

AFRICA! HOME!

Africa was the first home of humans. Here we first stood on two feet, took arms, made art, music, love. Africa is full of natural and human wonder, beauty and ingenuity. And yet many people in Africa live in enormous hardship.

Why is Africa a “developing” continent?

Until the end of the last Ice Age around 11,000 B.C., all the world’s humans were still hunting and gathering food from the wild. Nowadays, in some places people still live this natural and often hard life, while elsewhere people drive cars and use electricity, play music to themselves on tiny portable machines and communicate across the world using satellites in the sky. What makes these huge differences? Ecology alone can explain these inequalities.

Agriculture, growing food rather than gathering it from the wild, developed around 10,000 years ago in the Middle East. Controlling your own food production, rather than relying on what you can glean from nature, allows humans to relax and have leisure time. It was in this crucial time between the daily grind that humans began developing time-saving technologies and economic systems that let some groups of people store up money and

property over generations, and enabled larger numbers of people to survive. But agriculture and its effects came late to sub-Saharan Africa. Why?

One reason is its shape. Africa is tall and thin - unlike Europe, which is wide. Weather changes much more dramatically from north to south (and therefore between African countries) than from east to west. Agriculture spread quickly from the Middle East to Egypt and North Africa, where crops like wheat and barley can be grown, but because of the climate, these crops cannot grow further south, and because of the desert, few people with this new agricultural knowledge travelled south. Ideas were slow to spread. Agriculture in tropical sub-Saharan Africa did not develop until a few thousand years later, when people started to grow native African plant species like sorghum and millet, and it didn’t really get going everywhere until crops like bananas were introduced from Southeast Asia around 1000 years ago. In contrast, once agriculture had developed in Europe, ecological conditions allowed crops and ideas to spread quickly across the whole continent. This gave Europe a massive head start.

Another reason is that while there are many, many large wild animals in Africa, none of these were suitable for domestication by humans. Some were too big and aggressive, some liked to live alone and not in big herds, some grow too slowly, but none of the famous big wild mammal species of Africa are able to be tamed and controlled enough to be useful to humans. Goats, sheep, cows and horses have their origins in Europe or Asia. The only animal domesticated within sub-Saharan Africa was the Guinea fowl.

While these environmental factors made for a slower start, there is no reason why Africa cannot catch up. With mobile telephone and computer communications, good ideas can spread faster and faster. The fact that Africa is less developed means that, unlike in Europe, much of its natural wealth and wonder remains. Africa can lead the world, especially if, as human life on the continent improves, people find ways to guard and nurture its wonderful nature.

We share this planet with at least one million other types of creature. While many of these animals are known to local people, most have not been described by scientists. There could be up to one hundred million kinds of living things on this planet.

LIVING WITH WILDLIFE

Feathers in our hats, skins on our backs, poisons for our arrows, shells to eat from, horns to drink from, furs to sleep on! Animals name us, they prance and prowl through our poetry, live in our legends, brighten and frighten our children's stories.

We eat their flesh, their eggs, their honey, drink their milk and blood. While Chapter 4 is all about the plants, this chapter deals with how we can live alongside the many wild animals in Africa.

The terror and nuisance of large, dangerous predators, marauding baboons, crop-raiding elephants, poisonous snakes and many other wildlife nightmares cannot be overstated. Yet many people believe that it is better to find ways of living safely and happily alongside wildlife than destroying it all together. This is because wildlife is so valuable to humans in so many ways: Half of all our medicines and all of our food comes directly from plants and animals.

They bring **shelter, warmth, money, food, medicine**, inspiring **music, art** and **science** - the living source of **practical, financial, psychological** and **spiritual** well-being.



CHAPTER 2

WATER

THE ESSENCE OF LIFE

The human body is made of water. 70% is water and the same goes for most other living things. We all depend on it and can't do anything without it. In fact the evolution, the very existence, of life on earth, depended on the presence of water. All life depends on it.

