



# **EARTH OUR COUNTRY**

## **Let's Make Earth Great Again**

**Free Edition - Special 2020 US Election**

**Alain F. Andreoli**

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*With love and pride,*

*To my children Marc, Pierre and Anne,*

*To their future children, grand and great-grand children,*

*May they continue to carry the torch,*

*And make Earth their country.*

*“When the winds of change are blowing, some people build walls and others build windmills”*

### **Chinese proverb**

*“We are challenged to develop a world perspective. No individual can live alone, no nation can live alone, and anyone who feels he can live alone is sleeping through a revolution. The world in which we live is geographically one. The challenge that we face today is to make it one in terms of brotherhood.”*

*“Now it is true that the geographical oneness of this age has come into being to a large extent through modern man’s scientific ingenuity. Modern man through his scientific genius has been able to dwarf distance and place time in chains. And our jet planes have compressed into minutes distances that once took weeks and even months. All of this tells us that our world is a neighborhood.”*

*“Through our scientific and technological genius, we have made of this world a neighborhood, and yet we have not had the ethical commitment to make of it a brotherhood. But somehow, and in some way, we have got to do this. We must all learn to live together as brothers or we will all perish together as fools. We are tied together in the single garment of destiny, caught in an inescapable network of mutuality. And whatever affects one directly affects all indirectly....”*

### **Martin Luther King**

The National Cathedral, Washington, D.C., March 31 1968

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# Genesis

**H**aving crossed international borders thousands of times in my life, frontiers begin to blur. After all these years traveling and meeting people everywhere, I started to ask myself if countries are here to stay, or if they are just a temporary construction inherited from the past.

As our world gets smaller, are borders still making sense? Do they impede the evolution and progress of Humanity as the challenges that we now face have reached a global dimension?

Recently, two developments have profoundly transformed the state of the world:

1. Economic globalization – resulting in national political and cultural resistance,
2. The harassment of our resources – resulting in the disruption of our climate.

Economic globalization has an omnipresent impact on our daily life. Almost everything we consume comes from somewhere else. Despite this new dimension, we have not yet developed the institutional backdrop that allows globalization to benefit all humans, in a cohesive and sustainable way. *Full-globalization does not exist.*

The fragmented version of globalization that has impacted us first – economic – remains isolated from human and social dimensions. *Semi-globalization* has developed in disconnect from a broad global project for the society as a whole.

As it stands now, the world has already lost its balance between the economy and the society's fabric. The former is global and the latter still local. There is no coordination or mechanism to ensure that they work hand-in-hand toward a balanced development.

As a result, we see the destabilization of our fragile ecosystem. We are returning to the forgotten evils of the past. Religious extremism, despotism, nationalism, the risk of European disintegration, constant economic turmoil and an explosive Middle-East are back on the agenda.

A simple virus spreads around the world, accelerated by global travel and exchanges. It does massive disruption to our overall model. No global response can even emerge. We “react” locally.

Our society is not globalized at all. Our politicians are all local. We are ignoring the simplest evidence: it's a single planet that we all cohabit. We need a coordination of the human race itself through a global political tool that is totally missing.

We have learned to take control of Earth more than any species before us. Unfortunately, just at the blessed moment of mankind's dominance, Earth starts to passively rebel. Her first symptom is climate warming. Her most fragile mechanism – the atmosphere - deregulates. We won the race

of evolution over all other living beings. We have yet to win a sustainable Peace with our conquered ecosystem.

The fate of climate change is in our hands. From a space seemingly infinite for the first hominids, our planet has become the small island of our civilization. We have entered an all new game. Mankind, reaching an absolute success, condemns itself to reinvent the rules of its future.

After the great victory of Humanity, comes the risk of a collapse. Will the risk materialize in 2020, in ten years, in fifty or hundred years? Our children or grandchildren will tell. It is anybody's best guess as it's hard to predict how the planet and our species can ultimately adapt.

The great news is that there is hope, because most of us have now acknowledged the risk. We know that we are dramatically impacting our ecosystem. The conundrum of our era is exciting and can be managed as long as we share the problem and open up to innovative solutions. We can elevate ourselves, from unconscious dominators of our planet to careful architects of our universe.

We have evolved from animals to humans. Will we be able to become the responsible and sustainable stewards of our planet? Or will our combative genes – egoistic, opportunistic and shortsighted – drive us to self-destruction and reveal that we are our own worst enemy, slowly cutting the branch on which we all sit? Are we wise enough to survive as a species and to deserve sustainably our status of masters of Earth?

These are the central questions of this book. *How should we react to the global limitation of our resources in a growth-centric model?* It is a fundamental interrogation. *Earth Our Country* comes with answers. It addresses a holistic view of our shared future.

I am trying to offer ideas and responses for a wise and systemic solution to the next phase of Humanity's development. Realistically, it will remain constant work-in-progress. I wrote the first version of this manifesto ten years ago and published it three years later. In the meantime, we have continued to make our case more difficult. In particular, there is still no acknowledgement of the root cause of our ecological challenge. The symptoms are winning acceptance – climate change - but the cause of our endemic problem – political fragmentation – is still not recognized.

I decided to re-write “Earth our Country” in perspective of the November US presidential election. Our new president will have the exceptional opportunity to turn the tide and to address our lack of global political leadership. Our problem has been made worse lately with isolationist trends, in particular in the US.

*The next US election is pivotal for the whole world, more than any election before. We sit at the crossroads of our future: full globalization or return to nationalism. We need Joe Biden, with any help he can get from Barack Obama's international recognition, to re-launch a global project for the free-world. The world's directional shift - our crossroads - is truly pending on this election.*

We are the generation that can initiate the metamorphosis from our historic nations to a single country. The recognition of our universality will be a profound Darwinian step in our evolution.



One pool of resources, one people and one strategy for mankind is the evident solution for our sustainability.

*No national government alone can fix mankind.* If a government thought that it could, this would be the ultimate utopia. We need the US aligned with its democratic allies, to federate a democratic club and steer the world toward a global solution for peace and ecologic sustainability.

Mankind faces its most compelling challenge to date. It's the time to "think big", to turn a page of our evolution. The nationalist boundaries of the past will not work any longer. A new world is waiting for us.

Together, we can invent the next missing step for Humanity. Unconsciously, we already are the first generation of *Homo sapiens Universalis*.

Earth our Country.

## Chapter One:

### From the Big Bang to a Big Crunch

Many of us fear a collision with the ecological wall and predict the apocalypse. After the Big Bang of mankind over the last millennia, they see a *Big Crunch* coming. They predict the destabilization of the environment, point to the non-sustainability of our consumerist society and of our species altogether. I don't disagree with the risk analysis. More constructively, I see a potential solution.

The challenge forces our reinvention. When the horizon darkens, it is time for innovation. It is precisely why humans have won the animal competition. We are the ones who can invent. We can imagine new outcomes, we can think big. We are unbeatable when we match our survival instinct with our intelligence. Unleashing our imagination into innovation is the way that takes us forward.

Twelve thousand years ago our ancestors faced a similar crisis. They had hunted most of the big game and saw their resources dwindle. Starvation was imminent. Some experts estimate that Humanity was even at risk of disappearing. This is precisely when mankind uncovered the magic of the seed. Just as naturally available resources declined, man invented domestication of Nature and developed farming and breeding. We became even stronger and dominant.

Owing to this revolution, Humanity flourished beyond the imagination of any God. After domestication came industrialization. And the success of mankind's History ultimately led to the saturation of its ecosystem. The extraction and transformation of fossil fuels in particular have forced climate change.

Again, we are facing a challenge to our future survival. Again, Humanity can win. We can make the ecological wall an opportunity. We can avoid the crash and invent a new way to catapult our society above the collision that is now at sight. We need to change our current trajectory in a way that acts as a positive catalyst for a great shared future.

Today, everything in our society results from the health of the economy. The theory says that economic growth is happiness for all. Recession – negative economic growth – is a disaster of endless impact. Is there a way to think differently? Can the economy become the servant of mankind's overall progress instead of an unchallenged master with cannibalistic properties?

The quest of Humanity is no longer about conquering the world. We already have. We have multiplied to almost ten billion people on the same tiny planet. Our new objective must be to turn

our world into a sustainable human ecosystem. The realization that our resources are finite must become a stepping-stone toward a better common future.

We have succeeded in canoeing to our nearest islet – the Moon – at great cost, effort and risk. Our trip was limited to a visit, the Moon remains uninhabited. Earth appears to be the ultimate limit of our living framework. Until a conquest of Space, she remains the permanent and unique setting for mankind. From our paradise, Earth could become our jail. She has turned into our golden cage. Only in the last few decades have we acknowledged that Earth is our single precious neighborhood. We are truly starting to confront the impact of her finity. It's a *defining new situation* for all of us. We operate with our muscle memory – we keep thinking about growth, expansion, multiplication, development... as if we still had the luxury of infinity.

The ecological risk that we are taking is to waste what we – living beings - have won over millions of years of Darwinian evolution. If Earth rebels we lose the fruits of a Pyrrhic victory, the efforts of hundreds of thousands of generations in the chain of lives that preceded us.

We may even be the ultimate outcome of the alchemy that has led to life on Earth. Maybe this is all supposed to make sense and we do not yet have the capacity to understand it. We have been “elected” by evolution and given a chance to become so powerful that we may either fail or attain the next level of this divine game. To succeed, we cannot escape the immense responsibility of being Nature’s caretakers. This role is now ours. We didn’t ask for it, we have endorsed it with our domination of the world. It came together with the crown.

It is not uncommon to witness the awe of children when they see a cow for the first time. They have no understanding that the hamburger eaten before coming to the game farm was the flesh from this lovely creature. Our culture seals consumers from the natural source of their consumption. We have separated ourselves from the true world of Nature. We live in a second-life.

