no universal teaching even though abortion is not generally condemned and, when it is, it is not with a severe disapproval. Buddhism considers abortion to be a crime and it is permitted only when the health of both mother and baby is at risk. When only the health of the mother is at risk, giving birth to the child is considered to be a sign leading to a wealthier and happier reincarnation. According to Tibetan Buddhists, when a mother undergoes abortion, she is doomed to be born as a fetus who will suffer abortion 500 times.

Remarkable opinions. In order to emphasize the importance of a new life, the French writer Charles Peguy used to say: "Everything is done for children, isn't it? If not for children, for whom then, and what for?" According to Mother Theresa of Calcutta: "Abortion is the greatest destroyer of peace as, if we accept that a mother can kill her own child, how can we tell other people not to kill one another?" Then she added: "We

fight abortion with adoption. If a mother does not want to bring up a child of hers, please give that child to me because I love him/her”. Holy and responsible words that go beyond any religion.

Current global situation. Today in many countries if a woman chooses to have an abortion, she has the legal right to do so. When a pregnancy is ended for medical reasons it is called therapeutic abortion. This may happen either when the mother’s life is at risk due to cardiovascular disease, chronic kidney disease, pulmonary tuberculosis, hepatitis or a few forms of cancers mainly breast and cervix of the uterus or when the baby’s development is at risk due to congenital infections. This may be due to maternal rubella or mother-to-child transmission of HIV, whose risk is estimated to be 20%. Moreover, the baby might have severe birth defects such as Down’s syndrome, which is a chromosomal disorder, or other chromosomal severe anomalies, which do not allow the fetus to develop normally and sometimes leads to a miscarriage. These are rational reasons that cannot be disregarded whether you agree or not, but there are also cases when abortion is only based on a woman’s exclusive right to have it. However, the situation is getting out of hand in several countries such as the UK and Spain where abortion is considered to be a right even for underage girls. In these countries, the situation regarding teenagers seems to be uncontrollable. In Spain, abortion is a method of birth control and there are many women who have had more than 5 abortions. Some countries, like China, even have a mandatory counseling procedure. In the early 1980’s, the Chinese government introduced the so-called national birth control program imposing a one-child-policy in order to slow down its population growth. Those who violated this policy faced problems including severe financial penalties, a forced abortion, infanticide (the killing of the baby after birth), the destruction of their houses or land requisition. The Chinese government changed one-child-policy in 2013. Currently Chinese families can have no more than 2 children. However, China is not the only country forcing women to have an abortion. There is a French Law – the so-called “*Arret Perruche*” – that imposes liability on physicians for failing to detect a child’s disability and therefore to advise women to agree to an abortion. This leads ultrasonographers and doctors to suggest abortion even for insignificant fetal abnormalities so that the risk of

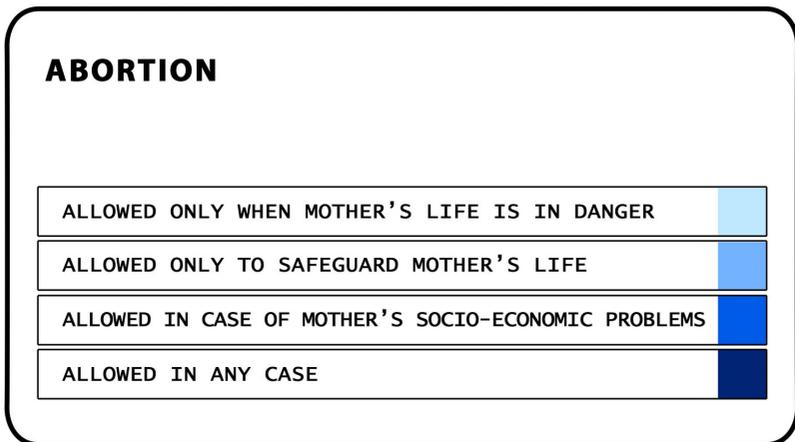
giving birth to “imperfect” babies is avoided.

Controversial contraceptives. The moral issues of contraception and abortion are strictly linked. The intrauterine device (IUD) is generally considered to be an inoffensive birth control method. Actually it prevents the fertilised egg – zygote – from implanting in the uterus causing an inflammation reaction of the inner uterus wall so that the zygote can be expelled, which in reality is a form of abortion although some women are unaware of its implications. As for this contraceptive, the questions are: Does it kill a human life? At this stage of development is the zygote an entity? The so-called morning-after pill is another matter. The WHO, which stands for the World Health Organisation, states that this pill cannot impair the implantation of the fertilised egg in the uterus but it affects the ovaries. It works by stopping them from releasing an egg as it delays ovulation. Therefore, if the morning-after pill is taken when the zygote has already been formed or implanted in the uterus, this will not affect pregnancy in any way.

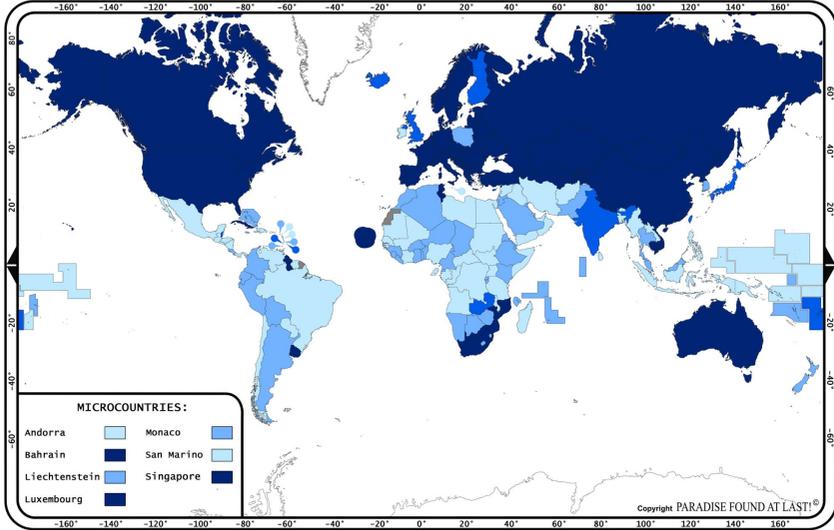
Conclusions. Abortion is a serious question of conscience and there are different opinions. However, this is the first time that the authors of this book feel the need to express their personal opinion, which absolutely disagrees with the legislations of most countries. Actually the following dilemma unfolds: is there a stage of pregnancy when interrupting the development of a human being by suppressing the fetus is considered to be a murder? Does life really start when a person is born? Or when a father’s sperm enters the mother’s egg and 23 male chromosomes join together with 23 female chromosomes creating a zygote? Or at an intermediate stage between the two of them? We believe that when a woman gets pregnant, she should accept this fact no matter the reason how she became pregnant. Actually there are very difficult situations such as rape. However, women should try and overcome this awful situation and find the best solution. Let us consider what a special woman named Julia did. She was a waitress in a hotel in Bologna (Italy). She was raped during World War II, gave birth and brought up her son Walter alone. Now he is a dignified gentleman with a big and lovely family. He owes all this to his mother’s wisdom and heart. Not all women are strong like Julia, but they should try to imitate

her. People should be able to put themselves into somebody's else shoes, to have a high moral sense and look beyond the present. Not everybody can do that. This is the reason why the law of many countries allows undesired children to be adopted, which is better than abortion. At the end of this chapter, the main question regarding the abortion debate is again: Does human life begin at conception? Scientifically this question may not be easy to answer but if life does actually begin at conception suppressing the life of an unborn baby would be a crime and this thought could prevent mothers from having an abortion.

The map. The *world map of abortion* shows current global legislations and how they allow or forbid abortion. The data comes from the “Center for Reproductive Rights”. This data is not a unique interpretation of the complexities of abortion: culture and conscience should be taken into consideration, but it will help you to identify a country consistent with your ethical values.



WORLD MAP OF ABORTION



[Open the World map of independent states to see the names of the states](#)

ON THE LAST PART OF YOUR JOURNEY

Our cultural heritage that elevates mankind

We are now entering the final stages of our ambitious journey. After facing oceans and mountains, after following economic and social issues, after being deeply introduced within the meanders of human rights, ethical and moral problems, and matters of conscience, the journey now opens up to a pleasant and sunny valley. The understanding of our cultural heritage is appearing on the horizon and beyond. It will exponentially increase our knowledge and will elevate us, making us worthy to occupy the creation in virtue of our intellect and understanding. We will try to comprehend its reality enabling us to perform works of great intelligence. In this ultimate phase of our journey we will linger on important issues such as religion which, with its strong influence, continues to coin educational messages for all people; you will then proceed to visit the most important monuments, prodigies of man and nature; lastly you will reach the interior of protected natural areas, that testify to the necessity and capacity to preserve our natural habitat that has been generously given to us.

Chapter 39

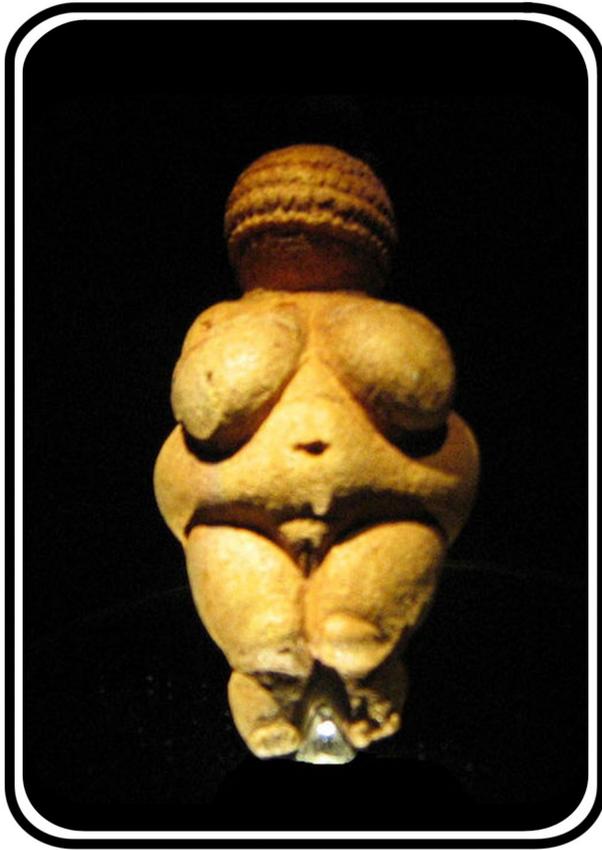
All religions should be respected

Religions have always played an important role in shaping people's culture. Everybody, non-believers included, are full of religious traditions inherited by their own family or simply absorbed by their social background. Religion is a valuable indicator of the living conditions of a country just as the kind of government and other forms of culture such as literature, art and music. In particular, religion deeply affects customs, traditions, behaviours, attitudes and the lifestyle of a country. This is the reason why the journey towards your own Eden now makes a long stopover to explore the world of religion so as to better understand the mentality and attitudes of people. What are the most common religions today? What do they support? What do they really teach? What are their historical origins? Where are they mostly professed?

First overview. There are a number of widely practiced religions in the world and some of them date back to ancient times. Some of these religions spread extensively to large parts of the world and still predominate there. Others were very important in the past then disappeared, sometimes leaving only a trace of their brief existence in other cults. Others remained localised in the region they developed in and were gradually reduced to specific geographical areas. Hardly anyone knows them today. Some religions had one common underlying source and still have similar features, even if their followers find it hard to admit it and tend to minimise the effects. Judaism, Christianity and Islam are monotheistic religions, namely they believe that there is only one God. On the contrary, Shinto and Hinduism are polytheistic religions: they teach the existence of many gods with a different hierarchical order. Buddhism does not take into account the existence of God as it does not consider it to be important for the salvation of the soul.

Do people need to believe in God? Many people think that the need to believe in the existence of a superior entity beyond the physical dimension comes naturally to humans. René de Descartes, latinized as Renatus Cartesius, was a French philosopher and a mathematician, He believed that the idea of God was a primary and absolute innate presence in humans. It is difficult to disagree with him. Actually, many people, as limited, finite beings but endowed with a higher level of intelligence than all other living beings on Earth, need to believe in a superior, eternal, constant, everlasting and infinite entity. Something able to give a reason for what we cannot understand and explain. Something able to provide an answer to all the questions that our mind, being limited, finite and incomplete, cannot find. Something able to comfort us as we endure the pain and hardship of life. People long for an absolute truth able to answer primary and unsolved questions such as: Why do we live? What is the purpose of life? What is the best way to live? What does the future have in hold for mankind? Most importantly: Is there life after death? Many people think that it is essential to answer these questions to give a sense to everything. In most cases this means to trust in God and be sure that human existence is not contingent or casual but that there must be something more important and permanent beyond it. Both ancient and modern religions share the fact that they have always tried to find a meaning and purpose in life. This does not mean that an atheist does not have moral feelings or ethical principles. Universally it is estimated that one person in seven does not believe in any god.

The most ancient cults. The most ancient form of religion is the Mother Goddess which dates back to the Neolithic Period, the last part of the Stone Age, when the earliest representations of the first primordial Mother Goddess were found. Unfortunately, we do not have much information on this ancestral cult as written documents are not available. It is no longer practiced.



One of the representations of the Mother Goddess known as the Venus of Willendorf

However, the best known ancient cult is the Sumerian religion. It influenced all the other religions in the Middle East. It dates back 5,000 years. We know it thanks to its cuneiform script, carved on rock surfaces. It was represented by the Ziggurats, typical templar buildings similar to Maya pyramid-like structures, which were scattered all over Mesopotamia. It had a peculiar vision of the universe, its literature and rites. This primordial religion has left its mark on the people living in the surrounding areas to the extent that forms of the ancient Sumerian cult are still to be found in Judaism, Christianity and Islam today. Just think about the story of the Garden of Eden. The Sumerian religion had a number of gods and a hierarchical structure. These gods had a human appearance, a body showing that they had a beginning and that they were not eternal. They had human feelings and emotions, they cheated, ate and drank, had a

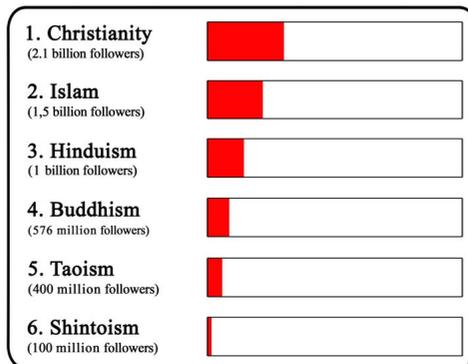
partner and gave birth to an offspring. According to the Sumerians, humans were created to relieve the gods of their work. The Sumerian cult is no longer practiced like the worship of the Mother Goddess. However, the oldest documented religion still being practiced nowadays is Hinduism with its oldest Vedic texts, which were written about 3,500 years ago.

Religions Goals. In practice, all religions try to satisfy basic human needs both for the individual and the community. Firstly, individuals often believe in God so that they can have eternal life and can also bear the burdens of life such as personal failure, the danger of disease and death. Religion gives a sense to their life projects. Secondly, there is a collective need, which is an extension of the first one, where all the believers of a given faith feel better, closer to each other by following its religions own precepts. They even feel empathy for the entire human race and tend to be more altruistic. All these positive attitudes lead to greater social balance as people need to be closer to their own god or gods. People often say that any faith is a personal choice so why do many people usually stick to the practice of their family religion? This is certainly true for the first decades of their lives. Even atheism or agnosticism is often linked to what close family members believe. This because parents and relatives have implanted moral values or religious beliefs into their offspring, from childhood to adolescence, so that religion becomes a sort of family tradition.

Are all religions equivalents? It is important to underscore that believers are sure that their religion is the best. Actually religions have a lot in common, more than people would usually admit. However, each faith has distinguishing features that affected and continue to affect myths, rites, traditions, attitudes and behaviours. In short, religions have shaped our culture. Therefore those who think they possess the truth should analyse what other religions teach so that they can evaluate what other people think and make a comparison with their own beliefs to find out what the various religions have in common as well as their important differences and peculiarities.

The most common world religions. Here you will find a list of the most common world religions arranged in a decreasing order. All together they

represent about 70% of the global population.



These are the six most important religions in the world and each of them will be analysed. You will learn their history, forms of cult and traditions. However, before doing that, you will be shown Judaism, which is considered to be the mother of all the monotheistic religions. It has only 15 million adepts but it is essential as it is the oldest religion in the western world. Christianity and Islam have stemmed from it keeping a number of its aspects such as ancient history and the prophets. Even though the number of Judaism's followers is not particularly high, it is the eighth world religion and the main religion in one of the 196 world's countries: Israel.

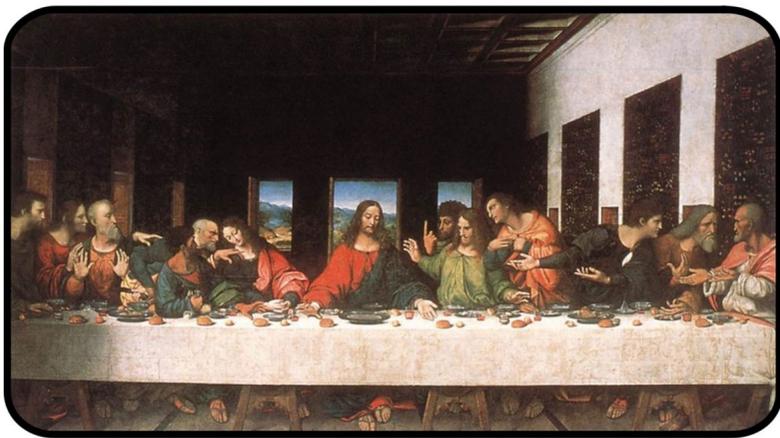
A long history, full of surprises. The history of the Jews began about 4,000 years ago when God, whose name in the Hebrew scriptures is written as *JHWH* (the most widely accepted pronunciation is *JAHWE'H*), called Abraham, the head of a nomadic tribe, and told him to leave his home country and go to the land of Canaan. This territory corresponds to present-day Lebanon, Israel and parts of Syria and Jordan. Obedience to God's commandments was a condition of the covenanted agreement as well as the acknowledgement of Jahwéh as the only God. Abraham was the father of Isaac who was the father of Jacob whose name was changed to Israel. Jacob had 12 sons, who founded the 12 tribes of Israel; one of these tribes became known as the Kingdom of Judah so the word "Judean" stems from it. Subsequently, the Jews were enslaved by Pharaoh in Egypt but Moses, a bloodline descendant, led them out of slavery after many tribulations. Moses then received first-hand from *JAHWE'H* the tables of the Law on Mount Sinai. A large tent that could be moved, called

Tabernacle, was built. It was a sacred place where the Israelites came together to worship and offer sacrifices. The people of Israel wandered in the desert for 40 years before entering into the Promised Land. Once the twelve tribes reached and conquered the Holy Land, they wanted a king so a kingdom was established. Saul was the first king, whereas king David from the tribe of Judah, came to the throne in 1077 BC. He established what later became known as Jerusalem. After king David's death, his son Solomon became king and built a large temple in Jerusalem that replaced the Tabernacle. When king Solomon died, ten of the twelve tribes of Israel established their own government, called the 10 tribe kingdom of Israel making their capital is Samaria, whereas the other two tribes, Judah and Benjamin, remained loyal to Solomon's son, Rehoboam and formed the kingdom of Judah (Judea). In 587 BC, Jerusalem was destroyed by Nebuchadnezzar the Babylonian king. The Temple was destroyed and the Jews were exiled to Babylon. They could return to their homeland only 70 years later, when Cyrus the Great, king of Persia, liberated them. They returned to Jerusalem to rebuild the city and their Holy Temple. Time passed by and the Jews suffered from the influence of other cults so they broke the agreement with Jahwéh several times. God started sending messengers - prophets - so that these could give the unfaithful people a warning. Then, in 332 BC, Alexander the Great conquered the Middle East, Israel and Jerusalem included, and started hellenising those territories; he also introduced the concept of the immortality of the soul. After many vicissitudes, in the 2nd century BC, the Jewish family of the Maccabees organised a successful rebellion and gave political independence back to the people of Israel, which lasted until the Roman conquest (63 BC). Between 66 and 70 AD, the Jewish revolt against Rome began. The Roman army besieged Jerusalem. In 70 AD the city was destroyed, the Temple was burned and the inhabitants were scattered all over the Roman Empire. It was then that the Jewish diaspora began. The Pharisees emerged as a religious group and promoted the Oral Law, which became the heart of a new order, called "Rabbinic Judaism". The rabbis were afraid that the religious principles of Israel would disappear so they compiled the Oral Law in writing and drew commentaries and then commentaries to commentaries. This collection of rabbinical debates explaining the Torah, namely God's Law, which is written in the first 5 books of the Jewish Bible

is known as the Talmud. The tribulation of the Jews was caused mostly by the Roman Catholic Church. In the late Middle Ages, there was an upsurge of anti-Semitism in countries influenced by the Roman Catholic Church. Jews were degraded, tortured, massacred and finally expelled. In 1492 AD, when Granada was conquered and Muslim power ended in Spain, the Jews were expelled from the Iberian peninsula. They were the first victims of the Spanish Inquisition, whose main aim was to persecute the Jewish race. In the 19th century, there was a huge rise in anti-Semitic acts, mostly in the Soviet Union, which heavily affected the Jews. This led to the formation of a political and cultural movement called Zionism, whose goal was to let the Jewish people return to their old homeland, Palestine. The Zionist project gained significant support all over the world when about six million European Jews were killed by the Nazis from 1935 to 1945. It was the so-called Shoah also known as Holocaust, a disturbing word. The Zionist dream of a Jewish homeland in Palestine came true in 1948, when the state of Israel was established. Today the Jews are scattered in more than a hundred countries but Israel is the only one where Judaism is practiced by the majority of the population.

The six most popular religions in the world:

Christianity is the world's most popular religion. 2,1 billion people believe in Jesus of Nazareth, The Christ.