Internationally, water is the most precious resource we have. We live on a blue planet, with most of the surface covered by seawater, but it is all salty and cannot be drunk. Only 2.5% of the world's water is fresh, and of that, 99% is frozen in icebergs or hidden deep underground. 6.5 billion people share the remainder. Many experts believe that wars will be fought over water in the coming decades. Keeping the water we have clean, and using it wisely is very important.

Even different countries have to share water. In Egypt, 90% of freshwater used comes from the Nile. Yet, the Nile is shared between the 9 nations along its banks.



CHAPTER 3

SOIL

Soil is the mother of almost every mouthful of food. This chapter is all about soil, how it is formed, how it is lost, and how to look after it. Even the smallest child can play a part in looking after the crucial resource underneath our feet.



FORESTS

Many millions of people depend on forests for their livelihood. And yet forests can seem harsh and hostile places to those living in or beside them. Sometimes it seems that the only way to survive is to clear the forest to grow food. People in many countries, especially in the industrialised world, where life is often easier, appreciate the fact that wilderness areas still exist. Places where the forests are vast and full of wildlife. Forests absorb carbon dioxide and help guard against climate change. The 'global community' especially the rich, must be prepared to pay for the safe keeping of the forests, which means looking after the people who would destroy it just to survive.

The forests of Africa cover 650 million hectares, but before humans began chopping, the forests would have covered much more of the land. Africa's forests are unique and important to the whole world. They live mainly in the tropical zones of Western and Central, Eastern and Southern Africa. With more than 150 million hectares

covered in trees, almost a quarter of Africa's forests live in the Congo. Nearly half of the world's endangered mammals and birds make their homes in the tropical rainforests. Africa is losing its forests fast. One fifth were lost during the 1980s. To keep these magnificent forests we must think and act in a different way.

TREES ARE FUNDAMENTALLY FANTASTIC

Trees provide humans with shade from the sun, shelter from the rain, warmth from firewood, charcoal and coal, and a feast of food and furnishings - fruit, nuts, chairs, tables, broomsticks, fishing rods, magic wands and medicine. Trees bind the soil so that other plants can live on the forest floor, they hold water in their branches and they make the rain. Masses of different animals live on and inside trees. Woodpeckers snuggle inside their trunks, tree frogs squish under their leaves, bats dangle bottom-up from their branches, spiders spin in their bark. Baobab trees can be 12 metres in diameter - big enough to drive a car through. Trees are the oldest things alive. Some trees live for thousands of years.

- More than 2,000 tropical rainforest plants have the potential to fight cancer
- Half of all the world's medicines come from plants
- Scientists did a study in Korup National Park, Cameroon, and found that the value of the standing forest was four times higher than the value of the fallen wood

*Fruit may be eaten by your great great great grandchildren,
from a tree planted by you!!!*