This psychological fence leads us to collective myopia. We are quasi-blind to the extreme harassment of natural resources, because we see them as supplies – “resources” – and no longer as part of the holistic setting to which we belong ourselves. Our selfish mass environmental cannibalism is driven by production and consumption growth, not by an ecological balancing act. As we “grow” we transform Nature around us, we build our own new parallel “man-made” planet.

In the course of the last century or two, we have turned into a virus in the body of Earth. We are not a meteorite. We developed from inside of her. With continued exponential growth, we could soon be tens of billions. Do we know where is this all going? No, we don't. In good faith, probably most of us sense that something has got out of hands one way or another, that somewhat we are building a big problem for our children. But there is no “solution”. It seems that no one has even dared to contemplate a truly holistic resolution to the big challenge facing us all.

*The true solution that addresses the root cause will challenge the social system that got us to where we are. The global anarchy of the empowered countries has stimulated our competitiveness when the objective was successful dominance. It is now our primary inhibitor when the challenge becomes global preservation and our survival as a species.*

Before we spend more time on the analysis of our current situation and look at solutions for the future, it may be worthwhile to reflect on how we got to where we are – our human Big Bang. The past brings lessons for the future for who wants to learn from his mistakes. How did we become the main catalyst of Earth’s transformation?

From just a few souls in the original hominid herd we have multiplied into thousands, millions, billions and soon 10 billion. Since we dared to leave the safe branches of our tree in the savanah of the African Rift in which we used to find shelter, we have turned into a nomadic predator and later settled as farmers and breeders. We even succeeded to accelerate the yields of nature with the addition of fertilizers. Beyond agriculture we jumped into mass industrial scale, drawing our energy and raw materials from the bowels of Earth.

It all really began with our courageous ancestor who first dared to leverage his rear paws, not to climb a tree but to venture away from its protection and discover new grounds. Our hunting and gathering capability progressed, so did our lower limb. We enlarged our territory and invented new hunting techniques. We became a predator and expanded the number of potential targets within our reach. We could feed a larger family and clan. We learned to shape rudimentary tools, recognized the value of fire to protect ourselves at night and to accommodate food better, thus enlarging the spectrum of the edible. This innovation made us truly omnivore and expanded our aptitude to survive on almost any kind of food. Eating meat, roots, leaves and berries, we improved our capacity to escape starvation. We dared to leave our original savanah and followed the migrations of our favorite games. Our legs got longer and stronger while our arms and hands developed as the extension of our imaginative brain, constantly shaping new weapons. Our intelligence designed new tools and ways to communicate better as a hunting and social team.

Animals live in the present. They don’t think about the future. They have a distant recollection of the past but their focus is “now”. Increasingly, the development of our brain took us beyond that. As we built more complex hunting strategies, we started to imagine the future. To do better tomorrow, we treasured our memories. *We discovered the dimension of time* and this consciousness changed everything. It made our life much more complicated. We learned our *ignorance*. We became afraid of what we could not understand – more or less everything... Facing the complexity of Nature and the fragility of our own existence, our mind got crushed by the mystery of birth and death. New questions emerged and only brought out more mysteries. Like any void, questions to mysteries eventually filled themselves with explanations from the smartest or strongest members of the tribe. Once accepted, they turned into beliefs supported by legends. Mystical beliefs and legends got carried and reinforced from generation to generation. They were the embryo of the first cultures and traveled with their nomadic believers. As groups became physically more distant, they also learned to communicate with a mosaic of differing languages. Distance and isolation, social progress and mystical complexity generated more differentiation among nomadic tribes.

In parallel, our body also evolved in Darwinian terms. Inventing new tools, the size of our brain pushed the size of our cranium. Covering ourselves with skins, we lost our fur. Better fed, we grew taller. In the meantime, with different climate pressures and intermarriages, our skin turned white, black or yellow. From one people in the African Rift, we developed different hunting techniques, tools, beliefs, languages but also colors of skin and specific physical traits.

Through the millennia, we managed to populate most of the landmass. We crossed mountains, plains, ice bridges and seas to continue our epic journey, looking for new hunting grounds. Finally, mankind got almost everywhere on Earth. We numbered in the millions but at the same time started to reach the limit of our nomadic lifestyle. We began to struggle to find rarefying preys while berries, mushrooms and wild roots also became scarce. There was no new green valley left for discovery with a new herd of delicious mammoths waiting for our skinny bellies. We had turned into an extremely efficient predator and no animal could resist. But the scale of our population and its deployment was saturating the capabilities of what was still a basic animalistic predatory model.

At this defining moment, we could have disappeared as a species, or become irrelevant. This is when came an extraordinary discovery: *the magic of the seed*. We understood the vegetal cycle and learned that by preserving and planting a seed in the ground we could replicate, boost or even supersede Nature. We also learned to domesticate animals. With the invention of farming and breeding, we revolutionized our destiny and differentiated ourselves from all other beings. From a crisis of near starvation – the first wall in front of Humanity – came relative and more predictable abundance. From the nomadic quest came the establishment of the landlord. The *Neolithic revolution* engendered the Homo sapiens sapiens. An all new paradigm unfolded: History.

It doesn't imply that Neolithic men and women suddenly turned happier than their nomadic predecessors. It may even be the contrary, as farming implied a lot more work, painful structuring of the society and reduced food diversity; while proximity between men and animals generated diseases. But with farming, we crossed the constraint of intermittent food and nomadic starvation. From best predator we evolved into *grand domesticator*. We cut forests to cultivate the soil. We surrounded ourselves with enslaved animals that only lived or died to serve our needs and appetite.

As a result, we invented the concept of property. We built fences, not only to protect us from other predators, but increasingly to defend our crops and our herd against our likes. Some laggard nomadic clans were still wandering around and starving while ambitious farming neighbors competed for our land and crops. Hunting strategies turned into war stratagems to protect or steal new wealth. Farmers anchored themselves to “their” land, a fixed location that became their plot, home, village and ultimately their “country”. To secure wealth or steal resources from other tribes, wars became the most strategic activity for survival and domination. True enemies became other men and no longer bears, lions or wolves.

The sedentary lifestyle created a multitude of new possibilities. We learned to tame Nature to our own benefit. We “invented” hybrid plants and animals. We specialized tasks among family or clan members to improve the capabilities of the team. Everyone concentrated on what they could do best to most efficiently contribute to the community. Mandatory labor and specialization were born – probably also human slavery and social classes. In an incredibly short time, primitive Neolithic societies organized themselves around war and social specialization.

As soon as food hunting got under control, war replaced it as the first priority. Behind strong warriors stood the weaker ones tasked to nourish and equip the troops. Sophistication of weapons and defenses became critical. Social clusters grew exponentially complex in a few generations.

As isolated groups of humans transformed into civilizations, their beliefs turned into religions. Religion became our inner social foundation. In order to stay in force and convince everyone at a larger scale, they formalized and organized – eventually they ruled. Uniqueness to each social group, they reinforced dividing lines against people with different beliefs. The original inspirations surrounding the mysteries of birth and death - naïve and basic - evolved into the most complex, official and irreducible evidences. Political rulers made themselves priests or living gods and asserted their credibility “in the name of God”. Organized religions became institutions and instruments of power. The shaman or the chief of the tribe evolved into a king or a pharaoh. The tribe morphed into a sacred nation. Beliefs became Faith.

Civilizations conquered the world and planted their first borders. To protect their unique “culture”, they formalized and cultivated their differences. Nationalism replaced nomadism.

*Before maps were even invented, invisible lines were drawn on the soil, mirroring wars, migrations, victories and defeats. The Big Bang of mankind suddenly accelerated. Only six hundred years after the discovery of the seed, modern sedentary civilizations were born.*

Religions coalesced with races, ethnic groups and languages, reinforcing again and again the perceived differences between human communities. Eventually, everyone forgot the original homogeneity of mankind. From one people, we evolved into an infinite mixture of diversity – both looking, living, speaking and thinking differently. Our national fragmentation ensured us that differences exceeded the otherwise evident commonness of human identity.

Since then, nations have totally run the show. They have done well in the context of our war-led historic expansion. They provided the social and political cluster to defend us and to manage us in the millions. To survive and prosper as populations grew exponentially, nations needed more wellfed soldiers to remain independent and fight against their fellow kind. More people implied for more resources. Which meant finding or fighting for more land. This is how the vicious circle of growth was invented. As a social group succeeded to draw resources from Nature, it became more populous. To support more people, additional food and space were needed, forcing conquest or defense from expanding neighbors. This circle defines the growth of human population and its endless quest for more resources. To remain relevant, we must grow. As we grow, we consume more... and so on.

The industrial revolution precipitated the movement with its pesticides, mines and worship of oil, carbon emissions and systematic extraction and utilization of all available materials. It allowed to find a way to make our resources unlimited again – through the multiplying effect of the fossil economy. Economic competition replaced war...

Now, with our quest for material prosperity for 6.5 billion people comes Nature’s death knell. The cycle has whirled around civilizations since their inception but at a much smaller scale. More people are coming who want a higher standard of living – more food, more cars, more everything. We still need more growth...

Rather suddenly, at the turn of the twenty-first century, Earth’s fragile ecosystem starts to give us tangible signs of nearing a pivotal point. *We are the first generation to inherit such an unsettling*

*discovery. It is disruptive and inconvenient and is loaded with heavy consequences and responsibilities: we are approaching the barrier of growth, our historic development model.*

We are entering a very critical and pivotal century. *Suddenly, our heavenly island can become our jail. We risk to blow up our safe balloon.*

We communicate in fractions of a second by phone, video conference and the Internet. We move all around the globe within a few hours. An illness can spread everywhere in a matter of days, carried by travelers or containers and lead to a massive epidemic. A continent consumes what another one produces. A region finances the deficit of another so it can enable the other to buy more of what it produces. A hemisphere occupies another one without a battle but simply through anarchic migration and for the search for a better future. Still, we want to grow further...

