

Listen to me, please. You're like me, a homo sapiens, a wise human. Life, a miracle in the universe, appeared around 4 billion years ago. And we humans only 200,000 years ago. Yet we have succeeded in disrupting the balance so essential to life. Listen carefully to this extraordinary story, which is yours, and decide what you want to do with it.

These are traces of our origins. At the beginning, our planet was no more than a chaos of fire, a cloud of agglutinated dust particles, like so many similar clusters in the universe. Yet this is where the miracle of life occurred. Today, life, our life, is just a link in a chain of innumerable living beings that have succeeded one another on Earth over nearly 4 billion years.

And even today, new volcanoes continue to sculpt our landscapes. They offer a glimpse of what our Earth was like at its birth, molten rock surging from the depths, solidifying, cracking, blistering or spreading in a thin crust, before falling dormant for a time. These wreathes of smoke curling from the bowels of the Earth bear witness to the Earth's original atmosphere. An atmosphere devoid of oxygen. A dense atmosphere, thick with water vapor, full of carbon dioxide. A furnace.

The Earth cooled. The water vapor condensed and fell in torrential downpours. At the right distance from the sun, not too far, not too near, the Earth's perfect balance enabled it to conserve water in liquid form. The water cut channels. They are like the veins of a body, the branches of a tree, the vessels of the sap that the water gave to the Earth. The rivers tore minerals from rocks, adding them to the oceans' freshwater. And the oceans became heavy with salt.

Where do we come from? Where did life first spark into being? A miracle of time, primitive life forms still exist in the globe's hot springs. They give them their colors. They're called archeobacteria. They all feed off the Earth's heat.

All except the cyanobacteria, or blue-green algae. They alone have the capacity to turn to the sun to capture its energy. They are a vital ancestor of all yesterday's and today's plant species. These tiny bacteria and their billions of descendants changed the destiny of our planet. They transformed its atmosphere.

What happened to the carbon that poisoned the atmosphere? It's still here, imprisoned in the Earth's crust. Here, there once was a sea, inhabited by micro-organisms. They grew shells by tapping into the atmosphere's carbon now dissolved in the ocean. These strata are the accumulated shells of those billions and billions of micro-organisms. Thanks to them, the carbon drained from the atmosphere and other life forms could develop.

It is life that altered the atmosphere. Plant life fed off the sun's energy, which enabled it to break apart the water molecule and take the oxygen. And oxygen filled the air.

The Earth's water cycle is a process of constant renewal. Waterfalls, water vapor, clouds, rain, springs, rivers, seas, oceans, glaciers... The cycle is never broken. There's always the same quantity of water on Earth. All the successive species on Earth have drunk the same water. The astonishing matter that is water. One of the most unstable of all. It takes a liquid form as running water, gaseous as vapor, or solid as ice.

In Siberia, the frozen surfaces of the lakes in winter contain the trace of the forces that water deploys when it freezes. Lighter than water, the ice floats. It forms a protective mantle against the cold, under which life can go on.

The engine of life is linkage. Everything is linked. Nothing is self-sufficient. Water and air are inseparable, united in life and for our life on Earth. Sharing is everything. The green expanse through the clouds is the source of oxygen in the air. 70% of this gas, without which our lungs cannot function, comes from the algae that tint the surface of the oceans.

Our Earth relies on a balance, in which every being has a role to play and exists only through the existence of another being. A subtle, fragile harmony that is easily shattered.

Thus, corals are born from the marriage of algae and shells. Coral reefs cover less than 1% of the ocean floor, but they provide a habitat for thousands of species of fish, mollusks and algae. The equilibrium of every ocean depends on them.

The Earth counts time in billions of years. It took more than 4 billion years for it to make trees. In the chain of species, trees are a pinnacle, a perfect, living sculpture. Trees defy gravity. They are the only natural element in perpetual movement toward the sky. They grow unhurriedly toward the sun that nourishes their foliage. They have inherited from these miniscule cyanobacteria the power to capture light's energy. They store it and feed off it, turning it into wood and leaves, which then decompose into a mixture of water, mineral, vegetable and living matter.