CHAPTER 5

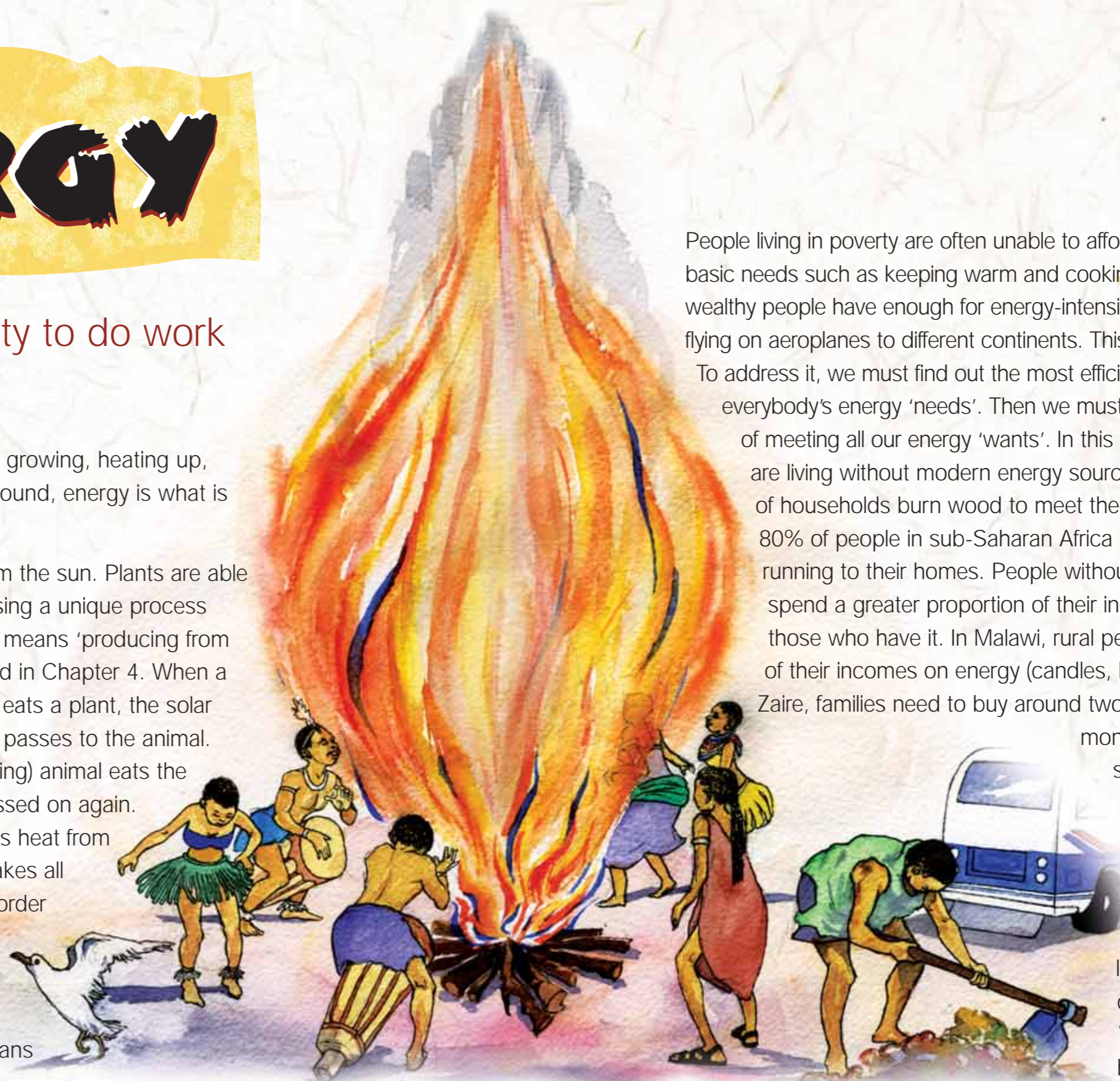
ENERGY

Energy is the ability to do work
it is all around us.

If you notice anything moving, growing, heating up, creating light or producing a sound, energy is what is making it happen.

All energy originally comes from the sun. Plants are able to harness the sun's energy using a unique process called photosynthesis – which means 'producing from light'. This process is described in Chapter 4. When a herbivore (plant-eating animal) eats a plant, the solar energy, collected by the plant, passes to the animal. When a carnivorous (meat-eating) animal eats the herbivore, so the energy is passed on again. At each stage, energy is lost as heat from the animal's body as it undertakes all sorts of chemical reactions in order to live.

Like animals, humans get energy to move from eating food. But unlike animals, humans have found ways to harness extra energy for the things they need to make their lives easier. Cooking food, heating water, lighting the house at night, listening to the radio, charging a mobile phone, running computers, travelling by bus, keeping food and medicines fresh in a refrigerator – all these activities need energy.



People living in poverty are often unable to afford enough energy to meet basic needs such as keeping warm and cooking food, while other more wealthy people have enough for energy-intensive activities including flying on aeroplanes to different continents. This is an unfair situation.