If all the countries of the world were to grow and reach the same level of economic wealth as the Western economies today, our total energy consumption would have to increase tenfold. Africa's population is expected to more than double between now and 2050 from 1 billion to 2.4. Imagine that Africans reach the standard of living of Americans. The explosion of fuel energy and natural resources utilization will not be tenable ecologically. It is simply not possible under the same architecture. After thousands of years, endless materialistic growth reaches one limit: Earth.

*There cannot be as much materialistic wealth for all – soon ten billion - as there has been for the West – less than a billion - at the peak of its golden years.* Something has got to give: natality, materialistic wealth or both. We have to fundamentally rethink the model of our future.

The old rich want to get even richer and the young poor have no intention to stay on the waiting list. Our systematic quest for material economic expansion, further amplified by the desire of the developing world to continue to catch up with a double-digit annual growth, has become unmanageable. Global economic growth fueling by the economic emergence of everyone accelerates the unbalance of Earth.

Still, we are collectively trying to ignore the profound implications, because of how much they challenge the social establishment of History and of how we see our future. It's hard to stay blind for much longer though. We cannot deny that the ice of the poles and glaciers is melting at light speed and that by 2050 the North Pole will be totally ice-free. What can a single nation do about that? All nations still want to grow and some still have to get out of poverty.

We have to move ourselves toward the next stage of our development. A stage that cultivates our planet like our garden and not like our trash can. We have to think about *consuming better* instead of *infinitely growing our consumption*.

The atomic or H bomb are ready and in the hands of a growing number of governments, with varying degrees of responsibility. Several of them could in the next hour initiate another form of "Big Crunch" by pressing a single button. All the machinery has been prepared and the result would be like a dominoes fall.

A loose alliance of the large democracies under the US influence has protected us so far from an immediate military collision under the cover of a global economic pact. But this is now going away. Other nations like China are challenging this *modus operandi*. More importantly, this world order did nothing to prevent such a damage to Earth – rather the contrary. Rarefying resources will cause a fight for survival between populations, starting with those who want to reach the Western wellbeing, those who could be submerged due to the rise of the oceans, those who risk to be invaded by the desert, those who try to make themselves fortresses to protect against migrants or viruses... We are not short of finding reasons for the nations to fight against each other and to have their leaders come out even reinforced through a reinforced nationalistic promotion.

The British magazine *New Scientist* asked a group of experts to paint a picture of what our Earth would look like at the end of this 21<sup>st</sup>. century. They adopted a scenario of a high-median temperature increase of 4 degrees Celsius. Here is an extract of their conclusions:

“Deserts will prevail. They will gradually invade the whole strip located between the tropics of Cancer and Capricorn, a zone where resides today half of the world population. For some, the Sahara will even progress up to Central Europe...”

“Finally, large zones of the planet will become totally uninhabitable – a loss which by far won’t be compensated by the gain of new useable lands, freed from ice in Greenland, Siberia, Scandinavia and maybe even Antarctica, regions where important populations will be led to come and settle. The massive arrival, in the timeframe of one generation, of billions of climatic refugees will not happen without confrontations...”

“Conflicts to protect basic resources, water and energy, or to win their access, will intensify. The “selection” will be so intense, that we won’t be more than a billion by the end of the next century,” according to James Lovelock...

Is this scary picture a realistic scenario or is it just excessively overblown? Well, we won’t know until we get there, but this is the scenario of a 4-degree Celsius increase above the 1850 pre-industrial level. Whether we can contain this heat wave or not is the question. The temperature acceleration that the scientific community has accepted as a minimum so far is 2 degrees Celsius, which almost everyone now sees as unrealistically low. The median expectation is around three degrees and the maximum around five. Others (still many) continue to deny the issue altogether, denouncing some sort of UN leftist and scientific Machiavellian conspiracy.

The margin of uncertainty remains enormous because it is a jump into the unknown, one that none of us has ever faced before and with no irrefutable scientific reference, since it is all about predicting the future. Nobody can scientifically demonstrate with certainty how Earth will continue to react. We only have the ability to simulate a series of forecasts or predictions based on historical data. It has been one degree so far in one century and it is exponentially speeding up. This has never happened before at such a pace as a man-made event.

We are the first generation to learn about the risk. We are the first e-connected citizens too. We must use the new tools at our fingertips to assert a global position that stimulates our politicians to think across their own boundaries and to act for the benefit of all.



*Global economic growth alone is not going to make the world a better place any longer. Economic globalization was meant to unify everything, but it's leading to the opposite effect. The lack of global social and political governance and the failure of the nations to resolve global problems in the framework of a global economic competition is the forum that fuels the revolt of nationalism.*

*We need another invention – similar to the magic seed – to make a new positive revolution for Humanity. We need global governance. Complete globalization is the only positive solution.*

In the middle of this crisis, we have the chance to recreate our social and political domain. We can adapt our governance to lead us to a new way of life. We can shift our central priority from global economic growth to global preservation of the human community and of its environment. It is totally possible, if we accept to reset our endless and unsustainable economic race toward a model that privileges wellbeing for a smaller and more cohesive Humanity. It can only happen with an empowered global governance. We need a pilot in our global plane.

Earth our country.

## Chapter Two:

### Our Unsustainable Growth

Our nomad ancestors relied on an environment which they were intimately intertwined with. Maybe they were very happy – happier than us - but it's too late to ask them. They implored the sky for support to survive another day and were totally submissive to their natural setting. When they invented their first tools, they got a glimpse of their future strength. The immoderation of their forthcoming power was yet unimaginable. They moved from a cave temporarily abandoned by a bear to a tent assembled with some branches and covered with skins or leaves. The concept of property did not exist yet as everything belonged to Nature for the benefit of the clan and other living beings. How could they “own” Nature who owned them in the first place? There was no privacy in their life but the permanent company of the rest of the tribe. No one could survive alone in a world filled with so many dangerous predators. Being banned or cursed was a death sentence. In such a precarious environment, people could only stay alive if they protected and fed each other as a herd. Humans hunted as a pack, like wolves. Each day was a new beginning, a new uncertain timeless search to fill their bellies. They only killed to eat, with respect for their prey. They knew they were a prey themselves. Living in such tribal intimacy, they mated on demand, probably without even knowing that a sexual act would lead to procreation. Children were a gift to the clan and the people the duty of all, as long as they coped with the nomadic journey on their own feet.

Paleolithic people saw themselves as animals among other animals – they were just the smartest predators. They cohabitated with fear and deference with their animal cousins under the common roof of Nature. Their lifestyle evolved gently along the 6 to 7 million years of our long pre-history. Life was dangerous and short and the quest for food remained the priority. Our population growth as a species and our evolution was very slow. We were not an instant win. Mankind survived tenuously against strong predators. Nature was keeping us under tight control...

After millions of years of this hominid evolution, *the global human population reached half a million souls 100,000 years ago*, at the emergence of the Homo sapiens. This represents an almost irrelevant number against other species. We were nobody really.

Such a demography reflects *the fragility of the Paleolithic man and his constant struggle for survival, in an environment from which he had not yet separated and where competition was fair and intensive with other animals*. To put this frail loneliness in perspective: there was only one human being per 120 square miles. Assuming that a clan consisted of an average of thirty souls, there was only one clan for 3,600 square miles of wilderness - three clans for the whole territory of Belgium or Massachusetts. If we add that the Americas were not yet populated and that glaciers

covered a lot of the continents, the physical population density in the populated landmass was maybe twice higher at best. Humans were just a noise for Earth, their carbon footprint was zero...

Such surprisingly low numbers show how painful our “conquest” has been. Such a permanent fight for survival certainly left a huge imprint to our modern genes. We didn’t win easily, we are real survivors with many scars. Our early days were a real struggle. We faced a systemic risk that the species could disappear. Other predators did not give way easily. Migrations and change were constant, we had to quickly relocate and readapt to new constraints. This adversity forced our adaptability. Human beings were survivors, pioneers and adventurers in the wilderness. They were not born kings or princesses... they fought and competed all the time to win to live another day.

With natural climate changes such as the last Ice Age, which enabled Asians to connect with America through the Bering Strait and the dominant winds which push primitive boat-people to discover Polynesia, it seems that Humanity finally completed its colonization of the landmass around ten thousand years ago. This marked the beginning of a finite world for nomadic people.

They didn’t know it yet since they were disseminated across an immense planetarian immensity. But they had colonized all the universe accessible to men. They ignored the finity of their world, although as a species they had just discovered the world (without Antarctica). A finite planet was not a comprehensible concept. Man did not dominate but was already everywhere.

Man occupied the summit of the animal kingdom while still living among them and as one of them. His toll on the available “game” was making hunting growingly challenging and capped its population. There was even a risk of first crunch, Humanity could have eventually disappeared due to lack of food accessible through bare hunting/gathering.

This is when the Neolithic revolution happened, probably the most pivotal moment in our evolution. Neolithic revolutionaries invented an all new human model which redesigned our relationship with Nature. They were initially the luckiest or the smartest. There were the innovators who tried a way of life radically different from the past. They quickly understood the benefits of growing their own harvest, raising their own cattle and sleeping under the protection of comfortable houses loaded with a full granary, which insured their subsistence for a foreseeable future. Growing and storing prevailed over constantly chasing.

For the first time ever, *man succeeded to “create” and to accumulate his own food in advance of his daily consumption needs.* This was an absolute breakthrough, the differentiating condition required for his forthcoming planetarian domination. From spending most of our energy to feed ourselves every day, we could suddenly turn our efforts to... build civilizations.

*From an animalistic horizon of a bare daily survival, we projected ourselves into the comfort of long-term planning – giving instant birth to complex social systems.* We managed to cross the steepest “sound wall” of the animal kingdom – the domestication of Nature.