Leonardo da Vinci's "Last Supper"

Christianity shares with Judaism the events occurred before the advent of Christ. Christianity inherited and accepted one of the oldest religions in the world. Christianity was born in the Jewish homeland, the Middle East, in 27 AD, 2,000 years ago, thanks to the preaching of a Jew called Yeshua (Jesus), who was born of a Jewish mother from Nazareth, Mary (Miriam in Hebrew). He was miraculously conceived by the Holy Spirit through Mary. This is the reason why Jesus declared to be the son of *JAHWE'H*, The Almighty God of the nation of Israel. Many churches of Christendom consider Jesus as one God where divine and human natures coexist. Jesus was a travelling teacher and large parts of the Jewish population gathered around him. There was also a smaller group of disciples who followed him. During his life, he performed many miracles and announced the coming of the kingdom of God, which would be a new world, according to the will of *JAHWE'H* his Father. There would be love, peace and respect for justice on Earth. This earthly Paradise would come after the last judgment day when all the wicked, who oppressed the poor and persecuted those who worshipped the true God, would be judged and punished. Even though he promoted some changes in the Holy Scriptures, Jesus became very popular and was supported by the common Jewish people of Israel. However, this revolutionary spirit clashed with the religious authorities. Actually, the fact that he criticised the traditional interpretation and observation of the Torah (the first 5 books of the Sacred Scripture), which was often purely formal, aroused discontent among the Jewish sect of the Pharisees. Moreover, his criticism of the abuses involved in the cult of the temple raised bitter objections on the part of the Sadducees, another religious movement. Jesus was considered to be a risk and an obstacle to their religious supremacy. Ultimately, they decided to charge him with blasphemy to the Roman authorities ruling over the land of Israel. The Romans arrested Jesus and sentenced him to death. Three days after his death, his tomb was found to be empty. He appeared to his disciples, who were persuaded that he was truly resurrected. They thus initiated an energetic and fruitful preaching activity, mainly outside the land of Israel. At first, they were persecuted but Christianity gradually became popular as the Roman Emperors Constantine and Theodore recognised it, becoming the most followed religion in the world. The bishop Ignatius of Antioch defined the first church of Christ as Catholic approximately in 117 AD. This was the forerunner of what became to be known as the Roman Catholic Church. It

has about 1,1 billion followers today. Over the centuries the dogmas that developed inside the Roman Catholic Church differed from the original Apostolic teachings and caused divisions leading to the birth of other Christian denominations. The main issues with other churches are as follows:

- the Trinity (Three Gods in one)
- the cult of Mary, mother of God-the worship of the Saints
- the immortality of the soul
- the intercession for the dead.

Protestant Churches have 553 million followers at present; Protestantism originated from a split within the main current of the Church in the mid-1500's. The great promoter of this schism was Martin Luther, a German monk, whose aim was to bring back the church to its original teachings, censoring the abuses and exterior traditions of the Roman medieval Church. He insisted on the necessity to restore the pure gospel and opposed the mediation of the clergy for the salvation of the soul. Political interests of local princes favoured Luther's rebellion so that the German states protested against the Roman Catholic Church as the state religion. Martin Luther stated that religious questions and confession should be taken directly to God and that each individual should decide personally the course to follow. Originally the Protestant Church encouraged adherence to the Holy Scriptures and its principles, not to man-made traditions. The followers of the Protestant Churches are commonly known as Protestants. They refuse other dogmas of the Roman Catholic Church such as Purgatory, and the Sacraments except for Christening and the Eucharist, which, on the contrary, are based on the Holy Scriptures. They do not worship Mary, have a personal and direct relationship with God and do not approach God through mediators. Amongst the Protestant Churches, the Lutheran Reformation was the greatest and the most followed. There were also other divisions such as the Anglican Church. This is the name that was given to the Church of England when it separated from the Roman Catholic Church in the 16th century, when King Henry VIII committed an act of insubordination. Other branches of Protestantism are: the Puritans,

Methodists, Calvinists, Presbyterians, Congregationalists, Baptists, Adventists, Pentecostals, Anabaptists, Quakers and so on. There are also other “minor” movements that originated during the 19th century. The Adventists have already been mentioned counting today 16 million followers. They believe in the imminent second coming of Jesus Christ. Mormons, who have 13,5 million followers, could also be considered as Adventists but the main difference is that they not only believe in the Holy Scriptures but also in other three specific books, namely the Book of Mormons, Laws and Agreements and The Pearl of Great Price. Joseph Smith established this Church in 1830 after receiving some golden plates and papyri from an angel. They were engraved in writing with the new revelation that Smith translated and inserted in the three books. Its doctrine teaches that God the Father (*JAHWEH*) has a body of flesh and bones that has evolved into a godhood. Another minor independent movement is Jehovah’s Witnesses, which has 8 million followers. It originated from the Advent Movement in 1870. There are significant differences between their doctrine and those of other Christian Churches such as the Trinity question but there are also more trivial differences such as the death of Jesus who, according to their understanding died on an upright stake (*crux simplex*) and not on a cross. It is estimated that there are over 2,500 Christian denominations worldwide, whose teachings are more or less similar. Presently Orthodox Churches account for 225 million followers. They originated from a schism that occurred before the Protestant Reformation. In 1054, Eastern and Western Christian Churches separated because they disagreed on the Trinity issue. The Roman Catholic Church teaches that the Holy Spirit comes both from the Father and the Son whereas the Orthodox Churches states that it emanates only from the Father. This is the reason why the dispute, which led to the schism dividing Eastern and Western Churches, is known as the “Filioque” controversy, a Latin word meaning “and the Son”. The Roman Catholic Church regards the Eastern doctrine as heretical. Historically the Orthodox Church can be traced back to the Patriarchate of Constantinople (then Greece) and to the Patriarchate of Moscow (Russia). Moreover, even the Eastern Orthodox Churches, which are made up of 72 million followers today, are part of the Orthodox Churches such as the Syriac Orthodox Church, the Armenian Apostolic Church and the Orthodox Coptic Church.

The Holy Scriptures and its doctrine. Christianity shares a part of the Holy Scriptures with Judaism, in particular, the Book of the Law (The *Pentateuch*), which Christians call The Old Testament. The name Bible comes from the Greek word “*Ta biblia*”, meaning “The Books”. The Holy Bible is the Holy Book (Holy Scriptures) of Christianity. It is composed of the New Testament (Christian Greek Scriptures) and the Old Testament (Hebrew and Aramaic Scriptures). Both are considered of divine inspiration. In the Old Testament, *JAHWE’H* promises the coming of the Messiah, namely The Lord’s Anointed One, who would save his people. Christianity believes Him to be Jesus Christ testified in the New Testament. The Jews however did not accept Jesus of Nazareth as the Messiah (Christ). The New Testament is totally dedicated to the figure of Jesus Christ who, as the Messiah or Christ (meaning Anointed one) reveals the good news – the Gospel – namely that a new kingdom, God’s Kingdom, a perfect government, is going to come.

2. Islam

Islam is the second religion in the world as it accounts for 1,5 billion followers. The word “Islam” literally means “submission”, namely loyalty to God’s will and the word “Muslim” comes from the same root.



The Prophet's Mosque, in Medina, Saudi Arabia

An historical outline. In the 7th century AD, Muhammad, a young man belonging to a wealthy family living in Makkah (a town in Saudi Arabia) made a spiritual journey driven by a deep interior desire. The Archangel Gabriel – the same announcing the birth of both John the Baptist and of Jesus – appeared to him revealing a long series of truths. Muhammad officially showed his fellow-citizens the precepts of this new monotheistic religion but they refused to leave their polytheistic ways, which were practiced and typical of the Arabic Peninsula. Consequently, he decided to emigrate to Yathrib, which would become the future Medina, namely “the town of the Prophet”, where he was recognised as being sent by God and became the political leader of the town and the new Muslim state. The prophet’s escape to Medina is called “Hegira”; the Muslim Calendar began then (15th June, 622). Subsequently, after conflicts between the Prophet’s followers and the inhabitants of Makkah, Muhammad declared that Makkah would be the Muslim Holy Town. He died in 632, without any sons and with no indication for his succession. For this reason there were controversies amongst Muhammad’s followers. The first two caliphs – the Arabian word “*Khalifa*” means “succession” – belonged to the group of the Companion of the Prophet. The third caliph belonged to the Umayyad dynasty, an aristocratic family in Makkah. After his assassination, he was replaced by Ali, who was Muhammad’s cousin and son-in-law. A part of the Muslim community was sure that Ali had killed his predecessor so another anti-caliph was immediately appointed. A series of struggles started between the two groups. In the end, the anti-caliph, who belonged to the Umayyad dynasty too, managed to be elected as the new caliph. The main internal Muslim schism, the divide between Shia Muslims – from Shi’a, namely Ali’s party – who was Muhammad’s cousin and son-in-law, and Sunni Muslims, namely those who follow tradition, began. Today Sunni Muslims are the majority and accounts for 1,4 billion followers. Shia Muslims, who are about 150 million, do not recognise a caliph as leader because they believe that he does not have a special relationship with God. They accept Imam’s as guides as they descend from Ali’s Family who they believe have temporal and spiritual powers. Sufism, another Muslim branch (mysticism), aims to find God and become one thing with Him. The Ismailis belong to the Shia branch of Islam and practice esoteric elements of Islam. There is also Alevism that accounts for 10 million followers. They do

not worship in mosques but in assembly houses. Druidism, a religious group that split from a sect of Shiite Islam a thousand years ago, combines an eclectic mix of Islam, Christianity, Platonic philosophy, and Gnosticism in their doctrine. It is not possible to convert to being Druidism, and you are forbidden to convert to another religion if you are born a Druid.

Holy books and doctrine. Islam shares with Judaism and Christianity the tradition of The Old Testament linked to prophets such as Abraham and Moses. Moreover, it is also strongly associated with Christianity through the Gospels as it believes that Jesus of Nazareth is a prophet but not divine. In fact, Muslims reject the doctrine of the incarnation of God as a man in the actual figure of Jesus Christ and also reject the main-stream Christian doctrine of the Trinity. They believe in the virginal birth of Jesus, in his miracles but they do not believe that he was crucified. Moreover, they do not believe that Jesus Christ is the Son of God. The Koran or Qur'an, which derives from the Arabic word "*Qur'an*", meaning "to be recited", is the main Holy book of Islam. It is considered to be God's final and decisive revelation to mankind. All the branches of Islam refer to the Koran. The Koran is composed of 114 chapters called Suras, which express the basic principles of Islam. It is a monotheistic religion, that is against social injustice. It fights mainly the rich and usurers and announces that Doomsday will eventually come when, after death, Allah will send those who deserve it to paradise and wicked people to punishment in hell, according to the deeds they perform in life. The word "God" is "*Allah*" for Muslims, which is an appellative noun. *Allah* refers to *JAHWEH*, the same God that the Jews and Christians worship. The Muslim tradition, known as "*Sunnah*" in Arabic, is not only made up of the Koran, but also of other two books: the Hadith, containing stories of Muhammad's life and the Syra, the traditional Muhammad's biography. There are five pillars of Islam, which are explained in the Koran: Allah is the one and only true God and his prophet is Muhammad; Muslims are required to pray five times a day towards the Makkah; they must give charity to those in need; every year during the month of Ramadam, Muslims fast from dawn to sunset; last, Muslims are expected to make the pilgrimage to the Makkah at least once in their lifetime. According to Islam, Adam was sent as the first Prophet of Allah whereas Muhammad was sent as the last prophet to this

world. There is a typical figure in Islam: the *Mehdi*. There are several written texts, which are mentioned both in the Sunni and Shia books, dating back to Muhammad and Iman, dealing with the figure of the Mehdi, a person who will come at the end of times, after the Dajjal – a sort of Muslim Antichrist – will have devastated the conscience of the adepts. Mehdi will therefore arrive in a period of wars and discomfort and will empower humans to reach perfection and spiritual fulfillment.

3.Hinduism

After Christianity and Islam, Hinduism is the third major global religion numbering approximately 1 billion followers. It is concentrated mostly in India and Nepal.

An historical outline. It is one of the oldest religion that is still practiced today. It dates back 3,500 years, when a few semi-nomad cattle-breeder tribes emigrated from the west and the north-west to the north of India. They had fair complexion and called themselves Arya, namely Aryans. The Vedic period was the oldest stage of Hinduism dating back to about 1500-900 BC and was characterised by the practice of sacrifices and the cult of a pantheon of gods. There is a close relationship with the ancient Persian religion and also with ancient Roman and Greek religions to be found in the names given to deities and in some mythological stories. In the Brahmanic period dating back to about 900-400 BC, the rite of sacrifices and many vedic gods lost their importance and Prajapati, the great creator deity, appeared for the first time. This God was identified with Brahman, namely the absolute.



Prajapati: Brahman The Creator

Holy books and doctrines. The term “Hinduism” does not refer to a specific Indian religion but to a group of religions, doctrines, beliefs and religious-philosophic practices. Hinduism has millions of deities, symbolising both humans and animals but, in spite of all that, it is not simply a polytheistic religion. Hinduism is a good example of henotheism as many deities and avatar’s are worshipped, considered to be different forms of the only God. They are not superior beings but they represent the forces of nature, symbolising the power and functions of the only supreme God, Brahman. Hinduism is not a unitarian religion, it does not have a definite doctrine or pastoral hierarchy. It is an ensemble of different religious movements sharing some basic principles and the holy books.

- *Sruti* texts are supposed to have been directly revealed by Brahman. For example the Vedic scriptures, which are considered to be

amongst the oldest religious books in the world, date back to at least 1500 BC.

- *Smriti* texts refer to the scriptures that were orally transmitted and then put in writing, For example the Manu explains Hindu religious and social laws; it also explains the reason why the caste system exists.

Hinduism is characterised by sublime tolerance and respect for any living being. In India, there is also a minor doctrine, known as Jainism, which practices extreme non-violence towards all living forms. The followers of Jainism are required to use a small broom to sweep their path to avoid crushing crawling insects accidentally. This peculiarity is linked to a basic principle that all Indian religions have in common, which is known as Karma. After death, the immortal soul (*Atman*), which is within the body, never dies but migrates in the evolution of life and passes to another living being. It could be a human being, an animal or a vegetable. *Karma*, which means to “act”, is the sum of person's actions in one of his successive states of existence, viewed as deciding his fate for the next. Good intent and good deed contribute to good karma and future happiness, while bad intent and bad deed contribute to bad karma and future suffering. This is the reason why a practicing Hindu is subjugated to his/her destiny and condition of life more than westerners. The basic principles of Hinduism must be strictly followed by practicing *Hindus*. They must eliminate “*Samsara*”, the endless repetition of birth, death and rebirth, which is considered to be a tragedy. The ultimate goal is to reach total liberation – *moksha* – and put an end to a long series of incarnations, closing the eternal cycle. Moksha allows people to reach and identify the deeper part of oneself – *Brahman* – namely the Absolute, the One indivisible whole, which is in all things. Moksha is the true union with God. *Swamis* (teachers) and *gurus* (spiritual guides) can help in the long and difficult path towards liberation as well as yoga and meditation, which are essential specific techniques. One aspect of Hinduism that has strongly affected society is the caste system. From ancient times society has always been divided into 4 castes: priests, warriors, workers (farmers and craftsmen) and slaves, considered to be the lowest of the low. Actually, this old caste system known as *varnasramadharma*, is a racial hierarchical order. The first three castes were made up of Aryans,

characterised by fair complexion. Whereas slaves, belonging to the fourth caste, were aboriginal people with dark complexion. It is the individual karma that determines one's caste. As already mentioned, it depends on the person's previous deeds. The caste that people are born in defines their duties and they must acknowledge the consequences of their condition. Their whole life is affected by it. For example, people can marry or sit at the same table only with members of the same caste. The execution of duties related to their caste is required to obtain a better rebirth. Gandhi was against the caste system but he was not able to change it as this is deeply rooted in Indian culture. The Indian Constitution today prohibits any form of discrimination in relation to the caste system, but, in practice, it still continues to exist. After the Vedic period, and over the centuries, Vishnu, a solar god with a positive influence upon people, and Shiva, a god with powers of destruction and recreation became very important. As a result, various forms of Hinduism were developed such as Vishnuism, accounting for 580 million followers today, Shivism, made up of 220 million followers and Shaktism, a third current named after Shakti, Shiva's bride.

4. Buddhism

Buddhism is the fourth major religion in the world, with 576 million followers.

An historical outline. Buddhism was founded by Siddharta Gautama, who lived in Northern India between the 6th and the 5th century BC. Many myths narrate his life. According to the most plausible story, he was born in a wealthy family where he lived until the age of 29. He then decided to renounce to his princely privileges. He abandoned his wife and his newborn child, he left his luxurious lifestyle and left behind him his materialistic way of life. He was a Hindu, so he followed the strictest Hindu doctrines "renouncing" the world by spending six years in absolute asceticism. He lived as a beggar, fasted, practiced yoga and meditation in lonely places. However, this experience did not lead him to spiritual enlightenment. He was disappointed and realised that leading a life of extreme sacrifice was

futile as much as leading a materialistic life, so he decided to moderate asceticism by adopting a lifestyle that he defined as “the middle path”. He reasoned that the answer had to be found within one’s conscience. He thus sat under a tree in Bodh Gaya, India, and began practicing deep meditation. After four 4 weeks, he reached the state of supreme conscience, the so-called enlightenment, the condition of perfect peace known as “*Nirvana*”. This term refers to the end of the cycle of rebirths, what Hindus call Moksha, freeing himself from desire and therefore from suffering. According to Buddhism, Siddhartha became the Buddha, “The Awakened One”. After some initial hesitation, “Buddha” started teaching his new reality to other people. His first disciples founded a new community which had nothing to do with the Hindu caste system. Buddhism was born!



Buddha's tree, Bodh Gaya, in India

Buddha stated that the Doctrine would be his successor but was gradually corrupted with time. The impending arrival of Maitreya, Buddha's future successor, would achieve complete enlightenment, and teach the pure dharma.

Holy books and doctrine. Siddhartha's biography appears to have evolved over time and the distinction between the historical Buddha and the

legendary Buddha blends together. The Buddha's teachings were preserved in the Pali Canon, which acts as an extensive analytical record written in Pali, Buddha's native dialect. Pali is considered to be the classical language of Buddhism. Sanskrit was also widely used. Sanskrit Buddhist literature later became the dominant tradition in India. The most exhaustive texts are those written in old Pali Indian script. Buddhism relies on a few Hindu concepts such as the immortal soul of living forms – *atman* –, the cycle of rebirth – *samsara* – and the idea that any action affects rebirth – *karma*. Buddha's teachings centre around the concept that enlightenment comes from an individual search and not through an entity. According to Buddhism, the primary purpose of life is to end suffering and stop the endless cycle of rebirths. Buddhism's main teachings focus on the "Four Noble Truths".

- The first Noble Truth declares the universal nature of suffering. According to the Buddha, whatever life we lead, we suffer. Even if we consider ourselves happy, this happiness is transitory by nature.
- The second Noble Truth is the cause of suffering which comes from within, since people attempt to end suffering without success and with misconceived notions. The strong desire to possess material things and the craving for them, which we believe will make us happy and safe, eventually leads to disappointment, because everything is impermanent.
- The Third Noble Truth is that suffering can be overcome only when people acknowledge the uselessness of transient things in life such as desires, passions and the erroneous idea that a permanent "self" exists.
- The Fourth Noble Truth refers to the path that people must follow to stop the cycle of rebirths and achieve the "Noble Eightfold Path", known as Nirvana. This path is right understanding, right intent, right speech, right action, right livelihood, right effort, right mindfulness and right concentration. The word "right" means "in conformity with Buddhism's teachings".

According to Buddhism, spiritual practices aim at leading a good life. There

are various paths to salvation. Buddhism is divided into several schools of thinking, which follow the different expressions of the historical Buddha and his teachings. They have their own doctrines. The two major schools of Buddhism are *Mahayana* and *Theravada*:

- *Mahayana*, the most liberal current, means “Great Vehicle” and teaches that enlightenment can be achieved by trusting in Buddha and practicing compassion towards all living beings. It is not achieved through strict teaching. It is the most popular form of Buddhism with 385 million adepts, mostly in China, Tibet, Japan, South Korea, Vietnam and Mongolia.
- *Theravada* or “Teaching of the Elders” is the most conservative branch of Buddhism. It teaches that people should search for their own salvation, renouncing the material world, approaching a monastic life dedicated to meditation and study. This discipline accounts for 124 million followers and it is mostly to be found in Sri Lanka, Thailand, Cambodia, Myanmar and Laos.
- The ancient branch known as *Hinayana* or “small wagon” – narrow path of salvation – is said to come from Theravada and prescribes a strict code of the Eight-Fold Path. This form of Buddhism teaches that only monks can reach *Nirvana*. Buddha is not considered to be a deity but only a teacher of moral perfection. Adepts preach, study holy books and venerate the places associated with Buddha’s life. They deny the existence of the soul – Atman – and consider rites, prayers, religious symbols and feelings to be purposeless.
- Finally, *Vajrayana* is a branch of Buddhism accounting for 67 million adepts and it is based on the direct transmission of tantric doctrines. This esoteric school dates back to about 750 BC and is also known as “The way of the Magic Formulas” or “*Mantrayana*”. According to its doctrine, enlightenment is reached through the repetition of sacred formulas (*mantras*). In Tibet, this branch is called Lamaism which also spread to Mongolia and Siberia. It is the only doctrine with a hierarchical order, where the ideologies of Buddhism are mixed with animistic and shamanic religions. As a result, Lamaism considers the power of magical spells, mystical

knowledge and music to be very important. Tibet is seen as a sort of “homeland” and a “promised land” to its adepts. Its capital Lhasa is considered to be sacred. The Dalai Lama – Ocean of Wisdom – has always been the highest theocratic authority in Tibet and, even though he was forced into permanent exile to India in 1959, his followers still consider him to be the supreme authority.

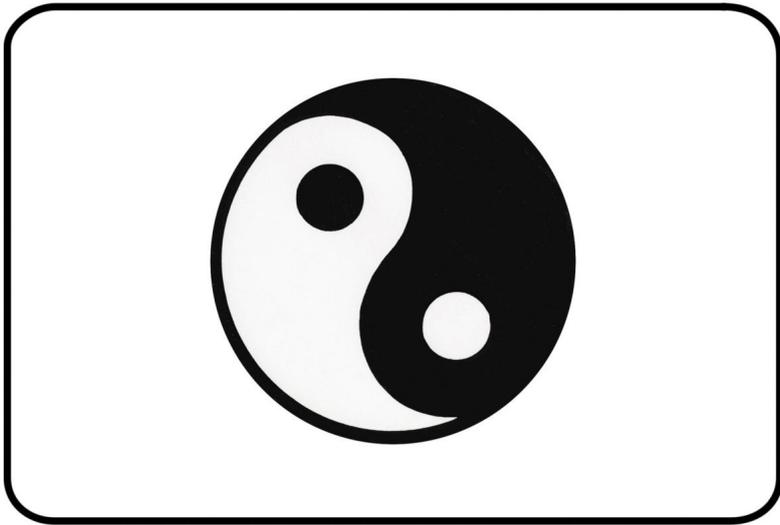
5. Taoism (or Daoism)

Taoism accounts for 400 million adepts and is thus the fifth most populous religion in the world. It is mainly practiced in the Far East such as China, Taiwan, Malaysia, Vietnam, Singapore and South Korea. A few followers are also to be found in Thailand and Japan. It has never been a systematic religion; it took a long time to develop and gradually integrated different schools of thought.