To address it, we must find out the most efficient ways of meeting everybody's energy 'needs'. Then we must look for sustainable ways of meeting all our energy 'wants'. In this world, two billion people are living without modern energy sources. In Africa, over 60% of households burn wood to meet their basic energy needs. 80% of people in sub-Saharan Africa have no electricity running to their homes. People without electricity have to spend a greater proportion of their income on energy than those who have it. In Malawi, rural people spend up to a third of their incomes on energy (candles, kerosene, charcoal). In Zaire, families need to buy around two sacks of charcoal every

month, costing a third of their salaries. There are other problems with having to rely on fuelwood. When trees are few and far between, women often have to carry heavy loads of fuelwood long distances every day. When burned in the home, the smoke

produced can cause health problems.

The aim of this chapter is to look at ways in which your community can manage the energy sources you already use in a more sustainable way and identify ways in which you might be able to gain access to other sources of sustainable energy.

CHAPTER 6

LIVING BY THE OCEAN

The sea is full of wonder, full of plenty. Biologists believe that human beings evolved in the sea, that the ancestors of our ancestors' ancestors came out of the sea! On our blue planet it can seem as though the bounty of the oceans is endless.

The surface of planet Earth is two thirds salt water. Thirty three countries in Africa are coastal and together have a coastline 18,950 miles long. Just like on land, however, the distribution of life is uneven. Most of the sea creatures live close to the shore, while the vast ocean floors can be quite deserted, being home to far fewer, specialist creatures able to survive in the deep dark depths.

40% of Africa's people make their living from the sea. The seas of course provide fish and other food stuffs such as seaweed. We travel between countries on the back of the sea. We use its products for building and for spiritual and aesthetic contentment.

Humans are drawn to the sea. Wherever you go in the world, the coast is the most popular habitat. People love to be beside the seaside. Perhaps because it is where we originally came from, because of the many fruits it has to offer, or because the rhythmic pounding of the waves, reminding us of the rhythm of our hearts.