We transformed the lack of available food into our biggest opportunity: we “created” our own food. With this invention, we cracked the code of the following 12,000 years. *From this moment on, our population and technologies took a growth path.*

This is when the concept of property and ownership originated. It sealed the indirect long-term foundation of the economy. Property was the result of our need to protect the fruits of agriculture and breeding. If you cultivate a piece of land or feed an animal for your future consumption, they must be yours or anyone can steal the benefit of your own work. It is a very different situation from living off of hunting and wild berries. This time, the harvest was reserved for the one who planted the seed and the milk for the one who fed the sheep. The farmer or the breeder had to “own” the land where the seed would grow and the breeder the animal he had domesticated. It killed the inherent communistic essence of the Paolithic era: Nature owned by everyone...

The profoundly new idea that man could transform a piece of Nature and make it his own creation and property (land, crops or animals) implied the need to defend this ownership. It's obvious to us all, but at the scale of Humanity's evolution, it was a hugely new concept. This breakthrough – owning a piece of Nature as if a human could be above it, fostered the formation of the first civilizations, which emerged almost suddenly in Egypt and Mesopotamia. Owning large pieces of cultivated land and cattle, owners regrouped in fortified villages and then cities and armies organized to defend them. This is us. This is where we are coming from. We are the children of this revolution.

Learning is a continuous process which dramatically accelerates at times of decisive innovation. The Fertile Croissant was at a crossroads between Africa, Asia and Europe. It certainly benefited from the heritage of an exceptional legacy of accumulated knowledge from all these places, together with a fertile land and an ideal climate. People there unleashed the cities that we view today as the ground zero of world History.

It all happened so fast. In a few centuries large cities started to spring up like mushrooms. They hosted elaborate social systems: kings and armies with professional warriors, specialized weapons, officers and battle strategies; struggling farmers and fantastically rich landowners and their miserable slaves; genuine religions with gods, priests, temples, sacrifices, capabilities to count, record and communicate at large scale (numbers, writing, manuscripts).

Socially, these civilizations were already like the ones we live in today, with a different degree of scientific and technological advancement. Else, they had their politics, their poor, their rich and their famous. One started a family, worked hard, dreamed, loved, played and died. Many believed in terrifying gods. People drove for military or economic power, recognition or fulfillment in Faith.

Notwithstanding scientific progress and its implications, nothing fundamental has changed in the thousands of years that separate us from these first “civilized” men and women. *They marked the beginning of our “separation” with Nature. They turned Nature from a mother to a resource (a property) and put us on our current trajectory.*

However, one subtle but profound nuance remains between this era and today. These people still saw the world in which they lived in, along with its potential, as infinite. They could still cut a forest to plant their seeds or build a new city - but there was yet another virgin opportunity behind the next hill. The world was flat, immense and unknown. The concept of a round finite planet was out of scope. These men were in the business of the permanent conquest of the infinity of the land.

Thanks to its immense success in domesticating Nature, the species flourished quickly. From a few million twelve thousand years ago, we exploded to hundreds of millions in just a few thousand years. Mankind reached half a billion people at the birth of Jesus Christ. This represented an amazing increase – our population roughly doubled in size at each new generation.

This explosion had profound implications. There were twice as many humans to harvest the planet's resources with each new generation. We always had to compete for more land. This explains the endemic need for “growth” of our historic model. Growth is our foundational legacy as a civilized species. We need more conquests. Successful civilizations are expansionist by design.

Such an extreme population growth was incomparable to any other mammal species. Our growth was only slowed down by wars or diseases. The geographic expansion of the empire was undoubtedly the logical solution for any political leader. War and conquest were well understood necessities and insurances for the future.

Consequently, the History of civilizations mirrors closely the History of wars. War was unavoidable, built into the system due to the competition for the conquest of resources which were always in short supply as the population grew. The preferred solution for nourishing more mouths was to increase one's territory, seizing fertile grounds and slaves to cultivate them. As a result, one attacked his neighbor and extended his civilization by concentric circles. Civilizations grew feeding on people, like fires feed on brush, endlessly. People learned new techniques by watching their neighbors or enemies and the nucleus of civilizations subsequently migrated from the inner civilized core to the outer unknown. Civilizations kept growing geographically until they would cover the whole planet – which only really happened two centuries ago. Infinite expansion has been the basic model for the last thousand years. It fueled the civilized man's appetite until the nineteenth century when civilization got everywhere.

Through Western colonization, the world of the nineteenth century became, for the first time, globalized and completely “known”. Colonization was the first step of globalization. The first winner was Spain, then England. There was no sunset on the empire of Queen Victoria. London was the capital of the world with treasures and materials imported from all over, to be transformed and re-exported.

*There were only 1 billion people in the world in 1800 though, twice as much as in year zero.*

The rate of natality had greatly decreased since antiquity – doubling in 2,000 years instead of doubling in a single generation as before. Why such a slowdown? The earlier catalyst for our species' growth – the geographic spread of agriculture and the implied general improvement in standard of living – had stabilized. This was due to the evening out between human population and available resources. Farming yields were still directly proportional to the surface being cultivated, with little technical progress since Neolithic times. Ancestral techniques remained in force. Muscles were the sole power available – human or animals. Fertilizers were still only biologic.

Moreover, the first eighteen centuries of the AD era had seen impressive human destructions. The devastation brought by the invasions of the post-Roman empire, the medieval plague, the constant wars in Europe and Asia, the almost complete elimination of native Americans (who were as many as Europeans in their totality at the time of Columbus) and the significant draw from African slavery - all took a huge and permanent toll on mankind. Such war-like events adjusted headcount to available resources quite efficiently.

Also, science and techniques in agriculture and medicine evolved very little during this period. Use and transformation of resources were static. The land was harassed with stable yields at best and its capacity calibrated to provide food to a proportional quantity of people. Civilizations had to develop through “horizontal” geographic expansion (population size proportional to the surface of cultivated land) because no new technique was invented to enable a “vertical” increase of wealth (food/resources yield acceleration through agricultural/industrial innovation). It was more of the same at equal perimeter, forcing the conquest of an always larger arable territory – which only doubled in the period.

After 1800, the industrial and agricultural revolutions took over. They multiplied our former muscular natural capabilities while chemical fertilizers improved crops performance. Technology (vapor engines, fertilizers, mass production) added its “vertical” lever of wealth creation, which decoupled the potential of Nature for the needs of man’s consumption. Additionally, considerable progress was made in medicine – like mass vaccinations - extending life expectancy.

The 19<sup>th</sup>. century industrial and agricultural revolutions made a paradigm change for “growth”. It enabled new layers of “vertical” expansion and wealth which eliminated the formerly immutable “horizontal” limit of land surface. Techniques of mass production (transformation of raw materials) and utilization of new resources like oil, enabled a globalized model in which the West transformed and the rest of the world provided supply of raw (natural) resources. The model allowed for the economic predominance of a Western minority over the rest of the world.

The demographic results of the industrial revolution have been even more staggering than the Neolithic revolution given the much bigger scale of our population. *In 1960, the world’s population was three and a half billion, three times more than in 1800. Today, sixty years later, our population has already reached 7 billion, doubling in only two generations.*

We have reached again the speed of expansion of the Neolithic times but on an incomparably larger scale. Of course, the developing countries are those with the highest birthrate, whereas the rich countries are aging and seeing a decrease in population.

Taking a selfish point of view: when I turned fifty the population had doubled since I was born. Whereas it took eighteen centuries – between year zero and 1800 – for the same proportional increase to occur. Though this figure is already vertiginous, it is generally recognized that there will be approximately 10 billion people by the middle of this century.

*During the length of my life, human population will eventually triple – increasing by over six billion souls.*

More importantly, the proliferation in resources and energy that each inhabitant individually consumes during this period continues to increase as the “rest of the world” emerges economically. When I was born in France in 1960 in a middle-class family, there was no shower, no TV, no car and no air-conditioning.

The conjunction of the two factors – population growth and individual materialistic consumption - is acting as an exponential accelerator, affecting our global ecosystem at a pace and scale never experienced before. Truthfully, the pace of this explosion – the “growth” of our population and consumption - is beyond the scope of any imagination. And it is not finished. Here are some basic scenarios for our immediate future:

- Rich countries of today – primarily the West – will maintain their current standard of living until 2050, with no or marginal relative economic growth. This is pretty much the anticipated scenario for Europe and Japan, the US hoping for more. They will continue to consume and emit about as much CO<sub>2</sub> as today, with a slightly negative population growth. They may do a little better with a wider use of clean energies but with a minimal impact on the overall picture.
- Emerging and poor countries will grow their GNP faster, at a double-digit annual rate. Ten percent per annum has been the average growth rate observed for the last two decades for China. Africa was slightly slower at around five percent and is now catching up. In the meantime, the population of the developing countries will increase by an additional three billion people according to the UN, half of them from Africa (a fifty percent increase).

Unless the aftermath of Coronavirus creates an immense recession, *we are leaning toward a further exponential increase of our overall demand for energy and resources*. We will continue to increase our requirements for cars, oil, gas, decent residences, air-conditioning, drinking water, land, food and in particular meat, electricity, breathable air... Consequently, we will see an equal reduction of our forests, opened and natural spaces, wild fish and animals.

If we don't find a way to put the brakes on any of the above trends, the resulting demand will represent such an extraordinary challenge for our environment that it will plunge planet Earth and its inhabitants into a state of serious disorder - the “Great Wall”.

Our livable ecosystem will eventually resist such a potential challenge for the duration of our lives with a manageable impact, which of course we all hope for. This delay authorizes the current “IBGYBG” political approach – “I'll be gone, you'll be gone”. In other words: if we are no longer here to see it, why to worry about this just now?

But what will happen to our children and to their own children? In a century, a thousand years, a hundred thousand years, whose responsibility will it be but ours?

Our civilization has become irreversibly global. It is impossible for any head of state, democratic or authoritarian, to make decisions that benefit solely his or her country without also directly or indirectly impacting all others. Those who try to forget this fact deny elementary logic and lure their people and all the people. We are all living in a single borderless ecosystem.