An historical outline. Taoism is an indigenous religio-philosophical tradition that has shaped Chinese life for more than 2,000 years. It is attributed to Lao-tzu even though he is shrouded in obscurity. Lao-tzu is said to have lived in a time of social turmoil in China during the 6th century BC. He was despondent so decided to retire from the world and turn to nature. His philosophy was further developed by The Chuang-Tzu, named for its primary author, "*Master Chuang*" (c. 369-286 BC), also known as *Nan-hua chenching* ("The Pure Classic of *Nan-hua*"). By the Han period, Taoism took on connotations of magic such as alchemy which affected the original philosophy. The search for immortality, the elixir of long-life, became prominent, as well as martial-arts. In 7th century, during the Tang dynasty, Buddhism had already become popular in China but Taoism managed to impose itself as the traditional Chinese religion. Lao-tzu is venerated as a philosopher by Confucians (Confucianism and Taoism are both ancient Chinese styles of living) and as a saint or god in popular religion and was worshipped as an imperial ancestor during the Tang dynasty (618–907 CE). Lao-tzu in religious circles became the Lord Lao (Lao Jun), revealer of sacred texts and the saviour of mankind. At first, their

rites were celebrated outdoors, but then Taoist religious groups adopted the institutions of Buddhism building monasteries with male (monks) and female (nuns) monastic orders as well as temples and shrines. The religious current of Taoism evolved its own pantheon of deities. These Taoist deities, like the Buddhist or Hindu pantheon, represented different qualities and attributes. As a result, some elements taken from Buddhism were mixed with traditional superstitions, spiritualism and the worship of ancestors. When the monarchy was replaced by the Republic of China in 1912, Taoism was criticised and disapproved due to its magical and superstitious practices leading to the persecution of its adepts.

Holy books and doctrines. During the Tang period (618-906 CE) the Taoist canon was developed, known as Tao-ts'ang (the Tao's basket). The term *dao*zang, usually rendered as "Taoist Canon", originally referred to the collections of texts housed in each Taoist monastery. The Taoist Canon of the Ming period -- the Zhengtong Daozang or Taoist Canon of the Zhengtong Era -- is the latest of such collections and the only one that is extant today. The almost 1,500 texts found in the present Taoist Canon are formally divided into "Three Grottoes" (*sandong*) and "Four Supplements" (*sifu*). The word "*Tao*" literally means "Path" or "Way". To understand Taoism, we have to avoid comparing it to the concept of a personal God of the monotheistic religions. Taoism does not refer to any specific incarnation of God. The supreme being/ultimate truth is beyond words or any conceptual understanding. It is something very similar to Spinoza's "*Deus sive natura*". God is identified with nature. The Tao is not conceived as a transcendent entity endowed with a personality but it is anywhere, anytime. Taoist thinking holds that Qin is at the origin of everything. It is a primordial dynamism of the breath of nature which has two expressions: Yang, which is light and bright; Yin, which is heavy and dark. This duality can be seen in all things such as light and darkness, male and female etc. This is an important concept of Taoism.



Ying and Yang

Taoism recalls Buddhism from an ethical point of view. Desires are considered to be the source of expectations that lead to suffering. They must be overcome to find internal peace. Taoism searches what is essential in life and pursues the difficult task of rejecting and abolishing superfluous material possessions and the shedding of prejudices. Humans are not the centre of life but are seen as a part of nature. There are several deities and they all come from the energy of the One. Taoism has the scope of searching the Tao, eliminating unnecessary material things and conforming to nature. Taoism exhorts its adepts to promote human ecology, to protect the natural habitat and vegetation and to love nature, which are ways to love themselves.

6.Shinto

Shinto refers to the indigenous religious beliefs and practices of Japan; it represents an essential intimate part of its local everyday life. Japanese people consider it to be a permanent and imperceptible part of the environment rather than a religion. It is the sixth most popular religion in the world as it is followed by more than 100 million Japanese, which is about 85% of the population.

An historical outline. The origin of Shinto is uncertain but it appears to have developed during the late Jomon period, around 300 BC. It is likely that after the arrival of the first ancestors of the Japanese race, who came from central Asia and Indonesia, each region and village started to worship their own gods, natural spirits and, immaterial beings (*Kami*). They created rites to protect and nurture the rice crops towards a plentiful harvest. In the 6th century, Buddhism had already spread all over the country and the Japanese cult, made up of customs and practices of Japan, of purification and propitiatory rites, was still without a name. When the Japanese population compared their customs and practices to Buddhism, which was a foreign religion, they understood that what they were practicing was their religion. It was called “*Shinto*”, which comes from “*Shin*” (god, spirit) and “*to*”, the Chinese word for “*Tao*” (way) meaning “The way of the gods”. In 13th century, Japan was invaded by the Mongols, who tried to conquer the island of Kyushu twice (Japan’s third-largest island) with their huge battle fleets but on both occasions a typhoon destroyed them. The Japanese believed that the strong wind (*Kaze*) was sent by their gods (*kami*). They thus began to have a high regard for their gods and to honour them. This gave rise to the myth of the Kamikaze, which literally means “divine wind”. In the second half of 19th century, following the overthrow of the Shogun, feudal, military dictators of Japan, the power returned to the emperor who promoted Shinto as the State religion. Therefore, the Japanese ruling class had a very effective tool for social control. Shinto was organised in such a way that the high priests taught youths Shinto theology, based on the mythological history of the Imperial House and the Japanese State gradually creating strong nationalistic feelings. The Emperor was considered to be a direct descendant of the Sun goddess Amaterasu; he was also considered to be “sacred and inviolable”, regarded as an earthly god to be worshipped. That is why Japan was believed to be a divine and infallible country. However, the figure of the Emperor as a god lost credibility in 1945 when Japan was defeated by the USA at the end of World War II, after the atomic annihilation of Hiroshima and, three days later, of Nagasaki. Subsequently, Hirohito, considered a divine and invincible sovereign, became a simple human being, a defeated ruler. On 1st January, 1946, the emperor Hirohito once and for all gave up any claims to being a sacred ruler by issuing a law that denied his god-like status as a descendant of the

sun goddess Amaterasu to a disconcerted population.

Holy books and doctrine. Shinto has no founder, no official sacred texts, and no formalised doctrinal system. Shinto has been formative in developing uniquely Japanese attitudes and sensitivities, creating a distinct Japanese consciousness. Its collection of rites and practices aim at mediating between human beings and kami. As in Taoism, Shinto considers all things to be sacred, as all living things have a divine nature. Valleys, mountains, ravines, forests and rivers are the expression of the divine essence of the universe as everything has a divine origin.



A Torii gate marking the entrance to a shrine

Even objects made by human beings can be considered to be a divinity as they are built with divine materials. Moreover, according to Shinto, the human spirit is eternal, therefore even distinguished citizens, heroes and ancestors can be regarded as Kami and venerated after death. Shinto, like most eastern religions, conceives death as a superior level of existence. It has coexisted peacefully with Buddhism for over a millennium. This is the reason why it is often difficult to separate Buddhist and Shinto beliefs. However, it should be stressed that Buddhism emphasises life after death whereas Shinto focuses on life on Earth and the search for happiness on it. The first ethical rule is selflessness. Shinto teaches that you should genuinely help your neighbour, be charitable and loving for the wellness

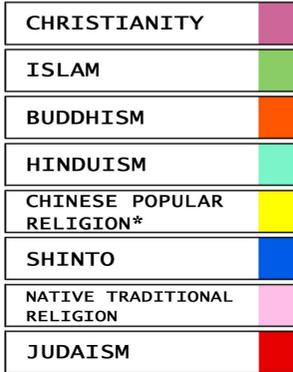
and harmony of society.

Believe it or not, you cannot disregard religion. We have briefly examined the six major global religions. This analysis has certainly enriched our knowledge. Religion is an essential part of people's lives so it is likely that the religion practiced in a given area will affect the choice of your Eden. This is not only true for believers, but also for atheists, as religions have deeply affected the culture of a country, its habits, traditions, ethical beliefs and life-style throughout their history, including doctrines, rites and vicissitudes. Religion is what mostly shapes the culture of a state.

The map. The religions mentioned above represent about 70% of the global population. The territorial distribution of religions is the result of historical events, conquests and conversions that have shaped it during the centuries. The *world map of religions* will show you the most popular religions in every single country. The map has been simplified so that only the mainstream religions of a country have been inserted, even though other religions may have a significant percentage. Religious minorities have been purposely left out. If this integration had been made, the data would certainly have been more comprehensive but it would have created such a mixture of colours that the map would be undecipherable. This is the reason why only the dominant religions of a country are shown. However, in the "Religion Rating Chart" reported in the appendix at the end of the book, you will find a complete list of religions practiced in a given country. Knowing what religion or religions are practiced in a certain country you will start to understand its reality.

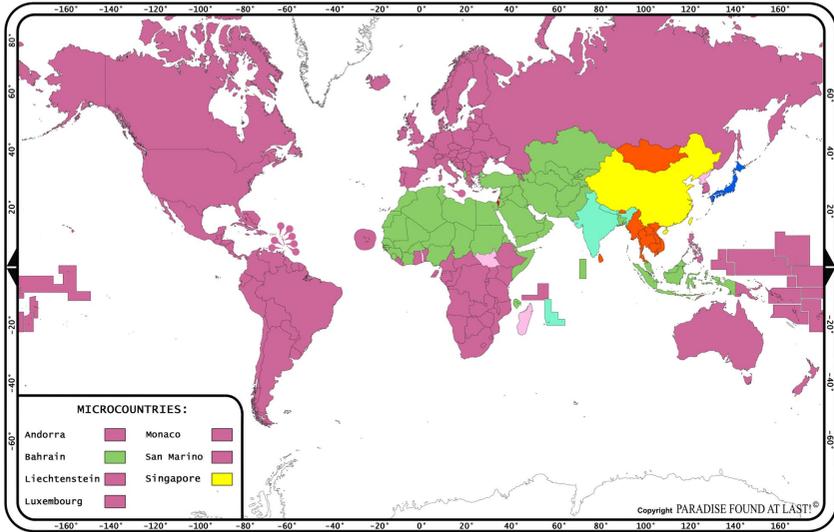
RELIGIONS

RELIGION PROPORTIONATELY MAJORITARIAN



* BUDDHISM AND TAOISM
PRACTICED TOGETHER

WORLD MAP OF RELIGIONS



[Open the World map of independent states to see the names of the states](#)

Chapter 40

The most fascinating places in the world

On Internet you can find a series of listings showing the most beautiful places in the world. Could it be an attempt to demonstrate that some countries are better than others? In reality many people would like to move and live in wonderful places. There are two tangible factors that can help you to understand if a place is more fascinating than another. Firstly, nature has imprinted the Earth for millions of years. Secondly, human civilisation has left its mark over hundreds and thousands of years. Several countries are a treasure house of landmarks: sacred and religious monuments, civil buildings and facilities, squares, streets, villas, paintings and sculptures of long ago. All this is at the disposal of humanity. It is not a simple task to classify the world's countries objectively from a natural and artistic point of view as it depends on individual sensitivity. However, the United Nations Educational Scientific and Cultural Organisation (UNESCO) has provided a solution. For a while now UNESCO has been protecting World Heritage Sites, which are internationally recognised for their outstanding universal value. There is a steady increase in the number of sites on the World Heritage List. Even though there are still a number of fascinating places that are not protected by UNESCO, World Heritage Sites can help those who are searching for their own Eden to have an indelible cultural and historical imprinting.

The beauty of a site is the result of its past. Each country has its own distinctive and unique attractions, ranging from outstanding natural beauty spots to interesting cultural sites. Nobody can deny that some places are more fascinating than others from a natural, cultural, architectural and/or historical point of view. It has proved essential that generations of the past preserve what they inherited from their ancestors and carry it forward.

How World Heritage Sites developed. It is interesting to learn what

brought the International Community to adopt this successful global instrument to protect Heritage around the world. It never happened before. What sparked the beginning of this endeavour goes back to the 1960's CE, when Egypt's growing need for electricity prompted the controversial construction of the Aswan High Dam. The dam created Lake Nasser, and rising waters flooded a number of important archaeological sites along the banks of the Nile and displaced thousands of people who lived in the area. It would have submerged the Abu Simbel temples too, a treasure of the ancient Egyptian civilisation. A massive undertaking was carried out in which the temples were dismantled and moved 65 metres up onto the plateau of the cliffs they from below and re-built. This initiative was spearheaded by UNESCO, with a multi-national team of archaeologists. It was a marvel of engineering techniques: entire sections of a mountain were cut to fit the templar structures and the statues. Tons and tons of rock were moved and reassembled exactly as they were. The operational costs amounted to about 80 million dollars. Half of this amount was voluntarily financed by about fifty countries as a gesture of solidarity. It was an incredible feat. Even today the Abu Simbel temple faces the same original orientation to the sky. On the vernal equinox, the sunlight enters the complex and hits a statue of Ramses II, which is located at the back of the hall. Mesmerizing!

A great Heritage has notably increased over the years. Since then, UNESCO has identified places of cultural, artistic and natural importance to be inserted on the list of World Heritage Sites. It aims to protect and safeguard them so that they can be transferred to future generations. World Heritage Sites refer not only to cultural sites such as monuments, archaeological sites, religious temples, historical centres and castles, but also to natural areas such as waterfalls, forests, barrier reefs, parks etc. Places that are included on the World Heritage List are of exceptional natural beauty and aesthetic importance that have an authentic spiritual, moral, historical or artistic value. The United Nations has the obligation to protect and safeguard those sites considering that they are World Heritage Sites; they do not simply belong to the country they are situated in. The 187 countries that signed the UNESCO Convention must protect and safeguard World Heritage properties. All states can benefit from that, especially developing

countries, which were unable to protect and conserve their cultural Heritage without the support of other countries.

It is essential to preserve the great world heritage. The cultural and natural Heritage of a state is associated with its ability to preserve it and prevent it from destruction. However, armed conflicts have often caused devastating effects on civilisation. Just think about the destructive air raids that occurred during World War II which destroyed towns of historical importance such as Berlin, Dresden, Cologne, Frankfurt and Rotterdam. Civil and internecine wars have caused similar destruction and damage. The wars fought in former Yugoslavia are an example of destruction such as the old historical Mostar Bridge. It was an awful act of vandalism. Much damage has been caused by regimes that were totally indifferent and declared enemies of traditions, history, art and culture. The Chinese Cultural Revolution contrived by Mao Tse Tung in the late 60s, aimed to destroy the traditional and ancient Chinese Heritage to make room for a mistaken sense of modernity. It managed in its intent. Iraq has also suffered considerably. Its territory comprises ancient Mesopotamia, the land situated between the Tigris and Euphrates rivers, where some of the most advanced and important civilisations of the world developed. However, in spite of its great history, Iraq has only four sites belonging to the World Heritage. The grandiose cities and wonderful structures made by the Assiro-Babylonian civilisations were neglected and consequently destroyed mostly due to unfortunate archaeological techniques and partly to the blameworthy behaviour of the occupying forces. In particular, the fabulous city of Babylon once famous for its Hanging Gardens and one of the seven wonders of the ancient world was badly hit by the war. Actually, the damage was caused both by the local dictator Saddam Hussein and by the American occupants. Beginning in 2003, warfare in Iraq had a devastating effect on its cultural heritage. The establishment of a military encampment amongst the ruins of Babylon caused significant damage. Another example is: the so-called Isis fighters caused a lot of damage to the town of Palmyra. Fortunately, Russian and Syrian armies retook control of Palmyra from the jihadists and archaeologists were able to assess that the majority of ancient Palmyra's ruins, one of the most important archaeological sites in the world, was still standing.

The History of Humankind. The World Heritage represents the historic continuity of human civilisation from megalithic monuments to the most representative ones of this era. Egypt is an example thanks to its millenary history. In particular, the Great Pyramid of Cheops is the last of the Seven Wonders of the Ancient World still in existence. The UNESCO World Heritage List contains all the world's continents great civilisations. From Petra to Machu Picchu, from the Parthenon to Chichen Itza, from Paestum to Stonehenge. Last, but not least, the great civilisations of India, the Middle Eastern Fertile Crescent, the African civilisations such as Great Zimbabwe or the native American cultures such as Mesa Verde (green table) and even the oceanic civilisations.

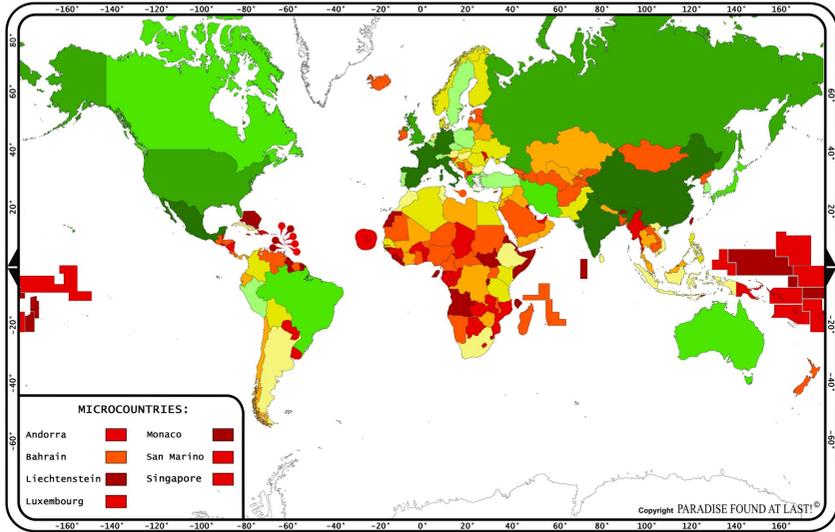
Natural wonders. There are about 200 natural wonders on the World Heritage List. Here are some examples: in the USA, the Yellowstone National Park, the Grand Canyon and the Yosemite National Park; on the border between Brazil and Argentina, the superb Park of the Iguacu Falls; in Africa, between Zambia and Zimbabwe, the famous Victoria Falls; in Australia, the Great Barrier Reef and Ayers Rock; the Belize Barrier Reef, which is the second largest reef system in the world; the outstanding parks in Tanzania such as Serengeti National Park, the Kilimanjaro National Park and the Ngorongoro Crater. In Costa Rica, a country rich in natural wonders, there are 3 natural World Heritage Sites. There are also mountain ranges such as the Rocky Mountains in Canada and the Dolomites in Italy. We have just mentioned a few but the list is still long.

The map. Currently there are 1031 World Heritage Sites. According to this list the country that has the most sites is Italy (51), and is thus considered to be the most historically and artistically country in the world. This does not necessarily mean that Italy is the best place to live in but it is the best choice from an artistic point of view. The *world map of UNESCO World Heritage Sites* shows where they are located. Even though there are countries with several natural and cultural wonders that would deserve to be included, this map reveals the places that people who love art and culture may choose from. On the UNESCO website, <http://whc.unesco.org/en/list>, you can find a global interactive map that visualises the total number of sites. It is an excellent site to peruse.

**UNESCO
WORLD HERITAGE SITES**

FROM 31 TO 51	
FROM 21 TO 30	
FROM 16 TO 20	
FROM 11 TO 15	
FROM 8 TO 10	
FROM 6 TO 7	
FROM 4 TO 5	
FROM 2 TO 3	
1	
0	

WORLD MAP OF UNESCO WORLD HERITAGE SITES



[Open the World map of independent states to see the names of the states](#)

Chapter 41

Wildlife sanctuaries

You have experienced quite a few adventures on your journey towards your personal Eden embracing the four corners of the world. You have discovered wide horizons and incredible panoramas. This exciting journey is coming to an end. The last leg of our journey is going to discover the refreshing world of protected areas. A natural protected area is a well-defined place recognised as internationally important and given special protection so as to conserve its beauty for generations to come. The whole Earth is wonderful and some of its areas are so inspiring that it makes one forget the massive problems our society is facing today such as wars, racial hatred and intolerance and even confusion, noise and pollution. If you love peace and quiet and your desire is to have a strong interaction with nature, well then this chapter will be decisive in making your final decision. Remember that the historical, mythical Garden of Eden was a garden of peace, serenity and delight, similar to the places that you will encounter on this last fascinating part of your journey.

A watershed in the history of mankind. 2008 was a silent watershed in the history of mankind when half of the global population lived in rural areas. Now urbanisation seems to be relentless. The tendency in the future will be for people to leave rural areas and live in middle-sized towns and cities. Megalopolises will develop amazingly fast and randomly without visible borders and will represent the most tangible expression of human evolution. Extra-urban areas will expand unbridled and will exceed 10 million inhabitants. There are many megalopolises already but by 2050 it is estimated that they will increase fivefold. This does not mean that you have to follow the crowd! Stop and think for a while. Leave your stressful and frenzy everyday life behind you and reason on the following question “would I live near or in a wildlife sanctuary if I could? That would certainly be like living in the Garden of Eden. Some have already decided to do so

with their great satisfaction. Living in contact with nature and with fresh air is invaluable. It makes you feel less aggressive, thus calmer and happier.

How Protected areas function There are different types of Protected Areas, commonly known as wildlife sanctuaries. Some are created to safeguard wildlife where people can moderately interact such as in scientific research or strictly organised adventure trips. But nobody is allowed to live within Wildlife Sanctuaries boundaries. However, there are some protected areas containing villages where human life and biodiversity coexist. “National Parks”, “Areas of conservation of species and habitat”, “Terrestrial and marine protected areas” and “Protected areas for sustainable management of resources” belong to this category. If you live in these special areas, you are very close to nature. Sensitive people are emotionally involved when they live in such protected areas not only for their mysticism but also for the spirit of adventure that permeates the environment. From an economic and employment point of view, these areas can provide natural resources for industry and the production of energy, now and in the future. Moreover, entrepreneurs know that Protected Areas have a great economic value as they attract tourists, campers and sport lovers. Moreover, think about forests and woods that prevent erosion, which is one of the main reasons for flooding, such as salinas, mangrove forests and the barrier reef. Think about their fundamental role in coastal protection, and how natural habitats maintain their microclimate or climate stability, rainfall rates included. Guaranteed fresh water supplies to nearby villages usually come from these areas. In reality the entire globe should be safeguarded from any kind of abuse. The whole planet should be considered as Protected Natural Area.

Evolution of the concept. Global population has shifted from 450 million to over 7 billion since the beginning of the 1500’s. Earth’s population will reach 9 billion by 2040 which is viable, only if mankind is able to respect the planet they live in. However, people often think that wellness can only be reached by increasing consumption, which implies a gradual and systematic destruction and exploitation of our natural environment. Think about what happened in the European continent, which boasts an ancient society and a high density population. It is the most urban continent in the

world and has always had a great impact on biodiversity. In Europe, national parks no longer correspond to wild and uninhabited areas, but only what is left of ecosystems which are carefully protected. In Germany, there is the Bavarian Forest National Park, which is what is left of the great European forests. They were destroyed in bygone years and turned into fields. When industrialisation and urbanisation are not properly planned and pesticides are used in intensive agriculture, they become a threat to plants, animals and micro-organisms. A saying in Camerun says that “you can’t dance on somebody’s else’s feet’, but this is what is really happening.

IUCN. Fortunately, there are international organisations worthy of admiration which try to halt this tendency. The International Union for Conservation of Nature (IUCN) aims to create and manage a global network of all land and marine protected areas. They want an ever-increasing number of protected areas to be safeguarded from human beings’ mismanagement. Today 11.6% of earth’s crust is protected. It is a large area but far from being sufficient because not all kinds of habitat have yet been safeguarded.

Oceans. Not only the earth’s crust but also the oceans should be protected. Today only 0.5% of the oceans total surface is protected. In those areas all human activities are partially or totally forbidden so that barrier reefs and ocean floors can be protected. The aim is to protect ocean habitats as well as single species such as whales, swordfish and krill where they can find their environment and serenity to reproduce. It is a very difficult and slow process to achieve. A number of countries prefer to follow their own rules and regulations, countries such as Japan, Norway, USA and Chile, where fishing is still rampant causing a rapid depletion of the oceans marine creatures. These countries prefer not to accept international laws to regulate their catch.