And so, gradually, soils are formed. Soils teem with the incessant activity of micro-organisms, feeding, digging, aerating and transforming. They make the humus, the fertile layer to which all life on land is linked.

What do we know about life on Earth? How many species are we aware of? A tenth of them? A hundredth perhaps? What do we know about the bonds that link them?

The Earth is a miracle. Life remains a mystery. Families of animals form, united by customs and rituals that are handed down through the generations. Some adapt to the nature of their pasture and their pasture adapts to them. And both gain. The animal sates its hunger and the tree can blossom again. In the great adventure of life on Earth, every species has a role to play, every species has its place. None is futile or harmful. They all balance out.

And that's where you, homo sapiens, wise human, enter the story. You benefit from a fabulous 4-billion-year-old legacy bequeathed by the Earth. You are only 200,000 years old, but you have changed the face of the world. Despite your vulnerability, you have taken possession of every habitat and conquered swathes of territory, like no other species before you.

After 180,000 nomadic years, and thanks to a more clement climate, humans settled down. They no longer depended on hunting for survival. They chose to live in wet environments that abounded in fish, game and wild plants. There where land, water and life combine.

Even today, the majority of humankind lives on the continents' coastlines

or the banks of rivers and lakes. Across the planet, one person in four lives as humankind did 6,000 years ago, their only energy that which nature provides season after season. It's the way of life of 1.5 billion people, more than the combined population of all the wealthy nations.

But life expectancy is short and hard labor takes its toll. The uncertainties of nature weigh on daily life. Education is a rare privilege. Children are a family's only asset as long as every extra pair of hands is a necessary contribution to its subsistence.

Humanity's genius is to have always had a sense of its weakness. The physical strength, with which nature insufficiently endowed humans, is found in animals that help them to discover new territories. But how can you conquer the world on an empty stomach?

The invention of agriculture turned our history on end. It was less than 10,000 years ago. Agriculture was our first great revolution. It resulted in the first surpluses and gave birth to cities and civilizations. The memory of thousands of years scrabbling for food faded. Having made grain the yeast of life, we multiplied the number of varieties and learned to adapt them to our soils and climates.

We are like every species on Earth. Our principal daily concern is to feed ourselves. When the soil is less than generous and water becomes scarce, we are able to deploy prodigious efforts to extract from the land enough to live on.

Humans shaped the land with the patience and devotion the Earth demands in an almost sacrificial ritual performed over and over. **Agriculture is still the world's most widespread occupation. Half of humankind tills the soil, over three-quarters of them by hand.** Agriculture is like a tradition handed down from generation to generation in sweat, graft and toil, because for humanity it is a prerequisite of survival.

But after relying on muscle-power for so long, humankind found a way to tap into the energy buried deep in the Earth. These flames are also from plants. A pocket of sunlight. Pure energy. The energy of the sun, captured over millions of years by millions of plants more than 100 million years ago. It's coal. It's gas. And, above all, it's oil.

And this pocket of sunlight freed humans from their toil on the land. With oil began the era of humans who break free of the shackles of time. With oil, some of us acquired unprecedented comforts. And in 50 years, in a single lifetime, the Earth has been more radically changed than by all previous generations of humanity. Faster and faster.

In the last 60 years, the Earth's population has almost tripled. And over 2 billion people have moved to the cities. Faster and faster. Shenzhen, in China, with hundreds of skyscrapers and millions of inhabitants, was just a small fishing village barely 40 years ago. Faster and faster. In Shanghai, 3,000 towers and skyscrapers have been built in 20 years. Hundreds more are under construction. **Today, over half of the world's 7 billion inhabitants live in cities.**

New York. The world's first megalopolis is the symbol of the exploitation of the energy the Earth supplies to human genius. The manpower of millions of immigrants, the energy of coal, the unbridled power of oil.