Country-based political fragmentation obstructs global solutions. It is almost impossible to be responsible for the best outcome of a country while at the same time trying to ensure the best global outcome for all. Countries end up behaving with collective irresponsibility because the addition of their local agendas cannot make for a cohesive global one. *The countries total independence and Freedom mean global anarchy.* Even assuming that each country has the most virtuous national agenda, the addition of all these agendas doesn't make for a sustainable global one. The sum of the national wills to grow cannot resolve the global equation that we have to deal with. We continue to prove it every day and again as I write these lines with the Coronavirus situation.

Our fundamental problem is structural. There is no local solution to a global problem. Our forest is planet Earth of which our nations are only trees. At the dawn of this era of planetary challenge, the solution for each country and for Humanity must align to a world that from now on is inter-connected and inter-dependent. *Global and local have become our yin and our yang.* They cannot be separated. There is only one planet Earth and one Humanity.

Let's make an analogy. Seven billion of us are sitting on the same blue aircraft – we are flying aboard “Blue Planet Airlines”. We travel on the fringes of the Milky Way in a small solar system. The plane is compartmentalized into two hundred separate classes of various size – one by country – each with different crews and regulations on board. Migrating from one class to the other can be hazardous. We are all mandatory passengers on this plane and have nowhere else to go. The plane is not managed or maintained by any airline company. “Blue Planet Airlines” is a loose UN-like association with no central empowerment. To make it clear, there is not even a pilot in the plane.

There is a wide front cockpit which looks very much like a large meeting room. Hundreds of national representatives are sitting in there for hours, participating to conferences about plane navigation with simultaneous translations. Their valuable objective is to maintain a dialog among themselves and to debate the direction of the plane. They never take a decision though. There is no guidance or flight plan. They never agree on anything that relates to the benefit of everyone on board. For thousands of years it has been a smooth ride and the plane kept circling around the Sun as if it would last forever. Life is good and more passengers are born each second to fill up the plane with numbers never seen before.

Very recently, the leaders in the cockpit have been informed by their respective national scientific control centers that the plane is running up against a large unknown and potentially extremely dangerous cloud. It looks like a Great Wall. There are reasons to believe that the plane's current course is leading to a direct collision, although it cannot be proven with certainty just yet.

The passengers are all quiet as they think that their leaders are in control of the process and are empowered to find a solution. Against all odds, they continue to assume that their guides are capable to decide a change in engine speed, direction or altitude, so that the plane eventually avoids the obstacle and gets them in a safe place as before. The truth is that their guides are not in control of any sustainable solution. Instead, most rulers are individually thinking about how they can evacuate their own class/national passengers so that at least their people can avoid the general catastrophe. The ones who survive will then justify themselves by blaming the disaster on the others...



Welcome to “Blue Planet Airlines”! We are all passengers on board. What should we do? The time has arrived for us to knock on the door of the cockpit and to shout loudly:

“Dear politicians please listen to us. We love you all for taking care of our nation. You are working hard to get the best for our country. We truthfully believe it, it’s not about you but about the limit of your empowerment. You only lead our single nation. But now we have a new situation. This cloud is going to hit all the countries together. Our plane needs to change course. We need above everything else a pilot for the whole plane, a leader for all of us. We need him or her – now!”

We have entered a new society. The Internet connects almost everyone. The physical means of communication – image, voice and travel – have developed in a way unimaginable even a few decades ago. Information travels at light speed and is accessible globally. Borders are becoming permeable and thus migrations – or non-violent invasions – are a phenomenon of scale unequalled before. Modern migrations are comparable in proportional volume to those of the greatest invasions of our History. The difference today is that they are peaceful, with or without visas. Their scale makes them as disruptive though, because they start to outpace the capacities of integration of their destination.

In the long run, this Great Mix has the potential to reunify mankind and to move us toward an interbred majority, merging all races and ethnicities into one – as we were at our origin. In the short-term, it brings de-stabilization because it is not managed at all.

Scientific innovation reinvents each facet of our lives, its immediate applications on consumer or industrial products and services generate new offers and create new needs that stimulate additional waves of demand for their consumption. Humans consume more to feel secure, satisfied and happy. They like to accumulate material goods as much as their neighbor to fulfill their social life. “Shopping” has become a ubiquitous leisure. Cities have expanded into working, living and shopping areas – all linked by an overlay of transit routes with streets, roads, highways and public transportation networks of all kinds.

Brands and consuming habits have reached a planetary scale: Disney and CNN, Angelina Jolie and George Clooney, Google and Facebook, Porsche and Toyota, Apple and Samsung, Louis Vuitton and Prada have disseminated worldwide. We all eat pizzas or sushi, drink tea or coffee and wear the same jeans. Once local, these products are now symbolic of our global lifestyle. In spite of the historic weight of our identities we have homogenized our consumption habits. In many fields, we have already started to become a *Homo sapiens Universalis*. The menu on board “Blue Planet Airlines” is becoming more familiar... Would you like fork and knife or chopsticks?

Astonishingly though, in spite of the extraordinary universal re-convergence of our evolution, we continue to govern ourselves as if each of our countries had its own local garden and its own independent atmosphere. We consider that this situation is completely normal.

Distances and time have become minuscule in our world village, but the weight of our past prides and wounds has not disappeared. We are unifying in our imitation of each other’s way of life. Our leisures, tastes, work, travel, readings and accessible information are converging. However, we continue to be primarily attached to our particular historic past with the anchor of

our national individuality. We fiercely belong to a linguistic, ethnic, religious and national group as if it was coming in opposition with our broader global human identity.

Many of us often feel torn between universal modernity and our traditional roots. We have a comfort zone. Our national or local conventions prevail as soon as they compete with the influence of a more generic wave of modernity – or our country feels like some kind of attack.

Globalization assembles us; it does not make us certified copies. It places us where we genuinely are anyway: in a single ecosystem of which each one of us is an integral part. We are all children of Earth; our atoms belong to her and will sooner or later return to her. A cloud coming from Chernobyl or from Iceland contaminates everyone on its passage depending on where the wind and the currents push it, the same for an epidemic of AIDS, influenza A or Coronavirus. The problem always come from somewhere else, but we all share its outcome...

We need a bridge. Ancient civilizations, History, borders, geographical fractures and beliefs – they are still here. They all exist and cohabitate. They are the fruits of the accumulated cultures of the people before us, who have grown and developed in their geographically separated clusters. Although we unify, they should remain our cultural inheritance. There is no intention to challenge that. But we must be able to raise above the past to create cohesiveness against our new challenge.

Identities do not have to be hidden or masked to allow Humanity to move toward full globalization. On the contrary, they should be the stepping stones of its integration process, the bricks of the large Babel tower of mankind.

We continue to wage war on globalization by cultivating our differences against the inescapable universalization of our civilization. We carry on denying the ecological wall that faces us by letting each nation regulate its independent path. On the contrary, a majority of the people must start to think differently and build a common forum in which we can re-align: we need universal points of view. We must find ways to foster a universal public opinion.

Social networks and they true-or-fake-news, as unperfect and manipulated they can be, are the first burgeon. People need to find ways and help greenfield international movements to emerge – ultimately political parties which only exist at the country level today. We must think about how to leverage all the communication tools that we can find at the global level. We must crusade for full globalization as the solution to rescue our civilization. The future of the species relies on such a shift in our historic mindset.

We are the result of an amazing History. From the first tiny hominids who spread everywhere from a single place in Africa, we then slowly evolved and diversified, as people and cultures got separated by immense spaces. We ultimately dominated everything and everyone else on Earth to the point of becoming our own sole enemy, endlessly fighting or competing with each other across our national borders.

*If anything, the shock provided by the current Coronavirus crisis, with billions of people in confinement having be forced to take the time to live and think differently, can be a catalyst. It's a very small catastrophe compared with the future impact of the ecological Great Wall. But it has*

*the merit of happening now, to energize our minds with a complete surprise. It makes our lack of global coordination evident. All in all, it's a wake-up call that challenges everything.*

China, with the chain of command of a single party and country, has confined its epidemic to one province. Meanwhile, the Chinese authorities did not really warn other nations for several weeks or months. With no organized global control, the epicenter moved everywhere else initially unnoticed. Isn't this a lesson to all of what a country-led world can do? A country saves itself and lets everyone else suffer?

This crisis also proves the disconnect between the economy and the society – the global economic supply chain seems to be out of anyone's political control. We heard: "Who has the masks?" Or: "Really, how come in such a great country we can't produce enough masks? Why do we need to rely on China or Turkey?"

Suddenly, it flushes the obvious of our global interdependence... But amazingly enough, it reinforces isolationism and the belief that the solution has to be local. We naturally focus on measuring the impact on each country (the death toll in Italy and how come South-Korea did so much better) instead of trying to stop the virus to impact the rest of the world and to contain it surgically with global information sharing, global supplies, global vaccine research, global experience sharing. The WHO is powerless in trying to manage the crisis globally, as no one has access to all the ammunitions that mankind can pull against the crisis... We should reflect on the situation. Isn't it the catalyst to experiment a new beginning? Exactly the opposite of what most of our national politicians have tried to do so far under such a wind of panic.

We can only be sure about one thing: we are the first generation that is aware that our model is unsustainable. *We can turn the page of the History of countries and enter into post-history, an era where the story of the world matters the most, because it's the scale of our challenges.*

Like pre-history at our origins, "post-history" is again a borderless world. It is ruled by a new paradigm. We are global beings. Our culture, our education, our economy and the diversity of our population are globalizing. Our fragmented political model needs to catch up. With this frame of mind, what we see today is a civil war – the fight of the countries is the fight our our own people against each other.

It is *just the beginning of a great transition*. The Wall is just ahead of us and we must figure out how we are going to jump over it. Then we will see the light above the cloud of our borders.

Earth our country.

## **Chapter Three:**

### **Our Great Transition**

**F**ive centuries ago, the dreamer Christopher Columbus followed by the greedy Hernando Cortes, initiated the first era of globalization. After them our world shrunk. Columbus's discoveries allowed us to connect all the missing pieces of the globe and proved the truly finite and circular identity of our immediate universe: Earth.