Safety and monitoring. Protected Areas are in danger, therefore the building of unplanned human areas or industries that would produce the same type of pollution and environmental degradation typical of non-protected areas is subject to regulation. Public forest rangers, faunal and district police are responsible for protected area safety.

Future. Our future planet will be very different. Our environment is becoming more and more polluted owing to its exploitation and the excessive amount of waste. The melting of ice-caps will probably cause sea levels to increase causing some coastal regions to disappear. It appears that the planet will be a worse planet to live on. Protected Areas should be considered as sanctuaries, havens of peace. Today protected areas save the flora and the fauna and, in the future, they may also save our posterity. It is imperative that international organisations that protect these natural areas continue to operate. We must thank WWF, Greenpeace, Global Environment Facility, Birdlife International, Conservation International, Flora and Fauna International, The Nature Conservancy, World Conservation Society, World Resources Institute and many other institutions, which are not listed here. We should support them economically and ethically as this is a sensible way to be responsible for the future of our planet without considering the advantage that Protected Areas currently guarantee.

The map. The *world map of protected natural areas* has been created thanks to the data collected by IUCN and UNEP-WCMC and use WDPA, which stands for World Database on Protected Areas. The map shows which countries are more sensitive to protect natural areas, essential for the future of humanity. On this map they have been divided into three categories:

- Protected natural areas where human beings can live.
- Protected natural areas where human beings cannot live.
- Protected natural areas not classified by UNEP; it is unknown whether people can live there or not.

PROTECTED NATURAL AREAS

INHABITABLE AREAS



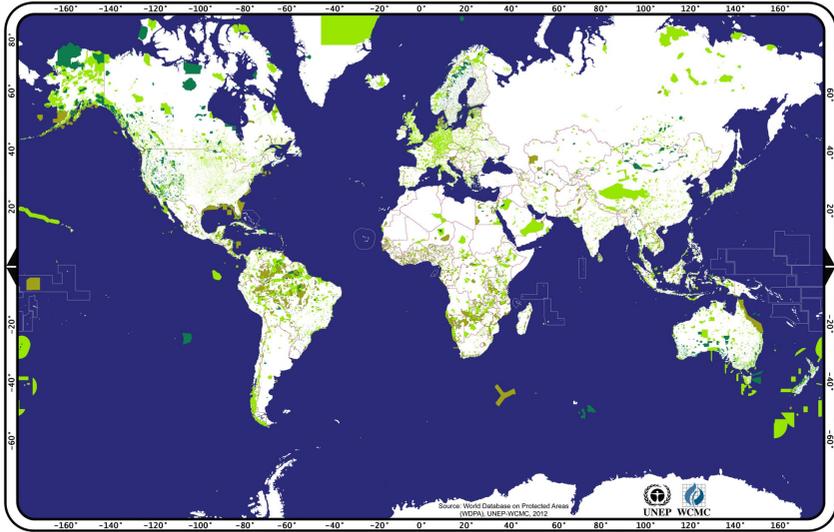
UNINHABITABLE AREAS



UNCLASSIFIED AREAS



WORLD MAP OF PROTECTED NATURAL AREAS



Open the *World map of independent states* to see the names of the states

Eden, finally!

You are now approaching the end of this intriguing journey. No doubt you have learned a great deal. Before reading this book and observing the title you had no idea what to expect. When you started this journey did you ever think it would be easy going? Maybe, but the reality turned out to be a long and tedious journey. That is how we felt when creating, organising and writing the book until its completion. What struck us is how difficult it is to decide which country meets the requirements of being a possible Eden, the best place in the world to be. This is the first time that a book has tried to reach such a conclusion. Actually you can find books such as “The 50 Most Romantic Places to go on The Weekend”, or “The 100 Places to be Seen Before You Die” but they are more for tourists and thus inadequate to help you decide where to find Eden, your earthly paradise to live.

Against the mainstream. We could have written an easier book, in a more narrative style, possibly rich in anecdotes and funny stories, but it would have been just another of the stereotyped and useless guides on how to move abroad. We could have narrated the story of a person who has already moved abroad. That would have been a very absorbing but subjective experience, containing perhaps a number of specific personal events and experiences of some interest but far from being a practical and objective narration. We chose to write a disquisition instead and the information that we have painstakingly obtained and placed together is impartial so as not to affect your choices. That is the reason why we decided to examine and scrutinise all the topics that could and would affect your life if you decide to move abroad.

Time to reach a conclusion. We have analysed many topics. What topic affects you most when it comes to your future plans? Have you already examined and subsequently pondered on them? Before making a decision continue to examine carefully the world maps so that you understand all

the themes discussed in this book. The supreme Italian poet said: “If you are aware of what you know, that is science!” Do not be hasty, read carefully, analyse and compare the data of the maps over and over again. Try to understand them and then you can reach a conclusion. You might even associate your personal Eden with more than one country. You may not only identify the country where your earthly paradise is located, but also a specific portion within its territory or, why not, more than one. Then you can use Google Earth, a very important and powerful tool. This famous search engine is freely available to any Internet user and will easily allow you to take a virtual trip over the area you like through a satellite image. You will be able to stop and zoom around, getting closer and closer to discover details of the place. This is the best way to locate the area you prefer. If you love living in an urban area you would probably prefer to live near a sports and leisure centre or perhaps you would prefer to live in a quiet area away from motorways and traffic noise. On the other hand, if you love living in rural areas and in the open-air, you are likely to search for a hilly or mountainous area, maybe near a river or a lake. So use this programme as it is a revolutionary invention. A similar tool which has been developed by NASA, known as World Win, could be a valid alternative. It is a bit more complicated but it is provided with extremely interesting functions. You can download free of charge.

What kind of Eden? This journey has been full of events which has most probably assisted you in many ways. After such a thorough examination you may have found a country you would like to move to, and leave your habitual patterns behind, or you may decide to visit the place you have discovered every now and again. You may plan to go there on holiday or to travel there more often. However, the search for your own Eden could have purely been spiritual, an imaginary journey searching for a genuine earthly paradise without moving from your computer. You may just decide to visualise its abstract image so as to maintain your dream, a dream that will not be damaged or ruined. Finally, after a careful examination of all the facts, some readers may not have found their own paradise. They might have identified a place or more places that are close to their idea of Eden but have not found the real one. We hope that even the more sceptical and probably more romantic readers have gleaned something about the real

world for their spiritual and cultural development.

A preliminary visit to your favourite place is recommended. If you belong to the first category of people, those who have been searching for the best place to live and believe that you have identified it, we strongly recommend you to go there on holiday, for at least a month. This will allow you to get a first-hand idea of its reality and local life and to get to know the sort of people who live there. You may also need to learn a foreign language: in this case, it would be advisable to attend a language course before leaving. English language speakers are advantaged because English has become the international tongue and practically you will find people who speak English everywhere, but you might also consider learning the new language once you live there: that will take time and patience. You should consider your first journey as explorative, and gather information about property, houses and flats for rent or sale. Transportation, amenities and other available resources should be examined to see if the locality is viable for your needs. At the end of your sojourn, after examining all the pros and cons, if you feel satisfied with this first experience, then you may well be able to make plans towards moving there. To reiterate, before you move, you should be acquainted with its culture and lifestyle so that you will not feel out of place, or even worse, feel isolated later. We recommend great caution and deliberation before you take such a fundamental step and a new life choice. It is also important that your Eden is not a way of escaping from your present situation. If you are escaping from your problems, debts, worries and emotional difficulties, they will haunt you and will follow you everywhere and anywhere you go. If you cannot find peace within yourself, you will not find it elsewhere and no place will make you happy. The first thing to do is to try and understand why you want to leave your country and then examine the motivations for doing so. If you clearly understand yourself, well then you will be able to find a better life.

It is not a matter of money. Money is not an obstacle to reach your goal. Remember you do not have to be rich to be able to travel. You need to set goals. You should say to yourself: “*Now that I have identified the best country (or countries), I need to visit it (them) and to get to know the place personally*”. If you are well-off, there should be no problem whatsoever; on the other

hand, if you believe that your finances are not sufficient you may convince yourself of not being able to carry out your project. So be careful and give priority to this goal, otherwise you will always find other ways to spend your money resulting in a lack of resources to accomplish your journey. Examine your budget, renounce spending for certain luxuries so as to save as much as possible, so that you can visit the place of your dreams with the goal of moving permanently to your chosen paradise.

Your Eden and red tape. You need to consider that there will be bureaucratic procedures in order to enter your earthly paradise. First of all, let us consider a temporary stay. If you officially move for studying, you will be able to obtain a student visa, which usually lasts 12 months; after that, you must apply for an extended visa each year. Before obtaining it, however, you have to prove that you have enough money to cover your study and living costs. If you move abroad and want to work there, you need to apply for a work permit. Then you will have to find an employer willing to hire you. Then you will have to convince the authorities that you are the best candidate for the job. Once your offer of employment has been approved by the local authorities, you will have to apply for a work permit at the Consulates of the two respective countries. It is important to note that if you change your job, you will have to repeat the same procedure over again. After working for many years, you can apply for permanent residence that will enable you to continue living in your Eden for an indefinite period of time. On the contrary, if you can prove that you have a regular income, such as a pension or life income annuity, you will easily obtain the permanent residency directly. The amount of this income varies from country to country and sometimes from year to year. Any Embassy or Consulate provides you with up-dated websites and employees with specific responsibilities will give you advice. Moreover, those who decide to invest a certain sum of money in commercial activities or residential property usually obtain the permanent residence immediately (Embassy and Consulates will always provide you with updated information). Last, but not least, if you fall in love with a local person living in your Earthly Paradise and you marry, well then the state would usually give you permanent residence as a gift. All the Embassies and Consulates abroad can provide you with all the information you need.

Conclusions. You tend to consider the typical values belonging to your country of origin as justifiable, necessary and inevitable. Therefore, positive and negative aspects of other cultures are assessed from your personal point of view, according to the parameters you have learned since adolescence. However, the world maps of this book will often show a different reality with respect to what people would expect it to be. In fact, this book reveals things as they really are, so it can help you to shed prejudices. This book has the aim of broadening your knowledge, opening up your mind and providing you with excellent updated information. All these factors will enable you to make the right choice for a better life. Now that you have opened your horizons you are now catching a glimpse of life in a new world. Now you can put your life on the line again because you have been informed. We suggest that you keep on studying. There are still things you need to know. This work aims at helping you to answer several questions but it also urges you to ask further questions. Remember that those who lack initiative, those who are unwilling to improve themselves as they prefer sticking to what they know or have been told, will never be blessed with good luck. No venture, no gain. However, after reading this book something has probably changed in your life. Perhaps you thought your Eden to be simply an imagination of your mind or a biblical myth. Could it be that now it has turned into a tangible reality and that you can clearly visualise it? Moving abroad is an ambitious project and there are difficulties and the results are not immediate but persist in achieving your goals. If you have this purpose in life, be determined and it will become a reality. The place you have already chosen, or you will choose, is or will be undoubtedly amazing and it will leave you speechless. It will be the life you have always wanted in a special place that you have chosen. Your new life starts now!

www.mypersonaleden.com is the website that gathers the latest expatriation updates.

You are invited to write an email to info@mypersonaleden.com and share with us your comments, criticisms and suggestions in order to improve the eBook. Please let us know your choice (that is your personal Eden) and your plans for the future.

If you want to perfect your research while searching for your personal Eden you will be able to do so by obtaining all the global maps (or only a few) through the website in an A3 printed paper format so that you can physically overlay them, thanks to the use of a transparent global map, which will help you to materially, concretely and realistically make your research.

APPENDIX

SINGLE MEN POPULATION RATES

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Afghanistan	90,8	63,5	35	16,7	9	5,8	4,1	3,4	2,6	2,5	2,9
Albania	100	86,3	38,8	12,3	4,5	0,6	1				
Algeria	99,8	98,4	85,4	53,7	18,9	7,3	2,3	1,3	0,9	0,3	0,2
Andorra											
Angola	92,4	58,3	28,6	17,1	13,3	8,1	7,5	6,4	8,1	7,2	
Antigua and Barbuda	100	94,9	76,3	56,2	45	38,1	29,2	29,4	26,8	18,9	14,7
Argentina	96,2	76,5	46,7	24,9	15,5	12,1	10	9,3	8,9	9,3	8,8
Armenia	100	79	37,4	12,9	13,1	7,4	3				
Australia	99,6	95,4	73,6	46	30,9	22,3	16,4	11,9	8,4	6,9	5,8
Austria	99,3	87,3	60,1	35,4	22,1	15,5	11,2	8,6	7,1	6,3	4,7
Azerbaijan	99,8	84,8	36,1	13,7	4,4	0,5	2	1,4	1,5		
Bahamas, The	99,5	88,8	62,5	40,5	30,3	22,7	17,8	13,9	12,2	9,3	7,6
Bahrain	99,7	86,5	62,2	38,2	21,2	13,3	8,3		4,8		
Bangladesh	95,7	69,1	32,2	12	4,7	3,3	2,5	2,9	2,9		5
Barbados	99,8	97,7	87,1	71	56	44,6	37,2	31	27,4	24,9	18,8
Belarus	99	70,2	27,7	12,9	8,9	7	5,4	4	3	2	1,1
Belgium	99,9	95,9	76	49,7	31,6	21,5	14,9	10,4	8	6,5	6
Belize	93,6	58,4	27,2	18	15,1	13,1	12,5	11,7	11	10,7	12,9
Benin	98,5	77,7	23,9	7,4	2,5	1,7	0,5	1,9	0	0,4	
Bhutan	95,9	72,2	34,7	15,4	9,5	7,5	7,1	7	6,9	8,3	9
Bolivia	96	58,9	25,3	8,7	4,1	3,6	3,1	0,9	1,7	0,2	
Bosnia and Herzegovina	94,6		46,6				6,9				1,5
Botswana	98,8	89,3	68,9	48,3	34,7	24,5	18,7	15	12,6	11,1	9
Brazil	96,4	69,9	37,1	19,6	12,5	8,5	6,2	5,2	4,7	4,4	4
Brunei	98,8	81,4	44,7	20,2	9,4	6,4	4,8	3,7	3,6	3,1	3,4
Bulgaria	98	81,8	48	23,1	13,5	10,4	8,2	6,2	4,4	3,1	1,7
Burkina Faso	98,9	71,9	40,2	11,7	4,8	0,8	1,7	1,4	0,6		
Burundi	98,3	71,5	32,1	18,1	8,7	5,4	3,2	3	2,5	4,5	2,2
Cambodia	98,4	62,6	21,6	7,1	2,7	0,9	0,4	0,4	0,4	0,3	0,7
Cameroon	95,8	72	41,8	18	6,3	3,1	0,8	0,5	2,8		
Canada	98,7	86,5	55,8	31,3	22	18,2	14,5	11,1	8,2	6,5	5,5
Cape Verde	98,8	84,7	59,9	38,1	24,8	17,8	14,7	14,9	12,3	10,2	8,8
Central African Republic	91,9	54,4	23,4	6,3	8,7	4,6	1	0	0		
Chad	98,9	62	21,4	6,1	2	1,6	0,3	0,9	2,5		
Chile	97	81,9	51,4	30,2	19,9	15,9	12,8	11,6	10,6	10,7	10
China	99,7	78,7	24,7	7,5	4,1	3,8	4	4,1	4,3	4	2,8
Colombia	96,1	74,2	47	28,6	20,4	16,9	15,3	14	12,6	12,2	10,7
Comoros	97	85	58	16,9	11,4	3,7	1,9	0	0	0	
Congo Brazzaville	97,2	73,3	36,3	16,8	7,9	3,6	2	6,6	1,7		
Congo Kinshasa	93,8	67,3	31,7	13	3,8	1,5	0	3,2	0		
Costa d'Avorio	98,3	79,1	54,2	19,4	11	10,7	10,5	0	0		
Croatia	99,7	92,3	61,9	33,8	22,5	16,6	12,6	8,9	6,4	5,2	3,4
Cuba	94,5	67	38,2	24,1	19	16,3	14,5	12,6	11,4	10,8	11,9
Cyprus	99,3	89,8	52,7	24,2	12,4	6,2	4	2,9	2,3	2	1,9
Czech Republic	100	96,9	75,8	42,4	21,8	14,1	11	8,8	6,6	4,7	3,2
Denmark	100	98,3	84,7	56,9	38,3	29,4	24,8	20,4	14,5	9,2	6,2
Djibouti	100	93,8	67,9	36,2	16	7,7	2,4	2,1	2,2	1,9	0,4
Dominica	99,8	98,9	89,7	78,4	69,1	58,1	46,2	35,5	31	23,3	19,3
Dominican Republic	95,9	71,5	41,3	25,3	18,2	14,8	12,7	11,8	11,3	10,9	9,4
Ecuador	93	62	34,4	20,7	14,6	11,9	10,4	10,9	11,2	11,6	16,7
Egypt	97,9	88,2	50,8	17,8	5,7	2,4	1,4	1	0,8	0,7	0,7
El Salvador	94,3	67,5	39,6	24,6	17,9	15	13,4	11,8	10,8	10,9	11,6
Equatorial Guinea	97,9	78,2	41,7	24,1	18,4	13,5	11,4	9,1	7,6	7,7	6,3
Eritrea	98,6	68,6	30,4	9,3	1,7	4,4	1	2,5	0		
Estonia	98,9	77,6	40,9	21,7	13,8	10,2	8,9	7,6	7,1	6	4,5
Ethiopia	97,6	73,1	31,2	10,2	2,2	2,1	0,8	0,6	0		
Fiji	98,2	77,3	35,2	15	9,1	6	5,1	4,8	5	4,4	5,3
Finland	99,9	95,7	78,8	55,2	41,7	34,1	28,1	22,1	16,3	11,8	9
France	100	98	82,8	56,1	40	30,5	22,1	15	10,4	7,9	7,6
French Guiana (region of France)	100	98,6	88,4	72,5	61,7	54,7	48,1	40,8	41,5	44,2	44,3
Gabon	96,1	70,8	39,1	12,9	7,1	5,3	2,5	1,9	1,9		
Gambia	98,3	87,6	57,3	22,9	12	7	6,1	4,3	4,6	4,6	4,4
Georgia	96,5	71,7	35,2	15,9	8,7	5,2	3,5	2,3	1,7	1,4	1,6
Germany	99,9	96,6	81,6	58,5	41,7	28,7	19,3	13,3	9,5	7,6	5,3
Ghana	98,9	75,8	39,2	13,5	5,6	2,1	1,7	0,6	0		
Great Britain	98,3	83,1	50,9	29,3	19,5	14,4	11,4	9,1	7,8	7,3	7,1
Greece	99,2	94	73,4	42,5	23,5	14,6	9,5	7	5,3	4,2	3,6
Grenada	99,9	98,9	88,8	73,6	57,8	46,1	40,3	34,9	27,7	25,9	20,7
Guatemala	91	51,9	23,9	13,6	9,2	7	5,8	5,8	5,2	5,5	6,1
Guinea	95,1	72,3	43,8	9,3	3,3	1,3	0	0	0		

SINGLE MEN POPULATION RATES

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Guinea Bissau											
Guyana	97,3	71,8	38,9	22,8	15,6	11,6	8,6	6,9		6	
Haiti	97,7	80,1	43,6	21	8,1	3,9	1,4	1,5	3,2		
Honduras	94,1	60,6	32,4	19,8	14,7	11,8	9,9	9,3	9,6	10,2	10,9
Hungary	99,9	96,8	78,4	48,5	29,1	19,8	15,1	10,9	7,4	5,1	4,1
Iceland	99,9	91,8	62,3	37	24,5	20	15,7	12,2	9,8	8,8	9,3
India	94,7	65,2	27,8	8,7	3,3	2,1	1,6	1,6	1,5	1,9	2,9
Indonesia	98,5	81,8	41,5	14,5	5,7	2,6	1,4	1,1	1,1	0,9	0,6
Iran	97,9	78,8	36,6	12,2	5	2,6	1,6	1,1	0,9	0,9	0,7
Iraq	98	82	51,5	24,2	11,1	7,1	3	3	2	2	1
Ireland	99,7	97,3	84,2	54,1	32,6	22,4	17,8	16	15,5	14,7	18,9
Israel	99,6	89	57,2	25	11,7	7,6	5,9	4,4	3,2	2,7	2,4
Italy	100	97,7	84,1	57,4	34,6	22,1	15,4	11,6	9	8	7
Ivory Coast	97,3	77,3	48,8	28,4	19	14,1	12,6	7,9	8	9,9	6,7
Jamaica	99,8	97,3	87,3	75,7	67,3	59,6	50,8	42,1	38,1	33,1	22,8
Japan	99,6	93,5	71,4	47,1	31,2	22,7	17,6	14,4	10,1	5,9	2,4
Jordan	99	90,4	56,3	21,4	7,6	4	2,2	1,6	1,1	0,8	0,8
Kazakhstan	98,6	74,1	33	14,1	8,2	5,4	3,9	2,7	2,1	1,5	0,9
Kenya	98	79,2	32,1	12	2,8	1,9	0,7	0,1			
Kiribati	95	60,6	28,7	15,8	10,1	8	6	5	5	5	5,7
Kuwait	99,2	79,1	55,2	30,6	15,1	8,5	6,5	4,7	3,3	2,6	2,5
Kyrgyzstan	98,8	71,6	23,3	6,8	3,5	2,3	1,9	1,4	1	0,8	0,4
Laos	94,1	62,6	26,7	9,9	4,7	2,8	2	1,5	1,4	1,3	1,5
Latvia	99,8	91,7	67,8	47,2	28,9	16,8	11,7	9,2	8,3	7,7	5,5
Lebanon	99,6	95,5	72,5	42,4	20,8	10,1	6,9	3,9	4,1	2,3	2,8
Lesotho	99,6	78,2	42,1	23,8	10,3	8,4	2,8	5,6	0,3		
Liberia	97,2	69,5	29	13,4	4,9	1	2,4				
Libya	99,9	98,7	87,6	42	10,9	3,4	1,5	0,1	0,5	0,7	0,4
Liechtenstein	99,9	94,2	77,2	50,6	32,2	20	13,6	9,7	7,4	7,5	5,7
Lithuania	99,8	91	59,3	33,9	19,4	11,8	7,8	6,9	6,5	5,3	3,8
Luxembourg	99,7	93,8	68,6	39,8	22,9	15,4	11,1	8,8	7,6	7,7	6,4
Macedonia	98,5	78,3	38	16,4	7,8	4,1	2,6	2,1	1,9	1,6	1,5
Madagascar	93,6	55,8	20,6	13,9	2,5	2,7	2,5	1,2	0,2		
Malawi	96,8	52,4	18,4	3,4	2,7	1,1	1,8	0,2			
Malaysia	98,9	88,3	54,9	24,7	12,4	7,4	5,1	3,8	2,9	2,3	2,1
Maldives	99,4	80,5	34,2	11,4	5,6	3,1	2,3	1,4	1,4	1,8	1,9
Mali	89,3	58,6	22,9	7,1	1,8	1,3	0,4	0,2	0,2		
Malta	99,6	86,8	43,8	19	12,7	11,4	11,8	14,2	15	16,1	18
Marshall Islands	92,4	59,8	30,8	20,5	14,9	9,9	6,6	5,5	4,4	6,8	10,7
Mauritania	99,5	91,9	60,4	23,4	13,1	4	0,9	1,5	0		
Mauritius	99,4	88,6	52,9	24	13,8	8,7	5,7	4,6	4,7	3,9	3,9
Mexico	94,1	62,2	32,1	16,9	10,9	7,8	6,3	5,6	5,1	5,1	4,6
Micronesia	95,9	71,1	31,3		11,3		5,7		5,6		5,8
Moldova	98,4	76,2	25,4	10,6	3,7	2,8	1,8	2,7	1,1		
Monaco											
Mongolia	98,7	70,7	31,2	13,5	7,2	4,2	3,4	2,8	3	2,9	2,8
Montenegro	99,3	92,8	67	40,3	25,7						
Morocco	99,2	92,1	68,7	41,5	22,3	11,8	6,1	3,6	2,3	2,1	2,4
Mozambique	97,2	42,4	12,4	5,5	0,8	0	0,7	1,4	0	0	
Myanmar	96,7	69,9	37,6	19,6	11,4	6,2	4,3	3,6	3,9	2,9	2,4
Namibia	99,6	87,1	65,5	47,9	33,5	21,3	17,3				
Nauru											
Nepal	89,5	44,1	14	1,1	0,2	0,7	1	0	1,3		
Netherlands	100	97,5	83,5	60,2	41	28,3	20,9	15,4	10,7	7,2	5,5
New Zealand	95,5	73,1	45,6	27,2	19,2	14,7	11,5	9	7	6,3	6,4
Nicaragua	92,2	57,9	31,9	19,8	15,1	12	10,3	9,3	8,5	8,3	8
Niger	96,9	67,8	26	8,2	3,4	0,6	0,7	0,2	0		
Nigeria	98,9	84,7	54	14,5	4,9	3,6	0,2	0,2	0		
North Korea											
Northern Cyprus											
Norway	100	97,5	84,2	62	45,3	33,9	24,9	17,1	11,3	8,5	7,6
Oman	99,6	89,4	52,5	19,1	7,6	4,1	3	2,7	2,4	3,2	3,4
Pakistan	97,4	76	38,6	13,9	4,4	2,2	1,7	1,3	1,5	1,2	
Palau	98	87,4	70,5	54,2	30,8	11	5,8	2,8	2,5	1,6	0,9
Panama	95,2	67,1	40,5	26,2	19,5	15,1	12,9	12,4	12,4	11,9	10,9
Papua Nuova Guinea	95,8	63,9	29,6	13,5	8,5	6,1	5,2	4,7	4,7	5,7	6,5
Paraguay	98	77,7	44	24,4	16,3	12,6	10,7	10,2	9,5	9,6	8,6
Peru	97,3	68,6	39,4	18,1	11	5,4	1,3	3,2	2,9		
Philippines	97,6	72,9	35,7	15,7	11,2	5	4,1	4,4			
Poland	99,8	87,7	47,3	23,4	17,2	14,2	10,7	7,8	5,7	5,1	3,2