America was the first to harness the phenomenal, revolutionary power of "black gold". In the fields, machines replaced men. **A liter of oil generates as much energy as 100 pairs of hands in 24 hours. In the United States, only 3 million farmers are left. They produce enough grain to feed 2 billion people. But most of that grain is not used to feed people. Here, and in all other industrialized nations, it is transformed into livestock feed or biofuels.**

The pocket of sunshine's energy chased away the specter of drought that stalked farmland. No spring escapes the demands of **agriculture, which accounts for 70% of humanity's water consumption.** In nature, everything is linked.

The expansion of cultivated land and single-crop farming encouraged the development of parasites. Pesticides, another gift of the petrochemical revolution, exterminated them. Bad harvests and famine became a distant memory. The biggest headache now was what to do with the surpluses engendered by modern agriculture.

But toxic pesticides seeped into the air, soil, plants, animals, rivers and oceans. They penetrated the heart of cells similar to the mother cell shared by all forms of life. Are they harmful to the humans they released from hunger? These farmers in their yellow protective suits probably have a good idea.

Then came fertilizers, another petrochemical discovery. They produced unprecedented results on plots of land thus far ignored. Crops adapted to soils and climates gave way to the most productive varieties and easiest to transport. And so, in the last century, three-quarters of the varieties developed by farmers over thousands of years have been wiped out.

As far as the eye can see, fertilizer below, plastic on top. The greenhouses of Almeria, Spain, are Europe's vegetable garden. A city of uniformly sized vegetables waits every day for hundreds of trucks to take them to the continent's supermarkets.

The more a country develops, the more meat its inhabitants consume. How can growing worldwide demand be satisfied without recourse to concentration camp-style cattle farms? Faster and faster. Like the life cycle of livestock, which may never see a meadow. Manufacturing meat faster than the animal has become a daily routine. In these vast foodlots, trampled by millions of cattle, not a blade of grass grows. A fleet of trucks from every corner of the country brings tons of grain, soy meal and protein-rich granules that will become tons of meat.

The result is that **it takes 100 liters of water to produce 1 kilogram of potatoes, 4,000 liters for 1 kilo of rice and 13,000 liters for 1 kilo of beef.** Not to mention the oil guzzled in the production process and transport.

Our agriculture has become oil-powered. It feeds twice as many humans on Earth, but has replaced diversity with standardization. It gives many of us comforts we could only dream of, but it makes our way of life totally dependent on oil. This is the new measure of time. Our world's clock now beats to the rhythm of indefatigable machines tapping into the pocket of sunlight. The whole planet is attentive to these metronomes of our hopes and illusions. The same

hopes and illusions that proliferate along with our needs, increasingly insatiable desires and profligacy. We know that the end of cheap oil is imminent, but we refuse to believe it.

For many of us, the American dream is embodied by a legendary name. Los Angeles. In this city that stretches over 100 kilometers, the number of cars is almost equal to the number of inhabitants. Here, energy puts on a fantastic show every night. The days seem no more than a pale reflection of nights that turn the city into a starry sky. Faster and faster. Distances are no longer counted in miles, but in minutes.

The automobile shapes new suburbs, where every home is a castle, a safe distance from the asphyxiated city centers, and where neat rows of houses huddle around dead-end streets. The model of a lucky-few countries has become a universal dream preached by TVs all over the world. Even here in Beijing, it is cloned, copied and reproduced in these formatted houses that have wiped pagodas off the map. The automobile has become the symbol of comfort and progress. If this model were followed by every society, the planet wouldn't have 900 million vehicles, as it does today, but 5 billion.

Faster and faster. The more the world develops, the greater its thirst for energy. Everywhere, machines dig, bore and rip from the Earth the pieces of stars buried in its depths since its creation... Minerals.

As a privilege of power, 80% of this mineral wealth is consumed by 20% of the world's population. Before the end of this century, excessive mining will have exhausted nearly all the planet's reserves. Faster and faster. Shipyards churn out oil tankers, container ships and gas tankers to cater for the demands of globalized industrial production.