Made aware of the vast new space available, Europeans got compelled and increasingly obsessed in conquering it. Over the course of four centuries, Europe made a fabulous race to make the world its global empire – first politically and then economically.

These last empires were heedless of their impact on the resources they raked up and transformed during their expansion – including the natives whom they viewed as another resource. Then came the bloom of technology's advance. The discovery of the power of combustible fossil energy augmented human labor with engines. We moved into an era of great innovation. Fast transport, cheap textiles, mass steel production, sophisticated industrial machines, electricity, revolutionary medicine, chemical agriculture, tap water and central heating to name a few - opened up the capacity of production needed for mass consumerism.

The economy became international, with London after Madrid controlling half of the world, along with hubs like Paris, Berlin and New York. Fruitful global mercantile trade across the colonial world diffused a lot of the conflicts of interest between European nations, projecting their battlefield into global competition for economic space in Africa, Asia or the Americas.

A terrorist attack of secondary importance in 1914 in Sarajevo reminded a flourishing Europe of its internal systemic demon: nationalism. A war of unseen proportions spread in a few weeks like wildfire, with the domino effect of intra-European and intercontinental alliances. Suddenly without a worthwhile reason, the entire world plunged from the euphoria of universal scientific progress to the deepest horror of the first mechanized world war. From Europe to Africa and from Asia to America, the world turned into an immense butchery. Tens of millions of men were killed, destabilizing European's population pyramid as well as ruining its industry and halting world trade.

The First World War was the first truly global political and military happening. Following colonialism, it opened up the second chapter of modern globalization. The internationalization of our national destinies engendered the first human disaster at a global scale. Many wanted to believe that this horror would force the world to finally unite politically, given so many miseries. On the

contrary, instability between winners and losers seeded the the next conflict and ultimately ignited the fire of the Second World War.

1914 was the first globalized conflict and a catalyzer for global political innovation. Destabilizing czarist Russia, it enabled the birth of the USSR which tried to implement in real life a model that had been so far only a utopian philosopher's dream: Communism.

International Socialism became a grand-scale reality and bifurcated nations in two archrival clans. The world became bipolar. Communism spread throughout half of the world to China, Latin America and elsewhere. It created a second pole that challenged the historical Western colonial empires won to Capitalism, themselves often confronted to a strong internal Socialist movement.

The US economic crisis of 1929 - itself a consequence of the American post-war economic overheating - destabilized the world economies still weakened by the first world war. It increased unemployment levels in Europe as it was still trying to recover. It threw shaken democracies into a gigantic storm, tearing them apart between National-Socialism in Germany, Italy and Spain and Front Populaire (Socialism) in France.

The result was 1945: the second all-out war. It intended to be the losers' great revenge from 1914, against the perceived injustice of the armistice – a hazardous geopolitical cut in the first place. Germans and their allies were compelled by the desire to reclaim their lost territories and pride. Once again, the political implications of the game of international alliances pushed each country of the world to take a position in this conflict and to join in the fighting. This infinitely barbaric war, full of extreme devastation, occurred in the middle of the twentieth century – a period otherwise illuminated by scientific innovation and progress.

It generated the inconceivable Jewish Holocaust, the horrors of the war in China and finally the bombs of Hiroshima and Nagasaki. It demonstrated to Humanity that under duress, modern man remains the ugliest predator. Barbarism happened seventy years ago at grand scale and continues every day at a smaller scale, for instance in Syria. Horror can start *anywhere* and even *everywhere* again, tomorrow. Modern Humanity sits on the permanent risk of savage madness.

The Second World War officially ended in Yalta, leaving behind a bipolarized world, with ruins to be rebuilt. The battlefield was full of neo-imperialist lines immured between the zones of influence of two large winners, the USA and the USSR. Each one exalted itself as the conquering high priest of incompatible societies: the Anglo-Saxon liberal Capitalism on one side (the West) and the Soviet Communism on the other (the East), both powered and protected by an atomic bomb arsenal. Each pole was the fierce survivor of one of the two modern Western political ideals – liberal-Capitalism and Socialist-Communism. The rest of the world had to chose camp...

Surprisingly, the bomb turned into a two-headed monster. "I can destroy you, but you can destroy me too..." articulated the fear syndrome of the Cold War. Because threat of total destruction with the simple pression of a red button was so real, the balance of terror ensured seventy-five years of world Peace - despite the valve of occasional peripheral conflicts.

This bipolar game of planetary dimensions ended up with a clear winner. Americans associated economic liberalism, democracy and relative Freedom in their “camp”. They planified post-war into an economic boost for all of their allies, while saving their own infrastructure. They financed the rebuilding of the economies of Western Europe, Japan and Korea with success. They turned their ruined allies into avid customers. In return, US allies emulated their new economic master by reaching record growth in the thirty years following the war.

Soviet Communism on the other side got grid-locked into complete totalitarianism and destroyed the original dream of its people. It developed into an imperialistic, militaristic and bureaucratic unpopular and oppressive one-party system. It finally imploded under failing infrastructures, a pathetic economy and a poor standard of living, all in immense contrast with the success of Western Liberalism.

Trying to reform a rusted and corrupted system, Gorbachev reached a pragmatic and peaceful exit despite the internal obstruction of the apparatus of its own Party. I must confess that Mikhail remains one of my heroes - although not glorified at home.

In 1989, the peaceful collapse of the Iron Curtain tolled the bell of the socialist society. It opened the entire world to free-trade and to the free-market economy, after the seventy-year interlude of Communism. This event marked the start of a race for - *economic only* - globalization. Unintentionally, Gorbachev cut the ribbon of the global economic boom of the last thirty years...

With the fall of the Berlin Wall, we entered into the third phase of globalization. The world as an economic model became seemingly unipolar – “global”. Reagan’s America took the role of conductor through influence, rather than having the need for dominance or genuine control. The US dollar became the overall monetary stallion and the US army the overall pacemaker. Overall, the US won the virtual seat of planetary deal-maker, thanks to its strength as a democracy, federal constitution, non-exclusive multiracial nationalism, multinational corporations and contagious liberalism – the American Dream personified by Hollywood, Steve Jobs and the Statue of Liberty...

For the first time in History, one nation became the world’s clock-keeper and role model. The US final supremacy over the USSR – without even a fight - converted the hesitant and even recalcitrant to join its economic model. The fall of the USSR killed the alternative collectivist model, which weaknesses were disconcerting even before its fall.

America’s cultural, political and economical forces of influence grew formidable in the eighties and nineties. It became granted that there could not be tangible progress outside of an US-like model. American liberalism could not be ignored by anyone any longer. For the first time, one size was going to fit us all.

While Russia got buyer’s remorse and tried to learn how to rebound from the explosion of the USSR, China caught the free-market wave. The Communist Party saw the benefit that it could leverage from market globalization and made an extraordinary U-turn. Acknowledging with pragmatism the collapse of Communism while maintaining its name and political grip, China learned its lessons from the American winner and morphed into a new economic liberal champion,

with the amazing success now seen by all. Following the trend, hesitant ones like Brazil or India and even Russia for a while, decided to follow suit. With various degrees, everyone opened up to a new era of global free trade and Capitalism.

The world became a large opened market. Everyone started to consume as much as he or she could afford, manufacturing in the cheapest places. The standard of living of most people progressed like never before. These three magic decades for the world economy proved that in a world with seemingly no limit of resources, the liberal model could enable progress better than any other before.

The system was a victim of its own success. Global economic liberalism consumed the planet's resources and energy at an exponential pace. The model was supposed to maximize a single outcome – global growth in profits – and it succeeded to a large extent. But it was not designed to optimize the consumption of natural resources or pollution. There was no future long-term grand design, no higher-level sustainability concern for the society as a whole.

More troubles now come at the horizon. The new disciples of US liberalism continue to catch up economically with the West. They try to approach the GNP per capita of their “American idol”. Without a global regulation on resources management, the model of universal free-trade will most likely be unable to survive. Some countries will compete with each other trying to put a hand on rarefying resources. Others will try to manage an ecological balance and become uncompetitive. A crisis will unfold well before most of the world can reach America's consumerist nirvana...

Americans have taught the world economic globalization. In doing so they have continued to fuel their own business and enlarged the overall global market – making everyone richer. However, they missed the consequences of their success – the ecological implications of having the world reach the economic level of America. The outcome of US economic leadership is truly awesome in one dimension. Europe has caught up with the US GNP per capita, then Japan, South Korea, parts of China and now most of Asia is getting there. Latin America is on its way and on a more distant horizon Africa will join in.

All would have been great in a world poised with infinite resources. Unfortunately, the planet cannot cope with 100% of humans consuming as much as Americans today. We can in good faith scratch our head: how long can this global economic partnership last, with such an apparent reciprocal willingness between the rich and the future rich? For how long can the world economic upturn of the last decades be prolonged without a major upheaval in the environment and its resources? *The Western model cannot scale up to the whole world – unless in the meantime the model accepts a substantial global resource containment – which seems to defy its purpose.*

Somewhat incidentally, the election of President Trump rung the bell of the triumphant era of economic globalization. The “rust belt” elected a man to “make America great again”, translating into: get blue collars work back home from China. The dream was to make globalization one sided - good for the US only.

However, the times of an undisputed US hegemony had already passed. President Obama inherited a mess in the Middle-East and the 2008 economic crisis. Still, he federated global actions

in a way that nobody else could at this juncture. It was hard, as he could not impose anything any longer. He was the first US president since Ronald Reagan to deal with a totally new set of cards, with China turning from an economic servant to a giant on its own right, and Russia doing a political U-turn. The dices had rolled the other way around. Reagan inherited the uni-polar miracle, Obama the multi-polar constraint and Trump definitely keeps trying to steer back to isolationism.

The number one superpower had lost its absolute and totally undisputed supremacy, in part for having naively misused it – economically empowering China, financing itself on external debt and politically destabilizing the Middle-East. The realization and fear of a weakening America elected president Trump. It eliminated any possibility for a positive diplomatic outcome to such a multi-polar paradigm change.