SINGLE MEN POPULATION RATES

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Portugal	98,8	85,1	51,5	24,7	14,7	9,8	6,7	4,9			
Qatar	97,7	74,8	50,4	24,2	9,6	5,2	3,6	2,8	1,8	0,9	4,3
Romania	99,7	92	59,3	31,4	19,7	14,3	11,8	9,2	6,6	4,8	2,7
Russian Federation	98,4	74,6	35,3	17	10,1	7,1	5,4	4	3,1	2,4	1,3
Rwanda	99,8	80,7	35,9	13,6	4,4	1,8	1,4	1,9	0		
Saint Kitts and Nevis	99,9	97,6	84,6	63,4	53,5	54,2	48,9	40,3	34,2	32,9	23
Saint Lucia	98,7	83,8	52,5	33,1	28,3	25,4	21,2	18,4	18,3	17,2	16,4
Saint Vincent and the Grenadines	95,5	74	52,1	40,9	34,3	30,2	24	18,7	19,8	18,5	19,8
Samoa	98,8	84,3	52,8	32,3	19,7	11,9	9	7,8	5,5	5	5,1
San Marino	100	97,4	77,7	41,8	20,5	14,1	10,3	8,5	7,6	6,4	5,8
Sao Tome and Principe	98,1	72,1	36,8	22,4	18,3	18,6	22,6	24,8	30,8	31,6	39,8
Saudi Arabia	99,7	87,7	40,5	13,2	6	3,1	1,9	1,8	1	1,5	1,1
Senegal		91,9	63,8	37,4	15,2	4,2	1,9	0	0,8	1,5	1
Serbia	99	90,4	60	33,2	21,3	14,6	9,9	6,4	4,4	3,5	2,4
Seychelles	98,2	81,2	55,9	39,4	30,1	26,4	24,1	23,9	20,2	24,9	23,1
Sierra Leone	94,7	79	48,8	26,1	14,7	11,1	7,7	6,4	4,9	5,1	4,2
Singapore	99,9	96,3	70,7	33,9	19,7	15,2	12,8	10,3	7,9	5,9	4,3
Slovakia	99,8	93,2	68,1	36,1	21,3	16,1	13	9,8	7,5	5,8	3,6
Slovenia	99,9	98,4	87,8	63,8	43,4	31,5	26,9	23,7	17,2	10,9	6,2
Solomon Islands	96,9	68,7	31,6	14,6	9,5	7,3	7,2	7,1	6,3	5,2	5,4
Somalia											
South Africa	97,8	88,4	72,8	45,3	33,1	10,8	17,9	9,6	14,8		
South Korea	99,8	98,2	81,8	41,3	18,4	8,5	4,5	2,4	1,3	0,8	0,4
South Sudan	98,2	85,9	56,8	32,2	13,5	6	3,8	3	2,1	2,2	2,3
Spain	99,6	96,6	77,4	45,7	26,2	17,2	13	11,1			
Sri Lanka	98,2	82,1	49,9	23,3	12,2	8,2	6,5	6,1	5,9	6	6,5
Sudan	98,2	85,9	56,8	32,2	13,5	6	3,8	3	2,1	2,2	2,3
Suriname	97,2	64,1	27,7	16	11,2	11,4	12,8	12,8	12,7	16	20,5
Swaziland	99,8	91,1	59	32,8	19,4	6,7	3,1				
Sweden	100	97,5	87,4	68	51,7	41,6	33,6	26,3	19,7	14,1	9,4
Switzerland	99,9	94,4	76,6	52,1	33,3	22,3	15,8	12,2	9,8	8,1	6,4
Syria	99,8	90,9	61,2	26,6	7,3	3,6	1,5	0,7	0,9	0,8	0,8
Taiwan											
Tajikistan	97,7	64,8	16,8	3,7	1,9	1,3	1,2	1,1	1,1	1	1
Tanzania	98,7	65,4	25	8,7	3,4	1,4	0				
Thailand	96,6	77,6	45	22,6	12,9	7,9	5,2	3,5	2,7	2,2	1,6
Timor-Leste	98,2	79	40,8	18,4	10,9	6,2	4,8	3,6	3,1	3,3	4,2
Togo	97,6	81,7	39,9	16,1	5,5	1,8	1,1	0,7	0,8		
Tonga	98,3	82,3	47,6	27	17	10,2	7,6	5,9	5,7	6,2	4,5
Trinidad and Tobago	98,8	89,4	65,2	44,9	32,8	25,7	21,2	19,2	17,2	15,5	15,5
Tunisia	100	96,3	71	31,2	9,5	4,8	3	2,4	2,1	2,1	2,3
Turkey	97,9	79,1	32,4	10,8	4,9	3	2,2	1,7	1,5	1,4	1,3
Turkmenistan	98,5	63,3	12,8	4,4	3	2,2	1,7	1,4	1,1	0,8	1,1
Tuvalu	98	75	40	20	13,8	9,3	8,7	4,4	3,8	2,2	1,5
Uganda	93,6	59,9	26,1	12,9	7,8	6,4	5,4	5,8	4,7		5,8
Ukraine	97	74,5	32,6	14,9	5,5	4,4	3,1				
United Arab Emirates	99,3	80,1	38,4	12,2	4,5	1,1	1,2	0,5	0,4	0,8	0,9
Uruguay	96,5	73,1	40,3	20,9	13,8	11,7	11,3	11,5	11,6	11,7	11,3
USA	95,8	78,8	49,2	29,6	17,9		9,7		6	5,1	4,4
Uzbekistan	98,7	57,6	9,5	3,1	2	1,4	1,1	0,8	0,7	0,5	0,9
Vanuatu	97,6	70,9	30,8	13	7,2	6,4	5,6	4,7	5,9	4,2	4,3
Venezuela	94,9	69,3	42,8	26,6	20,2	16,7	14,1	12,7	12,5	12,6	14,4
Vietnam	98,2	78,2	38,6	13,7	6,5	3,2	2	1,3	0,9		0,7
Western Sahara (disputed territory)	98,7	76	27,6	16,9	12,6	9,4	9,4	8,9	9,1	8,8	9,8
Yemen	96,9	70,4	29,3	10	5,4	1,9	1,4	1,3	0,4	0,6	0,5
Zambia	98,2	68,7	17,9	5,8	3,7	1,9	0,5	0	0		
Zimbabwe	98,2	74,5	30,4	11,4	6,5	4,2	2,9	2,4	2,2	2	2,1

SINGLE WOMEN POPULATION RATES

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Afghanistan	46,4	9,3	2,8	1,5	0,9	1	1	0,9	1,2	1,5	1,9
Albania	90,5	50,2	18,3	8,6	3,8	2,8					
Algeria	98,2	83,4	57,6	33,7	16,6	9,1	3,8	2,6	1,5	0,6	0,9
Andorra											
Angola	64,3	17,2	11,6	8,7	10	4,7	4,6	6,3	7,6	8,2	
Antigua and Barbuda	98,6	85	67,4	47,6	44,7	36,7	33,8	32,3	23,9	18,2	19,4
Argentina	89,4	62,6	35,9	19,8	13,9	11,6	10,2	9,8	9,6	9,7	10,1
Armenia	92,9	54,3	21,2	9,2	4,7	4,6	4,7				
Australia	99,2	89,6	60,3	34,9	22,5	15,6	11,3	8	5,5	4,3	4
Austria	97,1	73	40,6	22,1	14,3	10,8	8,4	6,6	6,3	6,5	8,6
Azerbaijan	89,1	46,8	21,1	11,6	11	6,5	5,6				
Bahamas, The	96,9	75,1	53,3	37,8	30,6	28	23,8	19,4	16,2	15,7	14,9
Bahrain	95,8	65,1	36,2	25,9	17,3	11,4	8,8	2,9			
Bangladesh	62,7	17,6	6,6	3,9	2,5	2,6	2,2	3	3,2	6,3	
Barbados	99,4	93,3	78,6	64,3	52,7	46,7	40,3	36,5	32,6	30,8	31,6
Belarus	93,7	45,1	15,6	7,5	5	4,1	3,7	3,3	3,1	3,7	6,3
Belgium	99,2	87,9	60,8	36,1	21,7	14,2	9,7	6,9	5,1	4,4	5,7
Belize	77,8	38	20,8	15,6	13,4	12,9	12,3	12,3	11,2	12,3	16,7
Benin	77,8	28,1	5,3	1,5	0,8	1	0,9				
Bhutan	83,7	40,4	14,7	7,2	4,7	4,6	4,1	4,2	4,4	4,7	5,6
Bolivia	87,6	41,9	19	7,8	4,9	4,6	3,1				
Bosnia and Herzegovina	82,9		23,1			3,9					4,7
Botswana	94,7	71,2	53	40,6	33,8	29,7	26,7	24,2	22,2	20,7	15,1
Brazil	83,4	50,2	26,1	15,1	11	8,8	7,7	7,3	6,8	6,7	7,3
Brunei	92	61,8	32,5	19,5	14,6	11,7	8,7	6,5	5	4,3	5,1
Bulgaria	90	58,1	25,7	10,9	6,2	4,4	3,4	2,6	2,2	1,9	2
Burkina Faso	67,8	16,1	3,2	1	0,4	0,1	0,1				
Burundi	92,9	50,9	21,3	12,7	5,9	4,2	4,1	2,7	2,8	0,9	2,8
Cambodia	89,5	40,8	18,9	9,6	7,6	6	5,2	3,9	3,8	2,3	1,5
Cameroon	64,2	26,4	10,9	5,3	3,3	1,1	1,5				
Canada	96,9	75,6	42	22,8	16,1	13	10,8	8,7	7	5,9	5,8
Cape Verde	89,8	62	43,1	32,9	27,5	25,1	22,9	21	17,7	18,2	24,1
Central African Republic	57,6	18,8	9,2	5,8	4,7	1,7	1,9				
Chad	54,7	9,7	1,7	0,2	0,3	0,2	0				
Chile	91,3	66,6	38,1	23	18,1	16,7	15,7	14,9	14,4	14,2	13,3
China	99,8	57,5	8,7	1,4	0,5	0,3	0,2	0,2	0,2	0,2	0,2
Colombia	84,7	55,9	35,5	23,5	19,6	18,5	17,9	17	16,1	15,1	13,4
Comoros	88,5	51,7	23,1	7,2	1,4	0,5	0				
Congo Brazzaville	80,1	32,4	16,7	5,8	6,7	3,7	1,6				
Congo Kinshasa	75,4	27	11,4	3,8	3,1	0,7	1				
Costa d'Avorio	74,6	35,8	17,3	7,7	4,9	1,2	0,7				
Croatia	97,6	74,2	38,5	17,8	10,5	7,8	6,5	5,4	4,7	4,6	5,6
Cuba	77	37,6	18,1	11,7	10,6	10	9,4	8,9	8,7	8,3	8,8
Cyprus	97,2	70,2	30,3	13,8	8,3	6,5	5,9	5,4	5,1	4,6	4
Czech Republic	99,6	90,2	57	25,5	11	6,3	4,5	3,6	3,1	2,8	2,4
Denmark	99,8	95,1	71,9	42,4	27,7	21,3	17,6	13,5	8,8	5,3	4,5
Djibouti	94,7	74,4	50,2	30	14,8	5,6	2,9	5,1	2	1,6	1,4
Dominica	99,8	95,2	79,5	67,5	58,1	49,5	41,2	39,2	31,1	32,2	28,7
Dominican Republic	77,9	45,8	24	15,5	12,6	12	11	10,9	10,4	9,2	8,5
Ecuador	78	43	24,5	16,4	13,6	12,9	12,1	12,3	12,7	13	15,2
Egypt	85,5	43,9	12,9	5,1	2,6	1,9	1,4	1,2	1	1	1,1
El Salvador	83	54	34,5	24,9	21,2	19,8	19,2	19,4	19,4	19,7	19,7
Equatorial Guinea	73,7	37,2	20,7	13,7	9,3	6,5	6,6	5,4	6,3	4,6	3,6
Eritrea	68,9	27,3	11,5	4,6	2,2	0,9	0,9				
Estonia	95,1	58,8	28,6	17,1	11,5	9,4	8,1	7,2	7,7	6,9	9,5
Ethiopia	73,4	30,3	9,7	3,5	1,9	0,8	0,4				
Fiji	89,7	45,9	18,4	10,5	7,6	5,7	4,6	4,4	4,2	3,9	4,7
Finland	99,5	90,8	66,6	42,9	32,2	25,8	20	15,1	11,2	9	9,3
France	99,8	93,8	71	45,7	32,8	24,2	16,7	11,6	8,6	6,9	6,9
French Guiana (region of France)	99,2	93,5	78,7	68,4	58,8	54,7	48,6	43,1	44	43,8	42,7
Gabon	77,6	38,7	18	7,9	4,1	4	1,8				
Gambia	61,2	25,2	9,1	4,4	2,7	2,3	2,3	2,4	2,8	3,2	4,2
Georgia	82,7	41,4	21,1	12,6	9,1	7,4	6	5,6	5,6	5,8	4,6
Germany	99,5	90,3	66,6	42,6	28,6	18,6	11,8	8,2	5,8	4,7	6,5
Ghana	86,3	42,1	14,4	5,1	2,3	0,6	0,4				
Great Britain	95,2	69,1	38,1	21,9	14,3	9,8	7,1	5,2	4,5	4,7	6,9
Greece	96,4	78,9	44,8	20,3	10,9	7,5	6	5,3	4,7	4,7	5,4
Grenada	99,4	93,6	79,4	64	54,1	45,7	42,6	41,3	36,6	34,3	36
Guatemala	76,5	36,2	18,8	12	9,1	8	7,3	7,2	6,9	7,4	8,7

SINGLE WOMEN POPULATION RATES

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Guinea	62,1	19,7	3	1,7	0,2	0,1	0,2				
Guinea Bissau	78,3	41,1	22,3	14,8	10,9	13	16,4				
Guyana	78,4	14	14,6	12,9	12,2	12	11,1	9,9		8,5	
Haiti	80,7	39,9	17,3	8,5	2,8	1,8	1,7				
Honduras	77,4	41,3	24,2	17,3	14,6	14,3	13,4	14,6	14,3	15,3	16,1
Hungary	99,3	90,4	61	33,2	17,4	9,8	6,4	4,9	4,2	3,6	3,6
Iceland	99,2	80,5	47,4	27,8	19,4	15,6	12	9,9	7,1	5	7,5
India	75,2	23	5,7	2,2	1,3	1,2	0,9	0,9	0,7	1,1	1,7
Indonesia	90,8	51,4	19,7	8,1	4,3	2,6	2	1,9	1,7	1,3	1,6
Iran	83,2	49,5	23,9	11,5	6,1	3,5	2,2	1,5	1,1	0,9	0,9
Iraq	85	58,6	34	24	15	9	6	4	3	4	3
Ireland	99,6	95,1	76,3	45	26,6	17,8	13,7	11,4	10,1	9,8	14,6
Israel	96,5	70,5	35,9	16,8	10,5	8,2	6,5	5,8	5,1	4,8	3,2
Italy	99,4	90	64,7	38,1	22,5	15,4	11,6	9,2	7,6	7,2	8,8
Ivory Coast	89,2	62,3	34,1	16,7	15	11,4	11,3	11,2	10,3	11,6	13,4
Jamaica	99,5	93,1	81,1	71,6	64,5	57,1	48,7	41,4	37,9	32,5	27,1
Japan	99,2	88,7	59,1	32	18,8	12,2	8,3	6,2	5,3	4,3	3,6
Jordan	91,1	60,2	31	19,9	13,8	8,7	5,4	3,9	2,9	2,3	2,1
Kazakhstan	92,6	47,3	19,5	10,3	7,1	5,2	4,1	3	2	1,7	2,2
Kenya	79,7	36,2	14,8	5,9	4,1	3,8	3,3				
Kiribati	82	35,4	15	8,1	5	4	4	3	3	3	4,7
Kuwait	88,9	58,7	43,2	32,9	25,2	16,4	10,4	5,9	3,7	3,5	2,5
Kyrgyzstan	88,5	34,1	11,6	5,2	3,4	2,5	2	1,7	1,1	0,9	1
Laos	80,2	37,9	14,5	7,4	4,9	4	3,5	3,2	3	3	2,9
Latvia	98,7	83	55,8	36,3	20,6	13,1	10,3	9,1	7,8	7,4	8,6
Lebanon	94,7	73	49,4	30,1	20,9	17,5	12,3	9,4	8,3	6,8	6,5
Lesotho	82	40,2	18,5	9,2	7,4	5,7	3,1				
Liberia	79,8	38,5	16,3	5,4	2,8	1,5	0,5				
Libya	99,1	87,7	58,6	27,9	10,5	3,2	1,4	0,8	0,3	0,3	0,1
Liechtenstein	99,5	87,2	62,4	32,6	20,6	15,9	11,4	10	8,5	8,6	9,9
Lithuania	98,6	80,1	43,8	22,8	12,9	9,2	7,4	6,6	5,8	5,5	7,2
Luxembourg	98,6	82,2	49,2	25,1	15,3	10,7	8,2	6,5	6,3	6	8,3
Macedonia	90,9	48,7	15,5	6,1	4	3	2,9	2,3	2	1,6	1,2
Madagascar	67	26,3	11,6	5,5	4,4	1,8	3,9				
Malawi	63,7	12	3,4	0,9	0,7	0,4	0,4				
Malaysia	95,1	68,5	29,8	12,7	7,8	6,1	5	4,1	2,9	2,3	1,7
Maldives	94,6	47,1	13,3	4,8	2,6	1,5	0,9	0,8	0,7	0,5	0,6
Mali	47,4	7	1,9	0,6	0,3	0,1	0,1				
Malta	96,9	66,8	25	15,1	15,2	16,7	19,3	20,9	22,1	22,3	25,1
Marshall Islands	85,8	42,3	20,4	12,9	8	6,4	3,9	3,5	7,2	6,6	13,5
Mauritania	72,3	39,6	20,4	6,7	3,3	2	2				
Mauritius	90,2	50,1	19,4	9,9	8,3	8,1	8,4	7,4	5,2	3,8	4,2
Mexico	82,9	47,7	24,9	14,4	10,4	8,6	7,8	7,6	6,9	6,9	6,8
Micronesia	89,8	56,6	22,7		8,5		5,5		5,8		6,8
Moldova	89,4	39,1	8,8	2,5	2,7	1	1,3				
Monaco											
Mongolia	94,4	51,7	20,9	10	6,5	4,9	4	3,3	3,4	3,3	3
Montenegro	95,3	70,4	40,8	22,6	14,5						
Morocco	88,9	61,3	40,7	27,3	17,8	10,9	6,8	3,9	2	1,3	1,8
Mozambique	56,7	15,6	4,9	1,9	1,4	1,1	1,3				
Myanmar	89,3	56	32,4	19,6	13,8	10,4	9,1	6,5	6,3	7,2	6,3
Namibia	94,6	76,1	55,4	39,7	30,7	26,1	17,1				
Nauru											
Nepal	67,7	17,9	4,4	1,6	1,4	1,3	1,2				
Netherlands	99,8	92	69,6	45,1	29,7	20,2	15	10,6	7,2	5,1	5,9
New Zealand	91,6	63,1	37,4	23,3	16,6	12,9	10,2	7,6	5,8	5,1	6,3
Nicaragua	71,7	36,4	20,2	14,4	12,8	11,2	11	11,1	10,5	10,2	9,3
Niger	39,3	10,3	3	0,6	0,2	0,6	0,2				
Nigeria	66,8	36,1	12,2	5,1	1,7	0,7	0,9				
North Korea											
Northern Cyprus											
Norway	99,8	92,5	71,5	48,4	34,5	25,3	17,6	11,1	6,9	5,4	5,5
Oman	95,8	65,5	25,5	9,2	4	2,4	1,6	1,5	1,1	1,1	1,4
Pakistan	86,6	43,5	13,3	4,4	2,1	1,5	0,9	1	0,5	1,4	
Palau	91,3	67,7	45,2	22,2	15,5	10,3	7,2	7,2	5,8	5,5	2,3
Panama	78	42,4	24,1	15	11,3	9,4	9	9,1	9	8,6	9,2
Papua Nuova Guinea	82,4	26,6	6,6	3	2	1,9	1,4	2,6	2,9	5,4	6,8
Paraguay	88	55,2	28,5	17,3	14	13	13	14,5	15,3	15,8	18,7
Peru	88,4	56,9	33,2	16,9	9	7	4,4				