Most consumer goods travel thousands of kilometers from the country of production to the country of consumption. Since 1950, the volume of international trade has increased 20 times over. 90% of trade goes by sea. 500 million containers are transported every year. Headed for the world's major hubs of consumption, such as Dubai.

Dubai is a sort of culmination of the Western model, a country where the impossible becomes possible. Building artificial islands in the sea, for example. Dubai has few natural resources, but with oil money it can bring in millions of tons of material and workers from all over the planet. Dubai has no farmland, but it can import food. Dubai has no water, but it can afford to expend immense amounts of energy to desalinate seawater and build the world's highest skyscrapers. Dubai has endless sun, but no solar panels. It is the totem to total modernity that never fails to amaze the world. Dubai is like the new beacon for all the world's money. Nothing seems further removed from nature than Dubai, although nothing depends on nature more than Dubai. Dubai is a sort of culmination of the Western model.

We haven't understood that we're depleting what nature provides. Since 1950, fishing catches have increased fivefold from 18 to 100 million metric tons a year. Thousands of factory ships are emptying the oceans. Three-quarters of fishing grounds are exhausted, depleted or in danger of being so. Most large fish have been fished out of existence since they have no time to reproduce. We

are destroying the cycle of a life that was given to us. At the current rate, all fish stocks are threatened with exhaustion. Fish is the staple diet of one in five humans. We have forgotten that resources are scarce.

500 million humans live in the world's desert lands, more than the combined population of Europe. They know the value of water. They know how to use it sparingly. Here, they depend on wells replenished by fossil water, which accumulated underground back when it rained on these deserts. 25,000 years ago.

Fossil water also enables crops to be grown in the desert to provide food for local populations. The fields' circular shape derives from the pipes that irrigate them around a central pivot. But there is a heavy price to pay. Fossil water is a non-renewable resource.

In Saudi Arabia, the dream of industrial farming in the desert has faded. As if on a parchment map, the light spots on this patchwork show abandoned plots. The irrigation equipment is still there. The energy to pump water also. But the fossil water reserves are severely depleted.

Israel turned the desert into arable land. Even though these hothouses are now irrigated drop by drop, water consumption continues to increase along with exports. The once mighty River Jordan is now just a trickle. Its water has flown to supermarkets all over the world in crates of fruit and vegetables. The Jordan's fate is not unique. Across the planet, one major river in ten no longer flows into the sea for several months of the year. Deprived of the Jordan's water, the level of the Dead Sea goes down by over one meter per year.

India risks being the country that suffers most from lack of water in the coming century. Massive irrigation has fed the growing population and in the last 50 years, 21 million wells have been dug. In many parts of the country, the drill has to sink every deeper to hit water. In western India, 30% of wells have been abandoned. The underground aquifers are drying out. Vast reservoirs will catch monsoon rains to replenish the aquifers. In the dry season, local village women dig them with their bare hands.

Thousands of kilometers away, 800 to 1,000 liters of water are consumed per person per day. Las Vegas was built out of the desert. Millions of people live there. Thousands more arrive every month. Its inhabitants are among the biggest water consumers in the world.

Palm Springs is another desert city with tropical vegetation and lush golf courses. How long can this mirage continue to prosper? The Earth cannot keep up. The Colorado River, which brings water to these cities, is one of those rivers that no longer reaches the sea. Water levels in the catchment lakes along its course are plummeting. Water shortages could affect nearly 2 billion people before 2025.

The wetlands represent 6% of the surface of the planet. Under their calm waters lies a veritable factory, where plants and micro-organisms patiently filter the water and digest all the pollution. These marshes are indispensable environments for the regeneration and purification of water. They are sponges that regulate the flow of water. They absorb it in the wet season and release it in the dry season. In our race to conquer more land, we have reclaimed them as

pasture for livestock, or as land for agriculture or building. In the last century, half the world's marshes were drained. We know neither their richness nor their role.