As a result, *the world before us becomes more uncertain than since 1945*. With the global coach playing solo, former alliances and cooperations have been taken off the global agenda. There is no more global agenda.

Before we expand on the consequences and new risks ahead of us, we should recognize the enormously positive economic progress and increase in well-being for most of Humanity that the last thirty years have allowed. Half of mankind came out of poverty. We should also acknowledge and celebrate the longest global Peace since the last global slaughter – we tend to forget it as most of us were not born in 1945.

Yes, there have been many conflicts – some terrible in Africa or the Middle-East - but all have managed to be contained locally. Global Peace, including the Cold War, has managed to last for so long that we have even come to consider it as our new standard, in particular in Europe. Regional wars have been constant on the borders of the tectonic plates of civilizations, particularly those of a religious-centric nature. They sparked around the Arab-Israeli conflict and the related clashes between Islam and the Occident overall – such as 9/11 and Al-Qaeda leading to Iraq and to the Talibans. But since Hiroshima, the wisdom and code of conduct has been: “a bad Peace is better than a good war.” The Cold War, followed by global economic competition, have prevailed over the risk of a never experienced all-out atomic war.

Uni-polar economic globalization has solidified and leveraged this prosperous and peaceful time window. The planet has turned into a wealthier world village. All-out war has morphed into peaceful global economic competition. Global Peace and increased standards of living everywhere are the outcome of Pax Americana.

However, the worm was already in the fruit: globalization was only economic, not political. Economic and political competition were profoundly distorted, leaving many players on the side of benefiting from the model. Nationalism kept its borders and political regimes ready for a revenge. Our historical legacy - identities and civilizations - were taken by storm in such an economical growth and success, ready to fight back sooner or later, as no political integration was achieved during this period to channel back the benefits of business success into the prosperity and sustainability of the society itself.



We are now dealing with an extremely dynamic situation. We stand at the crossroads of full-globalization and nationalism, while suffering from the vanished US global leadership. The East is boiling in its fast-paced emergence while Western dominance is fading away, having lost its guide. Eventually we are reaching an inflection point between different ages. The dice of globalization is rolling at full speed and can suddenly stop and flip on either side. It's either full-globalization or return to full-nationalism. Economic *globalization is definitely at risk of moving backward if political globalization doesn't come to the rescue with coherent institutions and an environmentally sustainable framework.*

Nationalism gets an additional and unexpected help from the economic upturn itself. The last thirty years have allowed the sudden and amazing molting of ex-communist totalitarian states into hybrid systems, politically totalitarian but economically semi-liberal. *Poor communists have turned rich owing to global Capitalism, but have not denied their original political grip.* China is the most fascinating example. It has utilized global free-trade to finance its economic transformation, with a totalitarian political structure. It has learned to leverage to its advantage the opportunistic greed of democracies to develop its own controlled economic actors – in a classically one-party autocratic way. As a result, China's political apparatus appears on the surface to be stronger than ever. Russia is trying to follow suit.

Should we anticipate the emergence of a new model of “liberal totalitarianism” or the swan's song of totalitarianism? Is global liberalism the poison pill that will ultimately kill authoritarian regimes? This is for everyone's best guess and too early to judge. The question is of extreme importance though. Will democracy continue to prevail or is totalitarianism having a second life, as economically reinforced nationalism fights back against half-baked globalization?

The success of China is extraordinary. The fact that a totalitarian regime – openly ignoring basic democratic and human rights – has succeeded so well with the full support of the free-world is troubling. It gives the message to all other dictatorships or fragile democracies that there is a “liberal totalitarian way” worth pursuing. Surprisingly, it has created a true alternative to the enabling democratic free-trade model. Free-trade has ensured an extremely fast transfer of wealth from rich consuming democracies to the formerly poor suppliers, independently of their political regime. In thirty years, China has become the principal creditor of the United States.

At the peak of their influence, democracies have unintentionally reinforced the agonizing anti-democratic models, with free global trade. They naively offered a rope of survival to ex-communists and turned them into a much stronger reincarnation. Economy was the endemic weakness of Communism. China is now the number one economic superpower. The largest mistake of the US “global leadership” post 1991 has been to reinforce dictatorships owing to the free-trade game, instead of filtering economic engagement proportionally to the democratic level of economic partners.

This unconceivable tolerance is leading totalitarianism to challenge democracy again. Beyond the ecological issue, it is the largest drawback of this era. We had the opportunity to make the democratic model win the global game with shared prosperity, enabling new democracies such as India, Latin America or South-Asia to flourish and to build the foundation of a future global

democracy. Instead, we have reinforced dictatorships, made them the winners and given them the cards of future dominance.

*Democracies had won the global race, building on the Achilles heel of autocratic Communist regimes: economic failure. The USSR collapsed of this disease, while the Chinese managed through it owing to the rope of free-trade with democracies. Post mortem, this has completely turned the table in their favor. They now own economic strength together with the power of long-term authoritarian planning.*

Looking back at 1991, this was not meant to be... We are now where we are. Nobody can predict how the Chinese model will evolve, but it's hard to bet on the collapse of the system any longer. We need to acknowledge our new global hybrid political landscape and decide how we deal with it: true democracies (apparently weakened), true dictatorships (second life) and various hybrids (enlightened dictatorships or populist democracies). It makes it even more difficult to align national agendas for the future and to tackle global problems in a cohesive manner. From the potential alignment of a "democratic order", we have moved to the mis-alignment of a political hybrid disorder. Not only do we have many countries, but also very divergent governance systems to guide them. More importantly, we have let the winner and potential world's role model be a one-party regime.

In such a labyrinth, is there a way that democracy can survive and reclaim its leadership position? The conflicted ambitions of these political poles could steer some violent winds and ignite a worldwide conflagration, in particular with the current heavy hand manoeuvring at the White House.

*A relatively weakened America needs to take again a more universal approach. The November 2020 Presidential election is critical as it happens at such a crossroads. The aftermath of Coronavirus risks to reinforce isolationism as a lure against recession and make economic globalization our scape-goat.*

The last decades have taught us a great lesson though. Even weakened, a globalist US remains indispensable to the world order. With an isolated US as we have right now, we risk chaos since China is not yet driven with diverse and democratic values and cannot be accepted as our new conductor. It will take much longer for China to be "trusted" in any international role.

While culture and communications have converged toward a freer and more multi-cultural world, the fragility of our political construct has developed in an opposite direction. America was the original core engine of the system and has gradually lost steam. For now, it remains indispensable because Europe cannot unify itself while China and the other large emerging powers have not reconfigured complementary alternatives of leadership. They may never get there. Other than Brazil and India, emerging countries are not founded on comparable integrative multi-cultural roots, based on human rights and diversity. China or Russia lack a universalistic inclination while the US is a land of diversity and immigration.

A "post-Trump" US is the only possibility for the re-establishment of a stable world order. While imperfect, its influence – not to say governance – fills a daunting vacuum. We can see right

now the implications of its sudden absence. Without such a pacemaker for much longer in a now finite and economically globalized world, we are jumping in the unknown. All in all, the US is the sole anchor for democracies and our tenuous gateway to a universal future. It has been imperfect and is lately its own worse enemy. But what would the world do without such an influence at all?

*Hopefully a new path will open up in November 2020 for a more engaged, consensual and respected US. It will ease tensions and allow for a more cohesive approach to international governance.*

What was un-achievable with one dominant US leader becomes more realistic with the softer touch of an US influencer-only. It provides a banner of global continuity, consistency and eventually could serve as a stepping stone for a new universal political system.

A non-gregarious US can win even more respect if it behaves wisely, with an acute sense of integration for critical international interests. It is in the general benefit of everyone to see the restored United States build a trusted political forum for cooperation, until we can get to more formalized universally elected global institutions.

A softer-handed US influence will help to defend the proven benefits of free-trade, acquired over the last decades. It will continue the promotion of human rights, hopefully more forcefully. It will fuel the free communication tools that provide the invisible foundation necessary to the emergence of our world village.

*Good luck Joe Biden!*

The pace of economic change has accelerated. What took centuries now takes decades. This increase in velocity further highlights the urgency for increased global synchronization. The economic crisis that started in 2008 and its ripple effects are the testimony of the failure of the international organizations to control the world economic “system” cohesively. We deal with local fire brigades instead of preemptive plans and global initiatives. We have seen these brigades at work again with Coronavirus.

Should we take this “state of the dis-union” for granted, or can we invent a better way forward? Now that the Internet enables all individual voices to raise and to connect all over the world, don’t we have – for the first time ever – the missing open forum that a global public opinion needs in order to emerge? Nothing prevents us to shape a new thinking for our politicians – more global, less fragmented and consequently more efficient. Only a new universal leadership can resolve the challenges that we face. To emerge, such leadership requires the support of millions of us around the world.

Local and regional obstacles are profoundly entrenched in our international decision making. The individuality of national policies blocks a basic global economic and political governance. International organizations lack the empowerment to sustain our hesitation for much longer.

- The United Nations remains the only true platform where *everyone* can communicate but has no delegation of power and lacks the leadership coming from election by popular consent.

- The World Bank fulfills the important task of monitoring financial support to the most fragile nations, but its stabilizing role for the overall economy is at best limited.
- The World Trade Organization is useful in disputes resolution for commercial anti-discrimination, but few concrete results have materialized after slow procedures.
- The International Monetary Fund has been an awesome lender of funds to countries in crisis, but lacks leverage over countries that are not its creditor and seems unable to address profound commercial imbalances.

If we simplify the situation to its basic reality: it is clear that all the important international decisions are made directly by the concerned countries. Typically, deals are bi-lateral (one-to-one) or multi-lateral among the great powers (few-to-few) while most of our problems have become global and impact everybody (all-to-all).