SINGLE WOMEN POPULATION RATES

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Philippines	90,7	48,7	20,8	10,8	6,9	5,5	4,5				
Poland	98,4	72	29,8	13	8,6	6,6	6	5,5	5	4,3	5,1
Portugal	95,4	71,2	36,2	16,2	10,5	7,9	6,7	6,6			
Qatar	96,4	62,4	34,7	19,6	12,3	7,3	6,5	3,2	1,7	2,1	2,6
Romania	95,4	71,4	36,4	18,8	11,9	8,6	6,4	5,3	4,4	3,7	2,6
Russian Federation	92,3	53,2	22,1	11	6,9	5,2	4,6	4,3	4	3,3	4,7
Rwanda	97,1	53,2	16,2	8	5	2,7	1,7				
Saint Kitts and Nevis	99,5	92,3	74,2	60,8	53,4	49	37,9	37,8	38,6	37	40,2
Saint Lucia	93,2	62,2	40,9	29,5	27,1	27,6	27,7	28,5	25,7	25,5	26,5
Saint Vincent and the Grenadines	83,3	51,2	35,2	27,7	26,2	24,8	24,1	27,7	28,2	28,9	37,7
Samoa	92,9	53,9	26,9	14,8	10,9	8,3	6,7	4,5	4,2	3,2	4,4
San Marino	99,8	91,6	56	27,1	13,1	9,5	7,5	6,2	3,3	3,3	4,4
Sao Tome and Principe	80,1	38,3	25,2	21,5	21,7	21,3	24,6	30,4	34	41,6	53
Saudi Arabia	96	59,9	25,8	9,6	4,4	2,3	1,6	1,2	0,8	0,6	0,9
Senegal	70,3	32	14,4	5,9	3,7	0,7	0,6				
Serbia	94,7	70,1	37,6	17,6	10	6,8	5,3	4,4	3,7	3,4	2,9
Seychelles	93,4	64,6	46,5	36,5	30,7	25,6	22,9	24	21	23	26,1
Sierra Leone	65,9	31,3	16,9	11	7,6	6,7	5,7	4,9	4,6	4,3	4,4
Singapore	99,4	86,5	46,3	22,1	15	14,3	13,3	12,2	10,4	6,4	3,6
Slovakia	99	83,5	49,1	23	13,1	9,6	7,9	7,3	6,5	5,2	3,8
Slovenia	99,7	94,7	74,9	46,6	29,4	21,4	19,2	13,5	9,5	7	8,5
Solomon Islands	80,9	34,9	14,5	7,3	6,7	6,3	5,9	5,2	5	4,8	4,3
Somalia	77,5	39,7	22,5	18,1	19,3	21,7	29,7				
South Africa	95,6	79,4	55,4	36,8	31	21,7	17,7				
South Korea	99,6	93,7	59,1	19,1	7,6	3,6	2,4	1,7	1,1	0,8	0,5
South Sudan	79,4	44,6	19,7	10,3	4	2,3	1,6	1,6	1,3	1,7	2
Spain	98,8	91	62,6	31,1	18	12,7	10,2	8,3			
Sri Lanka	89,2	57,6	27,5	13	8	6,7	6,4	6,3	5,6	4,8	3,8
Sudan	79,4	44,6	19,7	10,3	4	2,3	1,6	1,6	1,3	1,7	2
Suriname	80,2	38,8	20,7	16,1	15,9	16,6	21,2	22,5	25,2	27	32,1
Swaziland	92,8	65,6	40,8	26,4	14,3	12,5	8,7				
Sweden	99,6	92,6	77,2	55	40,8	32,7	25,3	18,9	13,4	9	6,2
Switzerland	99,1	86,3	62,2	36,2	22,1	16	12,5	10,4	8,6	7,9	9
Syria	89,1	57,2	37,9	21,4	11,1	6,6	4,6	3,2	1,7	1,3	3,3
Taiwan											
Tajikistan	86,1	30,7	8,7	3,7	2,3	1,7	1,5	1,4	1,3	1,3	1,4
Tanzania	72,2	23,8	9	4,2	1,5	0,8	2,4				
Thailand	88,8	56,1	29	16,2	11,7	9,3	8	6,6	5,2	4,3	3
Timor-Leste	89,4	44,3	17,2	9,9	7,1	4,8	4,2	3,5	2,9	3,3	4,2
Togo	80,1	36,6	7,7	2,4	1,1	0,5	0,3				
Tonga	95	66,6	33,2	20,2	12,7	9,3	7,1	6,8	5,8	7	6,1
Trinidad and Tobago	91	72,5	50,4	36,9	29,9	25,1	20,1	18,4	17,3	16,4	18
Tunisia	97	72,3	37,7	18,1	8,9	4,7	2,3	1,8	1,3	1,2	1,5
Turkey	87,1	47	18,5	8,6	4,9	3,1	2,2	1,7	1,4	1,1	1,2
Turkmenistan	93,6	46,7	9,6	2,8	1,8	1,3	1	1	0,9	1,2	1,3
Tuvalu	89,3	42,9	14,4	8,4	8,1	9,9	10,1	13,3	13,3	17,8	14,2
Uganda	70,3	24,7	10,4	6,1	4,1	3,4	2,9	2,8	2,4		3,9
Ukraine	93,5	47,3	17,5	7,9	3,7	2,1	2,5				
United Arab Emirates	91,8	58,3	26,5	9,6	2,8	0,7	0,9	0,5	0,7	0,3	0,6
Uruguay	87,2	55,2	27	14,4	10,6	9,3	8,6	8,7	8,7	9	11,3
USA	94,1	69,1	38,1	21,9	13,4		8		5,3	4,5	4,3
Uzbekistan	88,9	26,3	7	3,2	2	1,4	1	0,9	1	1,1	1,2
Vanuatu	88,1	43,1	17,4	7,2	5	3,7	3	2,6	3	2,1	4,5
Venezuela	82,9	51,4	30,8	20,2	16,6	15,1	14	13,9	14	14,4	16,8
Vietnam	93,8	53,9	20,5	9,2	7,2	6,4	6,1	5,7	5,5		2,2
Western Sahara (disputed territory)	39,5	19	12,9	10,9	6,3	6,6	6,9	6,4	10	7,6	10,1
Yemen	82,8	41	15,2	6,2	2,7	2,1	0,5	1,5	0,8	1	0
Zambia	73,1	24,6	8	4,4	0,8	0,8	0,2				
Zimbabwe	78,9	32	12,7	7,5	4,6	3,1	2,4	2	1,9	1,8	2,2

HOW MANY WOMEN FOR 100 MEN?

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Afghanistan	93	92	92	91	91	91	92	92	94	97	106
Albania	94	100	107	108	106	102	97	95	95	95	113
Algeria	97	99	98	99	101	100	99	97	94	101	102
Andorra	91	96	95	94	93	89	87	85	81	78	102
Angola	101	102	102	102	102	104	106	110	113	114	127
Antigua and Barbuda	111	109	117	124	121	122	114	112	121	118	129
Argentina	97	98	99	100	100	102	106	108	110	113	147
Armenia	96	98	99	104	108	111	111	113	120	128	153
Australia	94	95	98	100	101	101	102	102	101	100	120
Austria	95	98	99	100	100	97	98	102	104	108	144
Azerbaijan	95	96	100	108	113	113	109	108	111	117	139
Bahamas, The	102	104	102	106	108	108	108	109	109	115	137
Bahrain	92	70	48	48	48	53	55	51	53	74	107
Bangladesh	91	126	121	99	86	81	79	82	81	84	79
Barbados	98	100	102	105	109	110	109	108	119	125	146
Belarus	95	96	96	100	103	106	109	116	124	136	211
Belgium	96	99	100	98	98	97	98	100	100	104	139
Belize	96	102	114	114	109	105	96	94	95	94	94
Benin	103	132	133	115	116	110	107	106	102	118	120
Bhutan	102	90	75	85	84	84	86	87	88	91	95
Bolivia	97	98	100	101	103	104	106	109	111	113	125
Bosnia and Herzegovina	90	97	103	99	103	100	104	96	120	112	132
Botswana	100	113	111	102	117	120	122	125	121	136	150
Brazil	98	99	100	101	103	107	111	113	114	117	129
Brunei	88	100	91	91	89	75	81	89	92	93	98
Bulgaria	95	95	95	96	97	99	102	106	112	119	145
Burkina Faso	108	123	125	119	120	120	119	116	107	115	113
Burundi	101	102	102	103	102	103	109	116	123	137	157
Cambodia	94	105	104	107	107	114	119	150	141	137	148
Cameroon	99	99	99	98	97	100	104	108	110	112	122
Canada	96	95	98	99	98	98	99	101	103	104	127
Cape Verde	100	101	102	103	109	111	120	140	149	148	152
Central African Republic	102	102	102	100	95	96	107	115	119	119	130
Chad	99	100	100	100	100	102	106	110	113	112	126
Chile	97	97	98	99	100	101	102	103	106	110	135
China	95	97	95	95	94	92	95	93	93	92	112
Colombia	95	99	104	105	107	109	109	110	109	110	121
Comoros	97	98	99	99	99	99	100	102	104	106	126
Congo Brazzaville	99	100	100	101	101	101	102	105	110	116	132
Congo Kinshasa	98	99	99	99	98	97	98	103	108	113	120
Costa d'Avorio	100	100	100	96	90	87	88	88	86	82	88
Croatia	95	96	96	98	99	100	102	102	104	115	156
Cuba	94	94	93	95	98	101	103	105	104	108	112
Cyprus	97	105	101	99	98	102	98	103	103	108	121
Czech Republic	95	94	94	95	94	95	97	101	106	112	152
Denmark	95	96	99	99	98	97	98	99	100	100	128
Djibouti	99	99	98	97	98	100	102	105	107	110	127
Dominica	98	88	97	96	86	85	83	92	98	121	126
Dominican Republic	98	101	103	104	104	102	101	101	101	102	106
Ecuador	97	98	99	100	101	101	102	103	104	105	114
Egypt	92	92	108	100	102	97	92	104	91	98	90
El Salvador	101	113	121	125	127	130	129	126	124	123	127
Equatorial Guinea	99	98	95	90	90	91	89	85	80	78	105
Eritrea	100	102	104	100	100	103	112	134	144	140	167
Estonia	95	97	97	100	103	108	113	120	128	139	203
Ethiopia	97	97	97	99	103	107	111	110	106	104	101
Fiji	95	94	97	94	97	97	95	98	98	102	115
Finland	96	95	95	95	96	97	98	100	101	104	145
France	96	99	101	101	101	103	104	105	105	106	144
French Guiana (region of France)	98	109	111	111	103	99	98	91	94	87	122
Gabon	98	98	99	100	102	100	97	100	101	98	119
Gambia	101	105	109	113	113	112	110	101	95	84	93
Georgia	97	98	100	104	108	113	116	118	121	124	162
Germany	95	96	98	97	96	95	97	99	102	103	137
Ghana	96	110	114	113	110	100	91	103	95	107	101
Great Britain	94	95	99	100	102	102	102	102	103	105	131
Greece	93	92	92	93	95	98	101	102	104	109	126
Grenada	96	98	88	99	98	104	93	111	113	121	152
Guatemala	101	107	113	121	122	119	114	109	108	105	111
Guinea	97	97	97	97	97	96	98	101	104	110	124

HOW MANY WOMEN FOR 100 MEN?

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Guinea Bissau	100	101	101	101	102	103	105	108	110	111	123
Guyana	100	102	102	99	99	99	99	98	102	109	113
Haiti	98	101	106	109	108	107	105	108	113	112	122
Honduras	99	101	103	104	107	112	115	116	117	116	121
Hungary	96	97	96	96	97	100	105	110	117	126	174
Iceland	95	94	90	87	89	93	92	92	93	97	119
India	86	94	101	99	96	87	91	84	104	103	101
Indonesia	96	98	102	106	104	101	98	94	94	101	118
Iran	96	100	97	96	96	96	97	99	104	102	89
Iraq	97	97	97	99	101	105	107	109	109	108	119
Ireland	96	102	99	98	97	99	100	99	98	98	124
Israel	95	97	99	99	100	102	106	108	109	110	133
Italy	94	96	98	98	98	99	101	103	105	107	139
Ivory Coast	91	97	111	110	117	110	110	112	115	98	117
Jamaica	96	106	111	111	111	102	102	91	91	105	125
Japan	95	95	96	97	98	99	99	100	102	105	134
Jordan	94	93	90	92	92	94	95	98	104	90	98
Kazakhstan	96	98	98	102	105	108	112	118	129	138	228
Kenya	98	98	111	113	106	103	104	106	107	109	120
Kiribati	96	102	107	111	109	104	110	113	114	117	155
Kuwait	92	75	58	55	53	54	51	52	58	71	88
Kyrgyzstan	98	99	99	100	101	104	107	110	113	119	152
Laos	98	102	103	104	102	101	100	103	106	109	114
Latvia	96	97	96	98	101	105	110	116	127	140	206
Lebanon	85	92	106	110	123	128	118	114	114	113	98
Lesotho	100	104	101	99	105	110	113	120	116	125	174
Liberia	98	98	98	97	96	99	104	110	115	114	126
Libya	97	98	97	98	100	100	98	105	99	85	94
Liechtenstein											
Lithuania	96	97	96	98	103	105	110	117	125	141	210
Luxembourg	94	96	100	101	100	96	96	97	95	98	139
Macedonia	94	95	94	96	97	97	97	97	104	109	124
Madagascar	100	100	101	101	102	102	102	102	103	108	113
Malawi	102	101	108	126	101	98	104	103		109	
Malaysia	95	97	97	98	98	97	96	96	96	96	114
Maldives	95	102	106	105	106	104	99	93	91	95	81
Mali	96	97	98	100	103	108	116	123	129	141	144
Malta	96	92	93	92	95	97	97	98	100	104	135
Marshall Islands	94	93	98	99	96	95	102	96	82	91	110
Mauritania	95	105	112	114	110	108	99	103	102	95	103
Mauritius	98	101	101	99	97	97	99	104	111	116	138
Mexico	99	103	107	107	106	106	106	108	110	112	122
Micronesia	94	95	100	102	114	109	101	97	94	101	120
Moldova	97	96	97	100	103	108	111	114	120	127	165
Monaco	89	96	97	98	98	102	97	104	107	105	136
Mongolia	101	106	106	106	108	109	110	110	112	117	132
Montenegro	94	95	98	103	103	102	101	100	107	118	134
Morocco	98	103	107	109	110	110	103	95	99	113	112
Mozambique	109	107	119	133	130	119	117	119	123	127	142
Myanmar	92	95	98	101	104	105	106	107	108	11	122
Namibia	102	103	102	101	105	111	117	117	119	119	138
Nauru	101	92	98	94	98	113	108	108	93	59	122
Nepal	98	104	109	110	106	102	100	98	96	96	100
Netherlands	96	98	100	100	98	97	99	98	98	99	133
New Zealand	96	98	104	109	110	108	106	104	103	103	128
Nicaragua	99	101	104	109	107	105	107	109	108	107	115
Niger	101	106	112	114	106	100	97	96	101	106	97
Nigeria	100	98	97	106	116	112	105	99	91	88	90
North Korea	95	96	96	97	98	101	104	106	113	122	195
Northern Cyprus											
Norway	95	96	97	97	96	94	95	97	97	99	133
Oman	95	86	65	53	45	41	39	46	58	71	86
Pakistan	91	99	106	113	102	94	92	89	90	79	78
Palau	104	78	68	73	73	72	82	89	86	99	145
Panama	96	98	97	98	99	100	101	102	101	101	108
Papua Nuova Guinea	89	98	104	100	98	96	89	89	83	84	78
Paraguay	97	97	98	98	99	98	97	96	95	98	112
Peru	97	98	98	99	99	100	101	102	104	106	118
Philippines	97	99	101	100	99	98	98	99	101	105	125
Poland	96	97	97	98	98	99	102	106	111	120	165

HOW MANY WOMEN FOR 100 MEN?

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Portugal	96	96	98	99	100	103	104	106	109	115	139
Qatar	67	18	20	23	22	23	23	22	25	33	60
Romania	96	96	95	95	97	99	102	107	112	118	146
Russian Federation	96	98	99	102	103	107	112	120	130	143	215
Rwanda	105	112	119	115	115	115	119	122	145	147	133
Saint Kitts and Nevis	94	93	98	100	103	98	109	96	96	105	114
Saint Lucia	100	104	103	107	107	107	106	98	103	117	122
Saint Vincent and the Grenadines	99	95	96	91	92	94	96	93	100	109	128
Samoa	85	89	91	87	93	91	93	100	99	99	117
San Marino	92	95	107	104	107	102	96	101	104	103	129
Sao Tome and Principe	100	104	102	108	115	118	114	114	114	108	115
Saudi Arabia	102	94	74	66	61	55	56	61	71	84	93
Senegal	109	115	121	124	128	113	102	106	100	110	101
Serbia	95	96	97	98	100	103	104	104	107	114	137
Seychelles	89	76	68	85	87	104	91	90	97	108	166
Sierra Leone	105	119	123	122	116	103	87	98	93	125	108
Singapore	96	99	108	108	105	100	98	98	100	103	126
Slovakia	96	96	96	96	97	99	100	104	110	122	168
Slovenia	94	92	92	92	93	97	96	95	97	106	156
Solomon Islands	92	94	100	99	96	96	92	94	98	89	88
Somalia	94	107	113	116	109	89	79	65	58	57	68
South Africa	98	102	105	107	116	121	122	123	124	128	160
South Korea	89	92	94	94	95	95	98	98	101	107	147
South Sudan											
Spain	95	95	94	93	95	98	100	102	105	108	136
Sri Lanka	98	100	105	104	104	102	104	104	111	106	117
Sudan	97	97	98	99	99	100	101	103	105	108	117
Suriname	97	97	96	96	95	96	97	101	105	108	118
Swaziland	109	123	119	110	110	123	120	112	110	144	157
Sweden	94	95	95	96	97	96	97	98	99	100	127
Switzerland	95	98	100	100	100	98	98	98	100	102	137
Syria	95	93	107	108	105	102	100	95	93	86	72
Taiwan											
Tajikistan	97	98	99	104	104	104	103	103	104	90	115
Tanzania	104	125	114	105	103	101	106	106	104	110	106
Thailand	95	96	98	103	107	107	107	108	110	113	132
Timor-Leste	96	95	93	90	86	100	119	99	94	113	114
Togo	101	101	101	101	100	102	105	108	110	112	122
Tonga	88	90	95	99	99	97	105	110	112	110	100
Trinidad and Tobago											
Tunisia	95	98	102	108	108	107	100	100	103	110	101
Turkey	95	96	98	98	99	98	99	100	102	112	130
Turkmenistan	103	103	101	96	96	95	93	91	93	89	71
Tuvalu	74	109	113	96	107	125	122	135	114	114	145
Uganda	105	122	114	101	107	107	111	118	118	110	105
Ukraine	95	96	98	102	104	109	114	121	129	145	196
United Arab Emirates	91	58	37	30	29	29	29	29	30	44	72
Uruguay	96	97	101	103	103	106	106	107	112	116	152
USA	95	94	95	97	98	100	102	104	106	109	136
Uzbekistan	102	102	101	99	95	96	96	94	95	95	73
Vanuatu	93	96	102	104	102	100	97	94	93	92	90
Venezuela	96	98	99	100	101	101	101	102	103	105	116
Vietnam	94	100	104	104	102	101	105	114	117	121	152
Western Sahara (disputed territory)	96	94	91	88	87	82	76	76	71	72	86
Yemen	105	104	99	102	90	95	94	104	109	111	112
Zambia	108	118	105	98	103	102	100	108	101	110	87
Zimbabwe	104	117	108	97	114	123	116	135	114	105	113