All living matter is linked. Water, air, soil, trees. The world's magic is right in front of our eyes. Trees breathe groundwater into the atmosphere as light mist. They form a canopy that alleviates the impact of heavy rains. The forests provide the humidity that is necessary for life. They store carbon, containing more than all the Earth's atmosphere. They are the cornerstone of the climatic balance on which we all depend. The primary forests provide a habitat for three-quarters of the planet's biodiversity, that is to say, of all life on Earth.

These forests provide the remedies that cure us. The substances secreted by these plants can be recognized by our bodies. Our cells talk the same language. We are of the same family. But in barely 40 years, the world's largest rainforest, the Amazon, has been reduced by 20%. The forest gives way to cattle ranches or soybean farms. 95% of these soybeans are used to feed livestock and poultry in Europe and Asia. And so, a forest is turned into meat. Barely 20 years ago, Borneo, the 4th largest island in the world, was covered by a vast primary forest. At the current rate of deforestation, it will have disappeared within 10 years.

Living matter bonds water, air, earth and the sun. In Borneo, this bond has been broken in what was one of the Earth's greatest reservoirs of biodiversity. This catastrophe was provoked by the decision to produce palm oil, one of the most productive and consumed oils in the world, on Borneo. Palm oil not only caters to our growing demand for food, but also cosmetics, detergents and, increasingly, alternative fuels. The forest's diversity was replaced by a single species, the oil palm. For local people, it provides employment. It's an agricultural industry.

Another example of massive deforestation is the eucalyptus. Eucalyptus is used to make paper pulp. Plantations are growing as demand for paper has increased fivefold in 50 years. One forest does not replace another forest. At the foot of these eucalyptus trees, nothing grows because their leaves form a toxic bed for most other plants. They grow quickly, but exhaust water reserves. Soybeans, palm oil, eucalyptus trees... Deforestation destroys the essential to produce the superfluous.

But elsewhere, deforestation is a last resort to survive. Over 2 billion people, almost one third of the world's population, still depend on charcoal. In Haiti, one of the world's poorest countries, charcoal is one of the population's main consumables. Once the "pearl of the Caribbean", Haiti can no longer feed its population without foreign aid. On the hills of Haiti, only 2% of the forests are left. Stripped bare, nothing holds the soils back. The rainwater washes them down the hillsides as far as the sea. What's left is increasingly unsuitable for agriculture.

In some parts of Madagascar, the erosion is spectacular. Whole hillsides bear deep gashes hundreds of meters wide. Thin and fragile, soil is made by living matter. With erosion, the fine layer of humus, which took thousands of years to form, disappears.

Here's one theory of the story of the Rapanui, the inhabitants of Easter Island, that could perhaps give us pause for thought. Living on the most isolated island in the world, the Rapanui exploited their resources until there was nothing left. Their civilization did not survive. On these lands stood the highest palm trees in the world. They have disappeared. The Rapanui chopped them all down for lumber. They then faced widespread soil erosion. The Rapanui could no longer go fishing. There were no trees to build canoes. Yet the Rapanui formed one of the most brilliant civilizations in the Pacific. Innovative farmers, sculptors, exceptional navigators, they were caught in the vise of overpopulation and dwindling resources. They experienced social unrest, revolts and famine. Many did not survive the cataclysm. The real mystery of Easter Island is not how its strange statues got there, we know now. It is why the Rapanui didn't react in time. It's only one of a number of theories, but it has particular relevance today.

Since 1950, the world's population has almost tripled. And since 1950, we have more fundamentally altered our island, the Earth, than in all of our 200,000-year history. Nigeria is the biggest oil exporter in Africa, yet 70% of the population lives under the poverty line. The wealth is there, but the country's inhabitants don't have access to it. The same is true all over the globe. Half the world's poor live in resource-rich countries. Our mode of development has not fulfilled its promises.