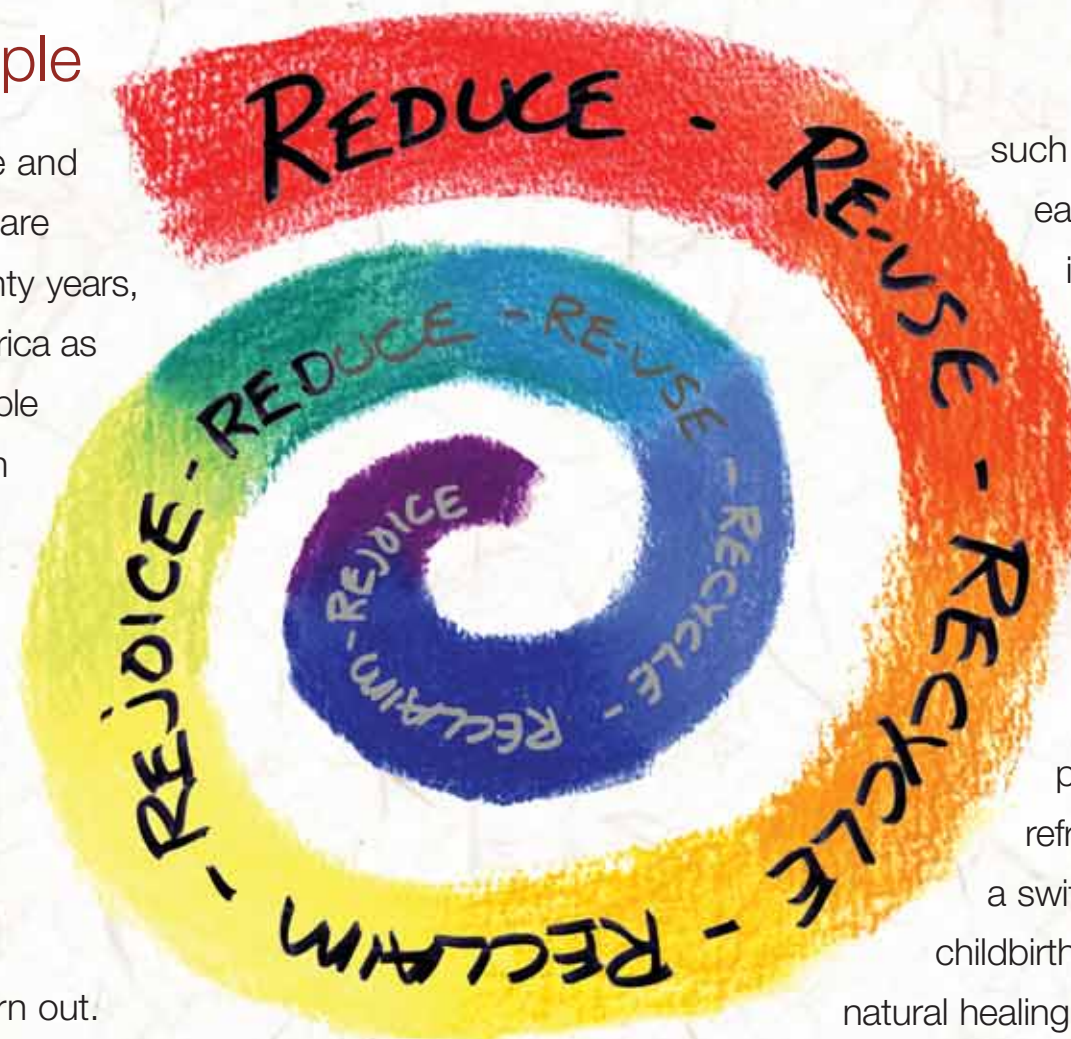
URBAN LIVING

Africa's 810 million people

Africa's population is growing fast. More and more people are being born, and more are surviving to grow up into adults. In twenty years, there may be twice as many people in Africa as there are today. In many ways, more people are a cause for celebration. Each human is unique, a person, a personality, and many believe a soul. The problem is that for each new person, the world's natural resources, the riches on offer from trees, the soil, water, are more divided. Nature's bounty is very wide, but it is not inexhaustible. As this book has shown, many of the world's environmental systems can become worn out.

We need to ensure that each child has a good life. This may mean each person having fewer children, which we are able to nurture better. One important way to reduce birth rates (number of kids born per woman) is to educate women.

While each African woman will on average produce six children during her lifetime, the fewer children born in developed countries



such as in Europe and the United States of America each do much more damage to the planet. Children in the developed world consume 50 times as many resources as African children, causing massive harm to the world.

Africa's people are still fairly gentle on their environment. Most Africans live in a pre-industrial manner. Some lack even basic needs like food and heating. Poverty makes many people's lives unbearable. Most people aspire to the many positive things that industrialization brings, such as refrigerators to keep food fresh, cookers to turn on with a switch, to have modern medical care, and help with childbirth. Yet as development comes, culture, traditions, natural healing and an understanding of humanity are often damaged. The best way to change is to ensure that on the road to development, the things that are good, like clean water, indigenous knowledge, and wild places are not lost. And to face the future with a mind to the environment and all the wealth of wildlife we share it with.

The principles of environmentalism: Reduce, Re-use, Recycle

EPILOGUE

Humans are clever, busy and industrious. We love to be doing things, making things, clearing ground to grow things. This is a wonderful attribute. The world, however, has existed for millions of years, bursting with biodiversity. Human agriculture has only existed for 10,000 years, industrial technology, only two hundred. In that time, of the many millions of life forms on the planet, humans have come to dominate.

Two hundred years ago there were only one billion humans. Today, 6.5 billion. We have caused all sorts of environmental catastrophes and nightmares. Most of the time, we either didn't know what they were doing until it was too late, or thought it was worth the risk. It's taken us a long time to realize how serious some of the problems are.

The reason humans have had such an impact is because we are so brilliant! Humans have climbed the highest mountains, survived the worst disasters, solved the hardest problems. Humans have built spaceships to put themselves on the moon!

We are capable of acts of extreme kindness like Mother Theresa or Nelson Mandela, of making beautiful Art like Malangatana Ngwenga of Mozambique or Chinua Achebe of Nigeria, of building incredible structures like the pyramids or writing fabulously beautiful music like Youssou N'Dour.