POPULATION RATES BY AGE GROUPS

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Afghanistan	11,1	9	7,2	5,8	4,8	3,9	3,1	2,5	1,9	1,5	2,6
Albania	9,9	9,4	7,4	6,5	6,6	6,5	6,7	5,5	4,5	3,5	9
Algeria	10,7	11	10	8	6,9	5,9	4,8	4	3,1	2,1	5,3
Andorra	4,7	5,4	8,1	9,7	9,7	9,6	8,6	7,1	5,7	4,7	12,6
Angola	10,7	9	7,4	5,9	4,7	3,9	3,3	2,6	2,1	1,5	3
Antigua and Barbuda	8,2	7,9	8,3	9,1	8,7	7,2	5,6	4,2	3,1	2,4	6,9
Argentina	8,7	8,3	8,3	7,5	6,3	5,8	5,5	5,1	4,6	3,9	10,1
Armenia	9,5	9,8	8,7	7,1	6,2	6,6	8,3	7	5,1	2,8	10,4
Australia	6,9	7,1	7,1	6,9	7,4	7,1	7,2	6,6	6	5,3	13,2
Austria	6	6,2	6,5	6,5	7,7	8,6	8,1	6,7	5,9	5,3	17,2
Azerbaijan	10,6	10,2	8,5	7,2	7,2	7,7	7,8	5,6	3,6	1,9	6,9
Bahamas, The	9	8	7,5	7,8	8,2	7,9	7,2	5,6	4	3	5,9
Bahrain	5,9	9,4	14,1	12,8	10,9	8,8	7	4,8	2,7	1,2	2,4
Bangladesh	9,7	9	8,8	6,9	6,3	5	3,8	3,2	1,9	2,3	3,9
Barbados	7,5	7,1	7,9	7,8	8,5	8	6,7	5,4	3,9	3,6	11,8
Belarus	7,1	8,6	7,9	7,1	6,9	7,2	8,4	7,6	6,3	3,9	14,3
Belgium	6,1	6	6,4	6,4	7,1	7,6	7,5	6,9	6,3	5,5	17,1
Belize	11,3	8	6,9	6,7	6,2	5,3	4,2	3,3	2,3	1,9	4,9
Benin	9,6	8,3	7,9	6,1	5	3,9	2,9	2,5	1,4	1,7	3,8
Bhutan	11,4	11	9,8	7,5	6	5,2	4,2	3,7	2,8	2,2	4,8
Bolivia	10,6	9,1	8	7,1	6	4,9	4,2	3,5	2,8	2,2	4,5
Bosnia and Herzegovina	7,3	7,4	7	6,3	6,4	7,4	7,9	6,9	6	4,8	15,1
Botswana	10,3	11,1	9,5	7,4	5,4	4,7	3,9	3,1	2,2	1,7	5,2
Brazil	8,8	9,3	9	7,8	7,2	6,9	6,2	4,6	3,9	3	6,5
Brunei	8,6	10,4	11,3	10,2	8,7	7,2	5,6	4	2,6	1,5	3,2
Bulgaria	6	6,9	7,2	7,7	7,2	6,6	6,9	7,1	7,2	6,4	17,4
Burkina Faso	10,5	8,5	7,2	5,7	4,7	3,9	3,1	2,6	2	1,7	3,4
Burundi	11,4	10,9	9,3	7	5,1	4,1	3,6	3,3	2,7	1,9	3,9
Cambodia	12	10,2	9,2	5,2	6,3	5,5	4,9	3,7	2,9	2,1	4,3
Cameroon	10,8	9,7	8,3	6,6	5,2	4,2	3,5	2,9	2,5	2	4,3
Canada	6,8	6,9	6,9	6,7	6,9	7,7	8,3	7,6	6,5	5,4	13,7
Cape Verde	13	10,8	7,8	6	5,4	5,3	4,3	2,9	1,6	1,1	5,7
Central African Republic	10,7	9,7	8,3	6,5	4,9	3,9	3,4	3,1	2,6	2,1	4,9
Chad	10,6	9	7,4	6	4,8	3,8	3,2	2,8	2,3	1,7	3,5
Chile	8,8	8,4	7,5	7,1	7,4	7,4	7,1	5,9	4,7	3,8	8,6
China	8,3	7,6	9,5	10,2	8,8	6,5	6,9	5,1	3,7	3,4	7,1
Colombia	9,8	8,8	7,9	7,1	6,6	6,6	5,9	4,8	3,8	2,9	6,4
Comoros	9,3	8,6	8,8	7	5,6	4,5	3,8	3,1	2,3	1,5	3,4
Congo Brazaville	10,9	9,1	7,3	5,8	4,7	3,8	3,1	2,5	2	1,7	3,3
Congo Kinshasa	10,2	9,1	8,1	7	5,8	4,5	3,58	2,9	2,4	2	4,5
Costa d'Avorio	11,1	9,5	8,1	6,6	4,9	3,8	3,3	2,9	2,5	1,9	4
Croatia	5,9	6,6	7,1	6,8	6,6	7,1	7,4	7,5	6,9	5,1	17,6
Cuba	7,4	7,1	5,9	7,4	9,3	9,7	7,4	5,7	5,4	4,8	12
Cyprus	7,1	8	8,7	7,6	7	6,9	7,1	6,6	6	5	12,7
Czech Republic	6,2	6,7	7,6	9	7,4	6,8	6,2	7,1	7,4	6,7	14,7
Denmark	6,2	5,6	5,8	6,6	7	7,8	7	6,6	6,4	6,9	15,7
Djibouti	11,2	10,1	8,6	7,1	6	5,1	4,2	3,4	2,7	2,2	4
Dominica	9,6	6,4	7,2	8	7,4	6,3	5	4	3,4	3,2	10,2
Dominican Republic	10	9,2	8,2	7,2	6,6	5,8	5,1	4,2	3,3	2,5	5,8
Ecuador	9,8	9,2	8,3	7,4	6,6	5,9	5	4,3	3,5	2,6	6,1
Egypt	11,6	8,6	7,4	6,7	6,5	5,3	4,5	3,4	2,5	2,4	3,4
El Salvador	10,4	8,5	8	7	6,1	5,3	4,4	3,8	3,2	2,6	6,8
Equatorial Guinea	10,4	9,2	6,8	5	5,4	6	5,6	4,3	2,6	1,3	3,5
Eritrea	10,2	9,6	8,9	8,5	6,1	3,7	2,6	2,5	2,2	1,8	3,4
Estonia	7	7,9	7,4	6,9	6,9	6,5	7,1	6,9	6,4	5	17,2
Ethiopia	10,3	9,4	8,1	6,7	5,4	4,4	3,4	2,8	2,2	1,7	2,8
Fiji	9,5	9,6	8,8	7,6	6,8	6,7	6	4,8	3,7	2,9	4,6
Finland	6,3	6,1	6,4	6,2	6	7	7,1	7,2	7,5	6,8	16,6
France	6,3	6,4	6,3	6,3	7	7	6,9	6,7	6,6	5,5	16,7
French Guiana (region of France)	9,4	7,5	7,7	7,2	7,7	6,7	5,4	4,4	3,4	2,1	3,8
Gabon	11,2	9,6	8,3	7	5,9	4,9	4,1	3,5	2,9	2,1	5,5
Gambia	10,8	9,7	8,7	7,2	5,2	4,4	3,3	2,5	1,8	1,2	2,2
Georgia	8,2	8,2	7,6	7,1	6,8	6,9	7,6	6,5	5,7	3,6	14,5
Germany	5,6	5,9	6,1	5,7	7,1	8,7	8,3	7,1	6,4	5,2	20,2
Ghana	10	8,5	7,9	6,4	5,4	4,7	3,8	3	1,9	1,9	5,3
Great Britain	6,6	6,8	6,5	6,4	7,4	7,8	7	6,1	6,1	5,7	16
Greece	5,2	5,9	7,2	7,8	7,8	7,6	7,1	6,7	6,1	5,7	10,7
Grenada	11,8	9,1	7,2	5,9	6,4	5,3	3,7	2,9	2,4	2,4	7,8
Guatemala	10,9	9,3	7,5	5,9	4,7	3,9	3,2	2,9	2,4	1,8	4,2
Guinea	10,6	9,1	7,6	6,2	5,1	4,2	3,5	3	2,5	1,8	4,1

POPULATION RATES BY AGE GROUPS

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Guinea Bissau	10,6	9,1	8	6,3	6,3	3,3	3,5	3	3,2	2	4
Guyana	8,9	8,6	8,1	7,7	7	6,2	4,8	3,8	2,4	2	5
Haiti	11,3	10,3	7,9	6,2	5,5	4,8	3,9	3,3	2,4	2,2	4,1
Honduras	10,7	9,4	8,3	7	5,7	4,5	3,7	3	2,4	1,9	4
Hungary	6,1	6,5	7,4	8,6	7,2	6,4	6,2	7,7	7	5,8	16,3
Iceland	7,4	7,3	8	7,2	7	7,2	7,1	6,6	5,5	4,5	11,5
India	9,7	8,7	8,1	7,2	6,9	5,4	4,6	3,6	2,7	2,7	4,3
Indonesia	9,3	9,2	9	8,5	7,8	6,9	6	4,8	3,6	2,6	5,1
Iran	12,4	12,8	10,2	7,9	7	5,8	5	3,9	2,7	2,1	5
Iraq	10,8	9,2	7,9	6,6	5,5	4,3	3,4	2,7	2,1	1,5	2,8
Ireland	7,6	9,4	8,3	7,7	7	6,5	5,8	5,2	4,5	3,4	10,9
Israel	8,1	7,8	7,5	7,4	6,5	5,5	5,2	5,1	4,9	4,7	9,8
Italy	5	5,2	6	7,4	8,1	8,2	7,4	6,6	6,2	5,8	20
Ivory Coast	10	9,9	8,1	7,1	6,3	6,9	6,4	5,6	4,1	2,8	6,9
Jamaica	9,3	7,8	8	8,2	8,4	7,1	4,9	4,2	3,2	2,6	8,4
Japan	4,9	5,6	6	7,1	7,5	6,5	6,1	6,2	7,8	6,9	21,9
Jordan	11	10,6	8,9	7,8	6,3	4,7	3,3	2,5	2,2	1,9	3,2
Kazakhstan	8,1	9,3	8	7,2	6,8	6,2	6,8	6,1	5	3,4	10,5
Kenya	11,6	10,3	8,4	6,8	5	4	2,9	2,4	1,9	1,5	3
Kiribati	11,7	9,3	7,3	6	7	5,7	4,6	3,4	2,6	1,9	3,5
Kuwait	6,8	9	12,7	12,1	10,7	8	5,8	3,7	2,2	1,3	1,6
Kyrgyzstan	11,1	10	8,3	7,3	6,6	6,1	5,8	4,1	2,9	1,3	5,3
Laos	11,9	9,4	7,7	6,4	5,7	4,9	4,1	3,3	2,4	1,8	3,8
Latvia	7,1	8,2	7,3	6,9	7	6,9	7,6	6,9	6,1	5	17,2
Lebanon	9,7	9,8	8,1	7,4	6,7	6,2	5,6	4,8	3,8	3,7	9,7
Lesotho	12,3	11,1	8,9	6,4	5	4,5	3,9	3,4	2,7	2	5,8
Liberia	10,2	9,1	8	6,6	5,2	4,2	3,6	2,9	2,3	1,7	3,4
Libya	10,8	10,8	10,7	9,3	7,4	5,3	3,8	2,5	2,3	1,8	4,2
Liechtenstein											
Lithuania	6,1	7,1	6,5	5,7	6,2	6,6	7,3	6,9	5,7	5,1	23,8
Luxembourg	5,9	5,9	6,8	7,4	8,1	8,6	7,8	6,8	5,8	4,8	14
Macedonia	7,7	8,1	7,9	7,5	7,2	7,3	7,1	6,8	6,1	4,6	11,4
Madagascar	10,8	8,8	7	6,5	5,5	4,4	3,6	3	2,4	1,6	3,8
Malawi	10,2	8,7	7,6	6,8	5,4	4,1	3,2	2,3		3,9	
Malaysia	9,4	9	8,2	7,2	6,8	6,4	5,6	4,7	3,7	2,5	4,4
Maldives	13,1	12,5	9,4	7,1	6,3	5,5	4,9	3,3	2	1,8	4,8
Mali	10,4	8,9	7,6	6,3	5	3,9	3	2,4	2	1,5	2,8
Malta	6,8	7,1	7,5	7,3	6,4	6,1	7,2	7,3	7,1	7,3	14,4
Marshall Islands	12,4	11,8	7,5	4,9	4,4	4,2	3,9	3,4	2,7	1,6	2,3
Mauritania	10,3	9,2	7,3	6,4	5,3	4,6	3,6	3,3	2,1	1,4	3,5
Mauritius	8,7	9,4	7,9	8,4	8,6	7,7	4,8	3,4	2,8	6,3	6,3
Mexico	9,8	9,1	8,4	8	7,4	6,5	5,5	4,4	3,4	2,6	5,6
Micronesia	10,6	9	7,2	6	5,8	5,3	5,1	4,5	3,5	2,2	4
Moldova	9	10	8,4	7,3	6,5	6,6	7,9	7,2	6,1	3,4	10,3
Monaco	4,2	4,1	5,1	7,3	7,4	7,3	6,8	8,1	7,5	6,5	22,4
Mongolia	11,4	10,3	8,9	8,2	7,4	6,7	5,9	4,1	2,7	1,9	4,1
Montenegro	7,3	8	7,7	7,1	6,6	6,7	7	6,9	6,1	4,1	12,9
Morocco	10,5	9,9	8,9	7,5	6,6	6,1	5,6	4,4	3,3	2,3	5,7
Mozambique	11,1	8,7	7,4	5,8	4,9	4,2	3,5	2,8	2,2	1,6	2,5
Myanmar	8,9	8,7	8,3	7,6	6,9	6,1	5,1	4,2	3,3	2,7	5,5
Namibia	11,5	10,2	8,8	7,6	6,1	4,9	3,8	2,8	2,3	1,6	3,9
Nauru	10	9,5	7,8	7,2	7,4	6,2	4,9	3,3	1,8	1,3	1,3
Nepal	11,1	9,5	8,1	6,9	5,8	4,9	4,1	3,3	2,7	2,1	4
Netherlands	6,1	5,9	6	6,4	7,8	8	7,6	6,9	6,7	5,9	14,6
New Zealand	7,6	6,9	6,4	6,4	7,3	7,4	7,5	6,5	5,7	5	14,1
Nicaragua	11,5	10,1	8,8	7,1	5,8	4,8	4,2	3,5	2,5	1,7	4,3
Niger	10	7,5	6,3	5,5	4,8	4,2	3,2	2,4	2	1,6	2,6
Nigeria	10,2	8,7	7,8	6,4	5,2	4,4	3,7	2,9	2,1	1,6	2,7
North Korea	8,5	7,7	7,2	7	9,2	8,4	6,4	5,5	3,8	4,4	8,7
Northern Cyprus											
Norway	6,7	6,1	6,3	6,7	7,6	7,4	6,8	6,6	6,1	5,9	14,7
Oman	10,3	11,2	12,6	11	8,2	6,7	4,5	3	1,7	1,3	1,7
Pakistan	11,5	9	7,2	5,6	5,6	4,5	4,2	3,1	2,4	2	3,3
Palau	7,3	6,4	8	9,3	9,9	9,5	7,7	5,9	3,7	2,6	5,7
Panama	9	8,6	8	7,7	7,5	6,6	5,6	4,5	3,7	2,9	6,3
Papua Nuova Guinea	10,7	9,1	8,6	7,4	6,4	4,9	3,8	2,9	2,1	1,7	2,4
Paraguay	10,7	9,9	8,5	6,6	5,7	5,2	4,6	4	3,2	2,4	4,9
Peru	10	9,3	8,5	7,8	6,8	6	5,1	4,1	3,3	2,6	5,6
Philippines	10,3	9,4	8,4	7,3	6,4	5,7	4,9	4	3,1	2,2	4,2
Poland	7,2	8,5	8,2	7,6	6,4	6,3	7,4	7,9	6,9	4,4	13,4

POPULATION RATES BY AGE GROUPS

COUNTRY	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
Portugal	5,5	6	7,2	8	7,6	7,4	7,2	6,6	6,2	5,6	17,5
Qatar	4,2	13,8	18	14,5	12	8,7	6,2	4	2	0,9	1
Romania	6,6	7,9	7,8	8,2	8,1	6,8	6,1	7,2	6,6	4,7	14,9
Russian Federation	6,9	8,9	8,2	7,5	6,9	6,8	8,3	7,8	6,7	3,8	13,6
Rwanda	13,3	10	6,8	5,5	4,7	4,5	3,3	2,4	1,5	1,4	2,9
Saint Kitts and Nevis	9,6	9	8	7,7	7,2	6,2	4,7	3,4	2,7	2,1	8,8
Saint Lucia	10,4	10	8,4	7,7	7	6,8	5,8	4,2	3,2	2,6	6,8
Saint Vincent and the Grenadines	10,6	9,1	8,1	7,2	7,6	6,3	4,4	3,5	2,6	2,6	7,3
Samoa	10	8,1	7,5	6,9	5,9	5	3,9	2,9	2,5	2,1	4,5
San Marino	4,4	5,2	6,9	8,7	9,7	8,9	7	6,4	6,2	5,2	16,3
Sao Tome and Principe	12,7	10,2	7,1	5,6	4,8	3,9	2,9	2,2	1,8	2	4,3
Saudi Arabia	9,3	8,9	9,8	9,9	8,4	6,5	4,7	3,3	2,2	1,5	2,8
Senegal	11,9	9,7	7,8	6,3	5,1	4,3	3,2	2,8	1,7	1,8	3,6
Serbia	5,9	6,7	7	7	7	6,6	7	7,8	7,7	5,3	17,1
Seychelles	8,1	10	7,9	9,3	8,1	7,1	7,6	4,8	3,8	2,8	7,9
Sierra Leone	10,8	8,4	8,2	6,3	6,1	4,3	3,6	2,6	1,7	1,8	4,4
Singapore	7,2	6,2	7,2	8	8,4	8,7	8,7	7,9	6,3	4,2	8,7
Slovakia	7,1	8	8,5	8,6	7,1	6,9	7,1	7,5	6,7	4,9	12,1
Slovenia	5,5	6,6	7,5	7,6	7,2	7,7	7,7	7,7	7,1	5,1	16,3
Solomon Islands	11,1	9,7	8,5	7,4	5,5	4,5	3,3	2,8	2,2	1,8	3,2
Somalia	10,7	8,6	7,3	6,3	5,4	4,6	3,7	2,6	1,8	1,2	1,6
South Africa	10,6	9,8	9	8	6,5	4,9	4,6	4	3,2	2,6	4,6
South Korea	6,7	6,7	8,1	8	9	8,5	8,7	7,2	5,1	4,1	10,3
South Sudan											
Spain	5,1	6,3	8,2	8,9	8,4	7,9	7,2	6,2	5,6	5,1	16,6
Sri Lanka	9,7	9,4	7,9	7,6	7,4	6,9	6	5,4	4	3	6,3
Sudan	10,4	9,1	7,9	6,8	5,7	4,7	3,8	3,2	2,6	2,1	4,2
Suriname	9	8,6	8,2	7,8	7,3	6,5	5,7	4,7	3,7	3	6,1
Swaziland	12,4	10,7	8,4	6,1	5,1	4	3,4	2,6	2,1	1,8	3,7
Sweden	6,9	6,2	6,1	6,4	6,8	7,3	6,4	6,3	6,4	6,8	17,6
Switzerland	6	6	6,4	6,8	7,7	8,5	7,9	6,9	6,2	5,9	16,5
Syria	11,2	9,7	7,8	6,4	6	5,2	4,2	3,5	2,4	2,1	3,6
Taiwan											
Tajikistan	12,2	10,6	8,1	6,6	6	5,4	4,7	3,1	2,1	1	4,2
Tanzania	10,4	9,1	8,1	6,5	4,8	3,9	2,9	2,6	1,7	1,8	3,9
Thailand	8	8	8,1	8,3	8,5	8,2	7,5	6,1	4,6	3,5	7,3
Timor-Leste	11,7	8,5	7,1	4,2	4,4	3,8	3,6	3	2,4	2	3,5
Togo	10,9	9,7	8,4	6,9	5,5	4,4	3,6	3	2,4	1,9	4,2
Tonga	11	10,2	8,3	5,7	5,2	5,1	4,3	3,8	3,2	2,7	4,6
Trinidad and Tobago	10,9	8,9	7,9	7,3	8,1	7,1	6	5	3,7	2,9	7,1
Tunisia	9,8	10,2	9,3	8	6,9	6,8	6	5,1	3,8	2,7	7
Turkey	8,6	8,7	9,2	8	7,4	6,6	5,9	5	4	3	6,8
Turkmenistan	11,3	9,4	8,3	7,4	6,7	6,2	4,6	3,1	1,7	1,8	3,9
Tuvalu	8,6	7,1	5,5	5,7	7,2	7,3	6,1	4,9	2,9	2,9	5,7
Uganda	11,1	8,9	7,3	5,8	4,2	3,4	2,2	2	1,3	1,5	3
Ukraine	7,1	8,4	7,5	7,2	6,8	7	7,9	7,1	6,5	4	16,3
United Arab Emirates	5,5	10,5	16,3	15,8	12,4	8,4	5,5	3,4	1,6	0,7	0,9
Uruguay	8	7,6	7,2	7,1	6,4	6,1	6,2	5,6	5	4,2	13,6
USA	7,1	6,9	7	6,4	6,9	7,1	7,5	7,1	6,1	5	12,8
Uzbekistan	11,9	9,6	8,1	7,2	6,5	6,2	4,6	3,2	1,7	2	4,4
Vanuatu	10,9	8,8	7,5	6,8	5,8	4,8	3,9	3	2,4	1,8	3,1
Venezuela	9,7	9,3	8,4	7,5	6,7	6,3	5,5	4,6	3,8	2,9	5,4
Vietnam	10,2	8	7,7	7,6	7,9	7,5	6,8	5,7	3,8	2,4	7,4
Western Sahara (disputed territory)	9,3	9,8	10	9,4	8,6	7,1	5,4	4,1	2,6	1,4	2,6
Yemen	12,6	9,6	7,5	4,9	4,6	3,7	3	2,5	1,5	1,6	3,4
Zambia	11,5	9,7	7,9	6	4,6	3,5	2,6	2,2	1,6	1,4	2,7
Zimbabwe	12,9	10,5	8,5	6,3	4,3	3,7	3,1	2,6	1,8	1,7	3,6