In 50 years, the gap between rich and poor has grown wider than ever. Today, half the world's wealth is in the hands of the richest 2% of the population. Can such disparities be maintained? They are the cause of population movements whose scale we have yet to fully realize.

The city of Lagos had a population of 700,000 in 1960. That will rise to 16 million by 2025. Lagos is one of the fastest growing megalopolises in the world. The new arrivals are mostly farmers forced off the land for economic or demographic reasons, or because of diminishing resources. This is a radically new type of urban growth, driven by the urge to survive rather than to prosper. Every week, over a million people swell the populations of the world's cities.

1 human in 6 now lives in a precarious, unhealthy, overpopulated environment without access to daily necessities, such as water, sanitation, electricity. Hunger is spreading once more. It affects nearly 1 billion people. All over the planet, the poorest scabble to survive, while we continue to dig for resources that we can no longer live without. We look farther and farther afield in previously unspoilt territory and in regions that are increasingly difficult to exploit.

We're not changing our model. Oil might run out? We can still extract oil from the tar sands of Canada. The biggest trucks in the world move thousands of tons of sand. The process of heating and separating bitumen from the sand requires millions of cubic meters of water. Colossal amounts of energy are needed.

The pollution is catastrophic. The most urgent priority, apparently, is to pick every pocket of sunlight. Our oil tankers are getting bigger and bigger. Our energy requirements are constantly increasing. We try to power growth like a bottomless oven that demands more and more fuel. It's all about carbon.

In a few decades, the carbon that made our atmosphere a furnace and that nature captured over millions of years, allowing life to develop, will have largely been pumped back out. The atmosphere is heating up.

It would have been inconceivable for a boat to be here just a few years ago. Transport, industry, deforestation, agriculture... Our activities release gigantic quantities of carbon dioxide. Without realizing it, molecule by molecule, we have upset the Earth's climatic balance. All eyes are on the poles, where the effects of global warming are most visible. It's happening fast, very fast. The north-west passage that connects America, Europe and Asia via the pole, is opening up. The arctic ice cap is melting. Under the effect of global warming, the ice cap has lost 40% of its thickness in 40 years. Its surface area in the summer shrinks year by year. It could disappear in the summer months by 2030. Some say 2015.

The sunbeams that the ice sheet previously reflected back now penetrate the dark water, heating it up. The warming process gathers pace. This ice contains the records of our planet. The concentration of carbon dioxide hasn't been so high for several hundred thousand years. Humanity has never lived in an atmosphere like this.

Is excessive exploitation of resources threatening the lives of every species? Climate change accentuates the threat. By 2050, a quarter of the Earth's species could be threatened with extinction. In these polar regions, the balance of nature has already been disrupted. Around the North Pole, the ice cap has lost 30% of its surface area in 30 years.

But as Greenland rapidly becomes warmer, the freshwater of a whole continent flows into the salt water of the oceans. Greenland's ice contains 20% of the freshwater of the whole planet. If it melts, sea levels will rise by nearly 7 meters. But there is no industry here. Greenland's ice sheet suffers from greenhouse gases emitted elsewhere on Earth. Our ecosystem doesn't have borders. Wherever we are, our actions have repercussions on the whole Earth. Our planet's atmosphere is an indivisible whole. It is an asset we share. In Greenland, lakes are appearing on the landscape. The ice cap is melting at a speed even the most pessimistic scientists did not envision 10 years ago. More and more of these glacier-fed rivers are merging together and burrowing through the surface. It was thought the water would freeze in the depths of the ice. On the contrary, it flows under the ice, carrying the ice sheet into the sea, where it breaks into icebergs. As the freshwater of Greenland's ice sheet seeps into the salt water of the oceans, low-lying lands around the globe are threatened.

Sea levels are rising. Water expanding as it gets warmer caused, in the 20th century alone, a rise of 20 centimeters. Everything becomes unstable. Coral reefs are extremely sensitive to the slightest change in water temperature. 30% have disappeared. They are an essential link in the chain of species. In the atmosphere, major wind streams are changing direction. Rain cycles are altered. The geography of climates is modified.

The inhabitants of low-lying islands, here in the Maldives, for example, are on the front line. They are increasingly concerned. Some are already looking for new, more hospitable lands. If sea levels continue to rise faster and faster,

what will major cities like Tokyo, the world's most populous city, do? Every year, scientists' predictions become more alarming.

70% of the world's population lives on coastal plains. 11 of the 15 biggest cities stand on a coastline or river estuary. As the seas rise, salt will invade the water table, depriving inhabitants of drinking water. Migratory phenomena are inevitable. The only uncertainty concerns their scale.

In Africa, Mount Kilimanjaro is unrecognizable. 80% of its glaciers have disappeared. In summer, the rivers no longer flow. Local peoples are affected by the lack of water. Even on the world's highest peaks, in the heart of the Himalayas, eternal snows and glaciers are receding. Yet these glaciers play an essential role in the water cycle. They trap the water from the monsoons as ice and release it in the summer when the snows melt. The Himalayan glaciers are the source of all the great Asian rivers, the Indus, Ganges, Mekong, Yangtze Kiang... 2 billion people depend on them for drinking water and to irrigate their crops, as in Bangladesh.

On the delta of the Ganges and Brahmaputra, Bangladesh is directly affected by phenomena occurring in the Himalayas and at sea level. This is one of the most populous and poorest countries in the world. It is already hit by global warming. The combined impact of increasingly dramatic floods and hurricanes could make a third of its land mass disappear. When populations are subjected to these devastating phenomena, they eventually move away.

Wealthy countries will not be spared. Droughts are occurring all over the planet. In Australia, half of farmland is already affected. We are in the process of compromising the climatic balance that has allowed us to develop over 12,000 years. More and more wildfires encroach on major cities. In turn, they exacerbate global warming. As the trees burn, they release carbon dioxide. The system that controls our climate has been severely disrupted. The elements on which it relies have been disrupted.

The clock of climate change is ticking in these magnificent landscapes. Here in Siberia, and elsewhere across the globe, it is so cold that the ground is constantly frozen. It's known as permafrost. Under its surface lies a climatic time-bomb. Methane, a greenhouse gas 20 times more powerful than carbon dioxide. If the permafrost melts, the methane releases would cause the greenhouse effect to race out of control with consequences no one can predict. We would literally be in unknown territory.

Humanity has no more than 10 years to reverse the trend and avoid crossing into this territory... Life on Earth as we have never known it. We have created phenomena we cannot control. Since our origins, water, air and forms of life are intimately linked. But recently we have broken those links. Let's face the facts. We must believe what we know. All we have just seen is a reflection of human behavior. We have shaped the Earth in our image. We have very little time to change. How can this century carry the burden of 9 billion human beings if we refuse to be called to account for everything we alone have done?

- 20% of the world's population consumes 80% of its resources.

- The world spends 12 times more on military expenditures than on aid to developing countries.
- 5,000 people a day die because of dirty drinking water.
- 1 billion people have no access to safe drinking water.
- Nearly 1 billion people are going hungry.
- Over 50% of grain traded around the world is used for animal feed or biofuels.
- 40% of arable land has suffered long-term damage.
- Every year, 13 million hectares of forest disappear.
- 1 mammal in 4, 1 bird in 8, 1 amphibian in 3 are threatened with extinction.
- Species are dying out at a rhythm 1,000 times faster than the natural rate.
- Three quarters of fishing grounds are exhausted, depleted or in dangerous decline.
- The average temperature of the last 15 years has been the highest ever recorded.
- The ice cap is 40% thinner than 40 years ago.

There may be at least 200 million climate refugees by 2050. The cost of our actions is high. Others pay the price without having been actively involved. I have seen refugee camps as big as cities, sprawling in the desert. How many men, women and children will be left by the wayside tomorrow? Must we always build walls to break the chain of human solidarity, separate peoples and protect the happiness of some from others' misery? It's too late to be a pessimist.