RELIGIONS

COUNTRY	PERCENTAGE OF RELIGIOUS DENOMINATIONS PER COUNTRY
Afghanistan	Islam 99% (Sunnis 82%, Shia 17%)
Albania	Islam 70% (Sunni majority), Christian 30% (Orthodox 20%, Roman Catholic 10%)
Algeria	Sunni Islam 99.5%
Andorra	Christian 93.4% (Roman Catholic 89.1%, other Christian denominations 4.3%) Islam 0.6%, Hinduism 0.5%, Atheists 5%
Angola	Christian 69.7% (Roman Catholic 50.7%, Protestant 14.7%, others 4.3%), Indigenous beliefs (Animist) 30%
Antigua and Barbuda	Christian 91.4% (Protestant 74.7%, Catholic 11.3%, other Christian denominations 5.4%)
Argentina	Christian 95.3% (Roman Catholic 87.8%, practicing 20%; Protestant 7.5%), Islam 1.5%, Judaism 0.7%
	Christian 76.9% (Armenian Apostolic Orthodox Church 72.9%), others 4%, including Roman Catholic and Protestant churches), Islam 2.4%, Yazidism 1.3% (monotheistic religion with elements of kabalistic Judaism, Christian Mazdeism and Muslim mysticism)
Armenia	Christian 63.9% (Protestant Anglican Church 18.7%, Roman Catholic 25.8%, Orthodox 2.7%, others 16.7%), Buddhism 2.1%, Islam 1.7%
Australia	Christian 79.1% (Roman Catholic 73.6%, Protestant 5.5%), Islam 4.2%, Atheists 12%
Austria	Islam 87% (Shia 53%, Sunnis 34%) Christian 4.8% (Russian Orthodox Church 2.5%, Armenian Apostolic Orthodox Church 2.3%)
Azerbaijan	Christian 88.3% (Protestant 56.2% of which Anglican 10.8%; Roman Catholic 16.9%, other Christian denominations 15.2%). Atheists 5.3%
Bahamas, The	
Bahrain	Islam 81.2% (Shia 60.9%, Sunnis 20.3%), Christian 9%
Bangladesh	Islam 89.5% (Sunnis 85.2%, Shia 4.3%), Hinduism 9.6%, Buddhism 0.5%
Barbados	Christian 64.8% (Protestant 60.6% of which 28.3% Anglican; Roman Catholic 4.2%), Islam 0.7%, Atheists 17.3%
Belarus	Christian 48% (Orthodox 40%, Roman Catholic 7%, others 1%), Judaism 0.6%. Atheists 50%
Belgium	Roman Catholic 60%, Protestant, Muslim and Jewish minorities
Belize	Christian 80.4% (Roman Catholic 49.6%, Protestant 30.8% of which Anglican 5.3%), Atheists 9.4%
	Christian 32.5% (Roman Catholic 27.1%, Protestant 5.4%), Indigenous beliefs (Voodoo majority) 30.2%, Islam 24.4% (Sunni majority), Atheists 6.5%
Benin	
Bhutan	Buddhist Lamaism 75%, Hinduism 25%
Bolivia	Christian 97.5% (Roman Catholic 88.5%, Protestants 9%)
Bosnia and Herzegovina	Christian 47.9% (Orthodox 29.9%, Roman Catholic 18%) Sunni Islam 43%
Botswana	Christian 62.7% (Protestant, Roman Catholic, others), Indigenous beliefs (Badimo majority) 2.2%, Islam 0.5%. Atheists 7.9%
Brazil	Christian 89%, (Roman Catholic 73.6%, Protestant 15.4%). Atheists 7.3%
Brunei	Sunni Islam 67.3%, Buddhism 9.1%, Christian 7.7%
Bulgaria	Christian 83.7% (Orthodox 72%, others 11.7%), Islam 12.2% (Sunnis, Shia)
Burkina Faso	Islam 60.6% (Sunni majority), Christian 23.2 (Roman Catholic 19%, Protestant 4.2%), Indigenous beliefs (Animist) 15.3%
Burundi	Roman Catholic 65%, Islam 10%. Atheists 18.7%
Cambodia	Buddhism 96.9%, Islam 1.9%, Christian 0.4%
Cameroon	Christian 47.6% (Roman Catholic 27.4%, Protestant 20.2%), Indigenous beliefs (Animist) 22.2%
	Christian 77% (Roman Catholic 43.6%, Protestant 29.2%, Orthodox 1.6%, others 2.6%), Islam 2%, Judaism 1.1%, Buddhism 1%, Hinduism 1%, Sikh 0.9%. Atheists 16.5%
Canada	
Cape Verde	Christian 96.8% (Roman Catholic 92.8%, Protestant 4%), Islam 2.8%
Central African Republic	Christian 50% (Roman Catholic 25%, Protestant 25%), Indigenous beliefs (Animist) 35%, Islam 15% (Sunni majority)
Chad	Islam 53.9% (Sunni majority), Christian 34.6% (Roman Catholic 20.3%, Protestant 14.3%), Indigenous beliefs (Animist) 7.3%
Chile	Christian 85.1% (Roman Catholic 70%, Evangelical Protestant Church 15.1%). Atheists 8.3%
	Chinese Popular Religion (Buddhism+Taoism practiced together) 28.7%, Christian 10% (Protestant and Roman Catholic), Buddhism 8.4%, Indigenous beliefs 4.4%, Islam 1.5%. Atheists 47%
China	
Colombia	Christian 95.3% (Roman Catholic 92.5%, Protestant 2.8%), Islam 0.2%
Comoros	Sunni Islam 98.4%, Roman Catholic 1.6%
Congo Brazzaville	Christian 65.4% (Roman Catholic 41%, Protestant 24.4%), Indigenous beliefs (Animist) 32.8%, Islam 1.8%
Congo Kinshasa	Christian 86% (Roman Catholic 41%, Protestant 31.6%, others 13.4%), Indigenous beliefs 10.7%, Islam 1.4%
	Islam 38.7% (Sunni majority), Christian 26.1 (Roman Catholic 20.8%, Protestant 5.3%), Indigenous beliefs 17%. Atheists 13.4%
Costa d'Avorio	
Croatia	Christian 92.5% (Roman Catholic 87.8%, Orthodox 4.4%, Protestant 0.3%), Sunni Islam 1.3%. Atheists 5.2%
	Christian (Roman Catholic 47%, Protestant 5%, Orthodox, Jehovah's Witnesses minorities), Indigenous beliefs (Santeria) 20%. Atheists 22%
Cuba	
Cyprus	Christian 96.9% (Greek Orthodox Church 94.8%, Roman Catholic 1.5%, Maronite Catholic 0.6%), Islam 0.6%
Czech Republic	Christian 29.1% (Roman Catholic 26.8%, Protestant 1.1%, Hussites 1%, Orthodox 0.2%). Atheists 59%
Denmark	Lutheran Evangelical Protestant Church 84.3%, Islam 2%. Atheists 6.9%
Djibouti	Sunni Islam 97.8%, Christian 2.2%
Dominica	Christian 88.3% (Roman Catholic 81.9%, Protestant 6.4%). Indigenous beliefs (Rastafarian Movement) 1.3%
Dominican Republic	Christian 88.3% (Roman Catholic 81.9%, Protestant 6.4%)
Ecuador	Christian 95.9% (Roman Catholic 92.5%, Protestant 3.4%)
Egypt	Sunni Islam 89%, Christian 11% (Coptic Orthodox Church 10%, Protestant 1%)
El Salvador	Christian 80.9% (Roman Catholic 57.1%, Protestant 21.2%, Jehovah's Witnesses 1.9%, Mormons 0.7%)
Equatorial Guinea	Roman Catholic 93.6%
Eritrea	Islam 69.3% (Sunni majority), Coptic Orthodox Christian 30.7%
Estonia	Christian 27.9% (Lutheran Evangelical Protestant 14.6%, Orthodox 12.8%, Roman Catholic 0.5%). Atheists 6.1
Ethiopia	Christian 62.8% (Orthodox 43.5, Protestant 18.6%, Roman Catholic 0.7%), Islam 33.9%, Indigenous beliefs 2.6%
Fiji	Christian 64.5% (Protestant 55.4%, Roman Catholic 9.1%), Hinduism 27.9%, Islam 6.3%, Sikh 0.3%
Finland	Christian 81.8% (Protestant 80.7%, Orthodox 1.1%). Atheists 16.9%
France	Christian 66.2% (Roman Catholic 64.3%, Protestant 1.9%), Islam 4.3%, Buddhism 1%, Judaism 0.6%
French Guiana (region of France)	Christian majority (mainly Roman Catholic; Jehovah's Witnesses and Adventists minorities)
Gabon	Christian 67.8% (Roman Catholic 49.6%, Protestant 18.2%), Indigenous beliefs 19%
Gambia	Islam 90% (Sunni majority), Christian 8%, Indigenous beliefs 2%
Georgia	Christian 88.6% (Orthodox 87.8%, Roman Catholic 0.8%), Islam 9.9% (Sunni majority)
Germany	Christian 74.9% (Protestant 42.8%, Roman Catholic 32.1%), Islam 2.1%, Judaism 0.1%
	Christian 51.8% (Protestant 23.7%, Roman Catholic 12.2%, others 15.9%). Islam 20.1% (Sunni majority), Indigenous beliefs 21.5%
Ghana	

RELIGIONS

COUNTRY	PERCENTAGE OF RELIGIOUS DENOMINATIONS PER COUNTRY
Great Britain	Christian 66% (Anglican 43.5%, Protestant 10%, Roman Catholic 9.8%, Orthodox 1%, others 1.7%), Islam 1.4%, Hinduism 0.7%, Judaism 0.5%, Sikh 0.4%. Atheists 31%
Greece	Orthodox Christian 91.8%, Islam 1.3%
Grenada	Christian 100% (Roman Catholic 53%, Anglican Protestant 13.8%, other Protestant denominations 33.2%)
Guatemala	Christian 97.7% (Roman Catholic 75.9%, Protestant 21.8%)
Guinea	Islam 85% (Sunni majority), Christian 8%, Indigenous beliefs 7%
Guinea Bissau	Islam 50% (Sunni majority), Indigenous beliefs 40%, Christian 10%
Guyana	Christian 57.4% (Protestant 30.5%, Roman Catholic 8.1%, Jehovah's Witnesses 1.1%, others 17.7%), Hinduism 28.4%, Islam 7.2%
Haiti	Christian 96% (Roman Catholics 80%, Protestant 16%). Voodoo is also practiced by half of the population
Honduras	Christian 89.5% (Roman Catholic 86.7%, Protestant 2.8%)
Hungary	Christian 88.5% (Roman Catholic 63.1%, Protestant 25.4%). Atheists 11.5%
Iceland	Christian 89.2% (Protestant 86.8%, Roman Catholic 2.4%)
India	Hinduism 81.4%, Islam 12.4% (Sunnis 9.4%, Shia 3%), Sikh 1.9%, Christian 2.2% (Roman Catholic 1.1%, Protestant 1.1%), Buddhism 0.8%, Jainism 0.4%
Indonesia	Islam 87.2% (Sunni majority), Christian 9.7% (Protestant 6.1%, Roman Catholic 3.6%), Hinduism 1.8%, Buddhism 1%
Iran	Islam 98.2% (Shia 86.1%, Sunnis 10.1%, others 2%), Baha'i 0.5%, Christian 0.4%
Iraq	Islam 97% (Shia 62.5%, Sunnis 34.5%), others (Christian included) 3%
Ireland	Christian 92.1% (Roman Catholic 87.4%, Protestant 4.2%, Orthodox 0.5%), Islam 0.8%
Israel	Judaism 75.6%, Islam 16.9%, Christian 2%, Druze 1.7%
Italy	Christian 91.2% (Roman Catholic 90%, others 1.2%), Islam (Sunni majority) 1.6%. Atheists 16%. About two thirds non-practicing Catholics
Ivory Coast	Christian 92% (Roman Catholic 76.3%, Evangelical Protestant Church 13.7%, Jehovah's Witnesses 1.3%, others 0.7%). Atheists 3.2%
Jamaica	Christian (Protestant 42.7%, Roman Catholic 10.3%). Rastafarianism also spread
Japan	Shinto 85%, Buddhism 71.4%, Christian 2%. Many practice both Shinto and Buddhism
Jordan	Sunni Islam 95%, Christian 3% (Greek Orthodox majority)
Kazakhstan	Islam 47% (Sunni majority), Christian 10.3% (Orthodox 8.2%, Protestant 2.1%). Atheists 40.2%
Kenya	Christian 61.6% (Protestant 33.8%, Roman Catholic 19.6%, others 8.2%), Indigenous beliefs 30.3%, Islam 6%
Kiribati	Christian 96% (Roman Catholic 56.9%, Protestant 36%, Mormons 3.1%), Baha'i 2.2%
Kuwait	Islam 74% (Sunnis 59%, Shia 15%), Hinduism 10%, Catholic 9%, Buddhism 3%
Kyrgyzstan	Sunni Islam 70%, Orthodox Christian 5.5%. Atheists 24.5%
Laos	Buddhism 57.8%, Indigenous beliefs 33.6%
Latvia	Christian 37.1% (Roman Catholic 14.9%, Lutheran Protestant Church 14.6%, Orthodox 7.6%). Atheists 62.9%
Lebanon	Islam 55.3% (Shia 34.1%, Sunnis 21.2%), Christian 34.6% (Maronite Catholic 23.4%, Orthodox 11.2%), Druze 7%
Lesotho	Christian 70.1% (Roman Catholic 39.3%, Protestant 14%, Anglican 5.6%, others 11.2%), Indigenous beliefs 29.9%
Liberia	Christian 85.6%, Islam 12.2% (Sunni majority), Indigenous beliefs 0.6%. Atheists 1.5%
Libya	Sunni Islam 97%
Liechtenstein	Christian 82.9% (Roman Catholic 76%, Evangelical Protestant Church 6.9%), Islam 4.1%
Lithuania	Christian 85% (Roman Catholic 79%, Russian Orthodox Church 4.1%, Protestant 1.9%). Atheists 9.5%
Luxembourg	Christian 94% (Roman Catholic 90%, Protestant 3%, Orthodox 1%), Islam 2%
Macedonia	Christian 57.9% (Orthodox 54.4%, Roman Catholic 3.5%), Sunni Islam 29.9%
Madagascar	Indigenous beliefs 52%, Christian 41% (Roman Catholic 21.3%, Protestant 19.7%), Islam 7%
Malawi	Christian 85% (Protestant 62%, Roman Catholic 23%), Islam 13% (Sunni majority)
Malaysia	Islam 60.4% (Sunni majority), Buddhism 19.2%, Christian 9.1%, Hinduism 6.3%, Chinese Popular Religion 2.6%
Maldives	Sunni Islam 100%
Mali	Islam 90% (Sunni majority), Indigenous beliefs (Animist) 5%, Christian 5%
Malta	Roman Catholic 95%, Islam 0.7%. Atheists 2%
Marshall Islands	Christian 95.4% (Protestant 83.4%, Roman Catholic 8.4%, others 3.6%), others 1%
Mauritania	Sunni Islam 99.3%, Christian 0.3%
Mauritius	Hinduism 48%, Christian 32.2% (Roman Catholic 23.6%, others 8.6%), Islam 16.6%
Mexico	Christian 82.8% (Roman Catholic 76.5%, Protestant 5.2%, Jehovah's Witnesses 1.1%)
Micronesia	Christian 94.4% (Roman Catholic 52.7%, Protestant 41.7%)
Moldova	Christian 98.5% (Orthodox 97.5%, Baptist Protestant Church 0.5%, Roman Catholic 0.5%)
Monaco	Roman Catholic 90%
Mongolia	Buddhism 53%, Islam 3%, Shamanism 2.9%, Christian 2.1%. Atheists 38.6%
Montenegro	Christian 77.7% (Orthodox 74.2%, Roman Catholic 3.5%), Islam 17.7% (Sunni majority)
Morocco	Sunni Islam 99%, Christian 1%
Mozambique	Christian 40.6% (Roman Catholic 28.4%, Protestant 12.2%), Islam 17.9% (Sunni majority), Indigenous beliefs 15.5%. Atheists 18.7%
Myanmar	Buddhism 89% (Theravada majority), Christian 4% (Baptist Protestant 3%, Roman Catholic 1%), Islam 4% (Sunni majority), Indigenous beliefs (Animist) 1%, others 2% (Hinduism included)
Namibia	Christian 80.5% (Protestant 56.9% of which Anglican 5.5%; Roman Catholic 16.5%, others 7.1%), Indigenous beliefs from 10 to 20%
Nauru	Christian 79% (Protestant 45.8%, Roman Catholic 33.2%)
Nepal	Hinduism 80.6%, Buddhism 10.7%, Islam 4.2%, Indigenous beliefs (Kirat) 3.6%
Netherlands	Christian 50% (Roman Catholic 30%, Protestant 20%), Islam 5.8%, others 2.2%. Atheists 42%
New Zealand	Christian 52.8% (Protestant 38.6% of which Anglican 13.8%, Roman Catholic 12.6%, others 1.6%), Hinduism 1.6%, Buddhism 1.3%. Atheists 32.2%
Nicaragua	Christian 82.6% (Roman Catholic 58.5%, Protestant 23.2%, Jehovah's Witnesses 0.9%)
Niger	Sunni Islam 88.7%, Indigenous beliefs 11%, others 0.3%
Nigeria	Islam 43.1% (Sunni majority), Christian 34.9% (Protestant 20% of which Anglican 5.1%; Roman Catholic 8.2%, others 6.7%), Indigenous beliefs 19%
North Korea	Indigenous beliefs 15.6%, Syncretic religions 13.9%, others 2.2%. Atheists 68.3%
Northern Cyprus	Muslim-majority country. A small Christian minority
Norway	Christian 90.1% (Protestant 86.7% of which The Church of Norway 85.7%, Pentecostal Church 1%, Roman Catholic 1%, others 2.4%), Islam 1.8%

RELIGIONS

COUNTRY	PERCENTAGE OF RELIGIOUS DENOMINATIONS PER COUNTRY
Oman	Islam 87.7% (Ibadhi 73.6%, Sunnis 14.1%), Hinduism 7.4%, Christian 3.7%
Pakistan	Islam 95% (Sunnis 75%, Shia 20%) Christian 2%, Hinduism 1.8%
Palau	Christian 71.7% (Roman Catholic 41.6%, Protestant 28.6% of which The Seventh Day Adventists 5.3%, Jehovah's Witnesses 0.9%, Mormons 0.6%); Indigenous beliefs (Modekngiei) 8.8%
Panama	Christian 94.7% (Roman Catholic 80.2%, Protestant 14.5%)
Papua Nuova Guinea	Christian 96.4% (Protestant 69.4%, Roman Catholic 27%), Baha'i 0.3%, Indigenous beliefs and other religions 3.3%
Paraguay	Christian 95.8% (Roman Catholic 89.6%, Protestant 6.2%) Atheists 1.1%
Peru	Christian 93.8% (Roman Catholic 81.3%, Evangelical Protestant Church 12.5%). Atheists 2.9%
Philippines	Christian 93.2% (Roman Catholic 82.9, Protestants 5.4%, others 4.9%), Islam 4.6%
Poland	Christian 90.5% (Roman Catholic 88.8%, Orthodox 1.3%, Protestant 0.4%). Atheists 8.9%
Portugal	Christian 86.7% (Roman Catholic 84.5%, others 2.2%). Atheists 3.9%
Qatar	Islam 77.5% (Sunnis and Shia), Christian 8.5%
Romania	Christian 99.1% (Orthodox 86.8%, Protestant 6.7%, Roman Catholic 5.6%), Islam 0.3%
Russian Federation	Christian 17.2% (Orthodox 16.3%, Protestant 0.9%), Islam 10%, Judaism 0.4%. Atheists 72.4%
Rwanda	Christian 93.6% (Roman Catholic 56.5%, Protestant 37.1% of which Adventists 11.1%), Islam 4.6%, Indigenous beliefs 0.1%. Atheists 1.7%
Saint Kitts and Nevis	Protestant Christian Church 61.5% (of which Anglican 33.3%)
Saint Lucia	Christian 90.8% (Roman Catholic 67.5%, Protestant 18.2%, others 5.1%), Indigenous beliefs (Rastafarianism) 2.1%. Atheists 4.5%
Saint Vincent and the Grenadines	Christian 74.3% (Protestant 62.8%, Roman Catholic 11.5%), others 25.7% (Hinduism included)
Samoa	Christian 98% (Protestant 59.9%, Roman Catholic 19.6%, Mormons 12.7%, others 5.8%)
San Marino	Roman Catholic 88.9%
Sao Tome and Principe	Christian 77.4% (Roman Catholic 70.3%, Protestant 7.1%). Atheists 19.6%
Saudi Arabia	Islam 96.7% (Sunnis 93.3%, Shia 3.4%) Christian 2.9%
Senegal	Sunni Islam 92%, Indigenous beliefs (Animist) 6%, Christian 2%
Serbia	Christian 91.6% (Orthodox 85%, Roman Catholic 5.5%, Protestant 1.1%), Islam 3.2% (Sunnis and Shia)
Seychelles	Christian 93.2% (Roman Catholic 82.3%, Protestant 7.5%, others 3.4%), Hinduism 2.1%, Islam 1.1%
Sierra Leone	Sunni Islam 60%, Indigenous beliefs 30%, Christian 10%
Singapore	Chinese Popular Religion (Buddhism + Taoism practiced together) 51%, Islam 14.9%, Christian 12.8% (Protestants, 8.7%, Roman Catholic 4.1%), Hinduism 4%. Atheists 14.8%
Slovakia	Christian 82.9% (Roman Catholic 68.9%, Protestant 9%, Greek Catholic Church 4.1%, Orthodox 0.9%). Atheists 13%
Slovenia	Christian 60.1% (Roman Catholic 57.8%, Orthodox 2.3%), Islam 2.4%. Atheists 10.1%
Solomon Islands	Christian 97.1% (Protestant 73.7%, Roman Catholic 19%, others 4.4%)
Somalia	Sunni Islam 99.9%
South Africa	Christian 79.7% (Protestant 36.6%, Roman Catholic 7.1%, others 36%), Islam 1.5%. Atheists 15.1%
South Korea	Christian 26.3% (Protestant 19.7%, Roman Catholic 6.6%) Buddhism 23.1%, Syncretic religions 0.2%. Atheists 49.3%
South Sudan	Indigenous beliefs (majority), Christian (minority)
Spain	Roman Catholic 66.7%, Islam 1.2%. Atheists 32.1%
Sri Lanka	Buddhism 76.7%, Islam 8.5%, Hinduism 7.9%, Roman Catholic 6.1%
Sudan	Sunni Islam 73%, Indigenous beliefs 16.7%, Christian 9.1%
Suriname	Christian 48% (Protestant 25.2%, Roman Catholic 22.8%), Hinduism 27.4%, Islam 19.6% Indigenous beliefs 5%
Swaziland	Christian 60% (Protestant 35%, Catholic Roman 25%), Indigenous beliefs (Zionism: indigenous beliefs mixed with Christian cults) 30%, Islam 1%, Hinduism 0.15%
Sweden	Christian 88.3% (Protestant 86.5%, Roman Catholic 8%), Islam 2.3%
Switzerland	Christian 78.9% (Roman Catholic 41.8%, Protestant 35.3%, Orthodox 1.8%), Islam 4.3%, Judaism 0.2%
Syria	Islam 86% (Sunnis 74%, Shia 12%), Christian 5.5%, Druze 3%
Taiwan	Chinese Popular Religion (Buddhism + Taoism practiced together) 93%, Christian 4.5%
Tajikistan	Islam 85.1% (Sunnis 80%, Shia 5.1%), Orthodox Christian Church 1.4%. Atheists 13.5%
Tanzania	Christian 44% (Roman Catholic and Protestant), Islam 37% (Sunni majority), Indigenous beliefs 19%
Thailand	Buddhism 94.6%, Islam 4.6%, Christian 0.7%
Timor-Leste	Christian 99% (Roman Catholic 98%, Protestant 1%), Islam 1%
Togo	Indigenous beliefs 51%, Christian 29% (Roman Catholic 21%, Protestant 7%, others 1%), Islam 20%
Tonga	Christian 80.5% (Protestant 64.9%, Roman Catholic 15.6%)
Trinidad and Tobago	Christian 57.6% (Roman Catholic 26%, Protestant 25.8%, others 5.8%). Hinduism 22.5, Islam 5.8%
Tunisia	Sunni Islam 99.5%
Turkey	Islam 99.8% (Sunni majority and Shia minority), others 0.2% (Christian, Judaism and others)
Turkmenistan	Islam 86.9% (Sunni majority and Shia minority), Orthodox Christian 2.5%. Atheists 10.6%
Tuvalu	Protestant Christian Church 98.4% (of which Congregational Church 97%, The Seventh Day Adventists 1.4%), Baha'i 1%
Uganda	Christian 83.9% (Roman Catholic 41.9%, Protestant 42%), Islam 12.1%
Ukraine	Christian 41.6% (Orthodox 29.9%, Roman Catholic 8.2%, Protestant 3.5%), Judaism 0.9%. Atheists 57.5%
United Arab Emirates	Islam 96% (Sunnis 80%, Shia 16%), other 4% (Christian and Hinduism included)
Uruguay	Christian 68.8% (Roman Catholic 54%, Protestant 11%, others 3.8%). Atheists 26%
USA	Christian 83.6% (Protestant 25.5%, Roman Catholic 22.1%, Orthodox 2.2%, others 33.8%), Judaism 2.2%, Islam 1.6%, Buddhism 0.9%, Hinduism 0.4%, Baha'i 0.3%, Sikh 0.1%. Atheists 10%
Uzbekistan	Islam 88% (Sunni majority), Orthodox Christian Church 1%, Atheists 11%.
Vanuatu	Christian 82.5% (Protestant 55.6%, Roman Catholic 13.1%, others 13.8%), Indigenous beliefs 5.6%
Venezuela	Christian 94.7% (Roman Catholic 92.7%, Protestant 2%). Atheists 2.2%
Vietnam	Buddhism 66.7%, Christian Roman Catholic Church 7.7%, Syncretic Religions 5.6% (Caodaism included)
Western Sahara (disputed territory)	Islam 99.9%
Yemen	Mainly Sunni Islam Majority and Shia minority
Zambia	Christian 39.8% (Protestant 22.9%, Roman Catholic 16.9%), Indigenous beliefs 27%
Zimbabwe	Christian 41.6% (Protestant 34.6%, Roman Catholic 7%), Indigenous beliefs 40.5%