I know that a single human can knock down every wall. It's too late to be a pessimist. Worldwide, 4 children out of 5 attend school. Never has learning been given to so many human beings. Everyone, from richest to poorest, can make a contribution. Lesotho, one of the world's poorest countries, is proportionally the one that invests most in its people's education. Qatar, one of the richest states, has opened up to the best universities. Culture, education, research and innovation are inexhaustible resources. In the face of misery and suffering, millions of non-governmental organizations prove that solidarity between peoples is stronger than the selfishness of nations. In Bangladesh, a man thought the unthinkable and founded a bank that lends only to the poor. In 30 years, it has changed the lives of 150 million people.

Antarctica is a continent with immense natural resources that no country can claim for itself, a natural reserve devoted to peace and science. A treaty signed by 49 states has made it a treasure shared by all humanity. It's too late to be a pessimist. Governments have acted to protect nearly 2% of territorial waters. It's not much but it's 2 times more than 10 years ago. The first natural parks were created just over a century ago. They cover over 13% of the continents.

They create spaces where human activity is in step with the preservation of species, soils and landscapes. This harmony between humans and nature can become the rule, no longer the exception.

In the US, New York has realized what nature does for us. These forests and lakes supply all the city's drinking water. In South Korea, the forests had been devastated by war. Thanks to a national reforestation program, they once more cover 65% of the country. More than 75% of paper is recycled. Costa Rica has made a choice between military spending and land conservation. The country no longer has an army. It prefers to devote its resources to education, ecotourism and the protection of its primary forest.

Gabon is one of the world's leading producers of wood. It enforces selective logging. Not more than 1 tree every hectare. Its forests are one of the country's most important resources, but they have time to regenerate. Programs exist that guarantee sustainable forest management. They must become mandatory.

For consumers and producers, justice is an opportunity to be seized. When trade is fair, when both buyer and seller benefit, everybody can prosper and earn a decent living. How can there be justice and equity between people whose only tools are their hands and those who harvest their crops with a machine and state subsidies? Let's be responsible consumers. Think about what we buy!

It's too late to be a pessimist. I have seen agriculture on a human scale. It can feed the whole planet if meat production doesn't take the food out of people's mouths. I have seen fishermen who take care what they catch and care for the riches of the ocean. I have seen houses producing their own energy. 5,000 people live in the world's first ever eco-friendly district in Freiburg, Germany. Other cities partner the project. Mumbai is the thousandth to join them. The governments of New Zealand, Iceland, Austria, Sweden and other nations have made the development of renewable energy sources a top priority.

80% of the energy we consume comes from fossil energy sources. Every week, two new coal-fired generating plants are built in China alone. But I have also seen, in Denmark, a prototype of a coal-fired plant that releases carbon into the soil rather than the air. A solution for the future? Nobody knows yet.

I have seen, in Iceland, an electricity plant powered by the Earth's heat. Geothermal power. I have seen a sea snake lying on the swell to absorb the energy of the waves and produce electricity. I have seen wind farms off Denmark's coast that produce 20% of the country's electricity. The USA, China, India, Germany and Spain are the biggest investors in renewable energy. They have already created over 2.5 million jobs. Where on earth doesn't the wind blow? I have seen desert expanses baking in the sun.

Everything on Earth is linked, and the Earth is linked to the sun, its original energy source. Can humans not imitate plants and capture its energy? In one hour, the sun gives the Earth the same amount of energy as that consumed by all humanity in one year. As long as the Earth exists, the sun's energy will be inexhaustible. All we have to do is stop drilling the Earth and start looking to the sky. All we have to do is learn to cultivate the sun. All these experiments are only examples, but they testify to a new awareness. They lay down markers for a new human adventure based on moderation, intelligence and sharing. It's

time to come together. What's important is not what's gone, but what remains. We still have half the world's forests, thousands of rivers, lakes and glaciers, and thousands of thriving species. We know that the solutions are there today. We all have the power to change. So what are we waiting for?