The intrinsic weakness of our international institutions is that they are condemned to limit their roles to official intermediaries, for solutions that are designed for all by a small or bi-lateral group. They cannot push for decisions against any of the great powers. Typically, Russia, China or the United States will never agree on a given decision when it harms their direct or even indirect interest. It has been worse lately with the US itself gripping the system. One nation is enough to block everyone else.

Thinking positively, the leading powers may end up one day to eventually agree on how to handle North-Korea, Iran, Syria or ultimately Palestine – although they haven't yet. But they will *never* make a direct national sacrifice for the benefit of resolving a global fundamental issue. Local interest prevails – *always* – even in front of an imminent global threat. We can see it every day.

International organizations are fantastic on their own merits, but have been intentionally designed to be weak enough for the nations to exclusively prevail. They represent the minimum link between countries, so that the countries can dominate. They “excuse” the lack of a cohesive system. They are meant to be as tenuous as they possibly can. They embody the official facade of world governance. In reality, the anarchy of the countries rules our Blue Planet.

It is fair game to pick on international institutions as a proof-point that nothing can be done globally. We forget to mention that they are only what the nations designed them to be in the first place. The nations are the masters and the UN the slave. If an organization “misbehaves”, its funding is cut – like the WHO's. We are used to the reassuring smiles of our leaders on the traditional pictures taken at any international leadership gathering – it always looks like everyone is so friendly and happy to be together. These smily faces hide that the world is solely controlled by the chaotic imbalance of the individual national forces and interests. There is nothing else.

The solution to the problem that we face can only come from a reinvention of the role of our international governance. We need a quantum shift, from many powerless institutions to one powerful constitution empowered *above and beyond* all countries. Somehow, there must be a *transfer of power and ultimate sovereignty for international affairs from the national to the global level.*

A universally elected international entity should represent the voices and the general interest of all the states, nations and countries and serve all men and women to deal more efficiently with the overarching issues that we face altogether. *It is only by superimposing a world government to the current anarchic autonomy of our hundreds of sovereign nation-states that Humanity will take the reins of its future.*

It is so evident, so obvious, so logical and at the same time so *impossible* isn't it? Utopia, fantasyland and wishful thinking it is. Why would everything be possible in the world of technology which strives in constant innovation and everything would be so impossible in the world of politics? Some dreamed of a global social network and they made Facebook a reality in just a few years.

Ultimately, “great powers” will awake at some point to the increasingly evident reality that the weakness of our international institutions is working against themselves. It does not appear to be the case just yet because their individual political construction prevents them all to think laterally as a peer group. Even when they try hard to build a multinational edifice – like Europe – we can see how hard and discouraging it is. There is a generic political myopia that dominates all national thinking. The “establishment” has not started to think globally yet. Our leaders can't resolve the growingly global nature of the issues they are dealing with, so they keep running faster on their national treadmills. They can't see yet that if they were just stepping down from their endless running loop, they would suddenly start moving forward... The continuum of their national History prevents them from “thinking big”.

We need a new political dimension. While the global plane continues to zigzag, nobody seems to accept that an unstable and uncontrolled world is heading for a potential crash, which will ultimately destroy most individual national goals and benefits, instead of protecting the selfish interests of each country. The US cannot win alone. China cannot replace the US and take over world leadership. Russia cannot win with 140 million aging people and an economy built on fossil oil and gas. Europe can do much better united and fill some of the vacuum, but it misses the alignment of visionary national leaders to become one.

We must finally move away from our collective myopia and focus our vision on the kind of solutions that make sense at the level that ultimately matters. The legitimacy for a new form of cross-national leadership will come from billions of citizens who share a sense of belonging that goes above the borders of countries. We are clearly not there yet, but nothing prevents us from getting started at the grass root level – we the citizens of a world which has now become “small enough” to be effectively managed as our single country.

We are reaching a turning point. The evidence of our collective blindness is imminent. As we cross the chasm of the old world to the new world and realize the need for our big transition, we are completing our great metamorphosis. We are mutants, from a gregarious identitarian *Homo sapiens Sapiens* – unable to deal with the saturation of Earth – to the *Homo sapiens Universalis*. We are preparing to adapt ourselves to the new constraints of our post-industrial society and to our finite ecosystem. We are starting to learn that building sustainable Peace with Earth is the missing key to any promising long-term future.

It is time to change gear. The anarchic sum of our good old local recipes nurtures our global instability. New powers emerge and the West loses its grip. Nationalism is up for a revenge. Free-trade has reinforced totalitarianism. A virus cannot be fought by a single country. Our resources become scarce and our natural setting warms up. Somebody can make the case that the relative global Peace that we have seen since 1945 – first owing to the Cold War and then to the leadership of the US – may be coming to an end. This is all piling up at the horizon. And contrarily to what we have seen over the last seventy years, Peace is not a natural state in a world solely governed by the disorder of independent countries competing in an increasingly challenging environment.

One country, one home, one team – for all of us. It is time for the Great Transition.

Earth our country.

## Chapter Four:

### The Great Waste

The free-trade consumerist model of these last decades has un-intentionally created its own limitation with waste and pollution. How many more individuals can own and use multiple cars, several air-conditioned houses, commute by plane on a weekly basis and eat so much meat and sugar that obesity has become the most widespread disease?

Our Western lifestyle generates in average twenty tons of carbon dioxide per head per year – almost 2,000 tons in the lifetime of a single human being. An average American consumer rejects 20,000 times his weight in CO<sub>2</sub> in the atmosphere.

Our fast climate warming indicates that since at least the industrial revolution, we have begun to unknowingly derail our ecosystem. Moving forward, there are different scenarios of risk levels ahead of us.

#### i. The “conservative” scenario:

At the very minimum we already are on tracks for of a global warming of a *minimum of 2 degrees Celsius* above pre-industrial levels within the next thirty years, given the inertia of the gas already accumulated in the atmosphere. We just exceeded one degree already. Two is the official goal of the UN. It is very conservative, because most indicators show that we are going to exceed it by at least one degree and rather trend toward three degrees.

Sticking to two degrees assumes that we stabilize our annual emissions at their current level globally. It is very optimistic and politically sensitive, considering the double-digit growth of emerging countries. It can only be achieved if developed countries reduce their footprint significantly while the emerging ones increase theirs only slightly.

To get to the magic goal of two degrees, the CO<sub>2</sub> concentration in the atmosphere would have to be restricted to 450 ppm at the maximum in the future. We have passed 400 already, from 300 in the 1950s. It will be tough to freeze the trend and stay below 450, unless some pivotal sustainable changes finally materialize.

Of course, these numbers are completely meaningless to most of us. To put them in perspective, the last time there were such high CO<sub>2</sub> emission values on Earth 4 million years ago during the Pliocene era, jungles were covering northern Canada (source: *The Economist*, May 11, 2013).

Estimates keep changing. Predicting the future remains a difficult and somewhat uncertain exercise. But the trend is indisputable – just look at Bangkok growingly underwater, the North Pole freeing up, the glaciers disappearing or the increased intensity and frequency of hurricanes.

The UN climate chief Christiana Figueres warned us ten years ago already: “With 400 ppm of CO2 in the atmosphere, we have passed an historic ceiling and have entered into a new zone of danger. The world must wake up and acknowledge what it means for the security of mankind, their well-being and economic development. There is still a chance to escape the worse effects of climate change, provided a political response genuinely addresses the challenge.”

## **ii. The “realistic” scenario:**

Unfortunately, a more logical scenario is that our global rate of development and pollution continues on its current path. This “realistic” assumption simply projects constant historic growth of resources and emissions. It is “business as usual” - just more of the same.

In this scenario, experts count on a mid-century warming of *around three degrees* against pre-industrial levels. This is the situation on which most scientists put their bets. Some see that if the trend persists and nothing massive is done to react globally, we might reach a few decades later – by the end of the century – an increase of four degrees or even up to five degrees on the higher end. No one can really predict how the ecosystem would react if this was to happen. It would drive a chain reaction of extreme climatic events of unpredictable consequences, which evidently no man before us has ever experienced and could ever measure.

## **iii. The “extreme” scenario:**

We just considered two basic assumptions: i. freeze everything to current levels (conservative) or ii. keep going with the current growth path (realistic). These are the mainstream scenarios around which politicians are currently encircling their UN led negotiations.

With from a more paranoid perspective though, more complexities should be inserted.

- First, demographic growth only comes from developing and emerging countries. Their population is anticipated to grow by another 50 percent between now and the middle of the century – in particular Africa, where half of our total population growth will come from. It represents a specific challenge: “newcomers” will originate from areas where local ecosystems are already the most fragile such as subtropical zones. People will try to migrate in larger numbers than today, facing a growing resistance at destination.
- Secondly, emerging countries will continue to develop economically with higher GNP per capita, copying the model of growth pioneered by their Western predecessors - furthering their impact on the global ecosystem. This factor is pivotal. Today poor people from Africa or developing Asia emit only 100 kilos of CO2 per year. That is 200 times less than their distant American neighbors who, together with Australians, occupy the other extreme of the spectrum. If by the end of the century the material progress of all men levels out to today’s Americans, global CO2 discharges will be over ten times higher than today.



This nightmarish scenario would warm us by *4 degrees in 2050* and five by 2100. We cannot let this happen by any stretch of the imagination. It implies a short-term catastrophe for mankind in the short-term.

Our national political leaders should be less concerned about faking realism of the conservative scenario (it's already game over) and instead to fight to fence us to the realistic one (make it the red line), since 3 degrees are already in motion. The “extreme scenario” would be a cataclysm in a matter of decades. 4 degrees should be the nightmare of our leaders, because there is a serious probability attached to it given our current pace. We are not saying that it *will* happen. It *likely will if we keep going on our current trajectory* – natality and economy – and maintain our legacy business and consumption models.

Obviously, there is hope that we land in-between the first two scenarios. I can even hear more than one of you thinking: “the nightmare of the extreme scenario cannot occur because in the meantime cars will be electric, heating will be solar-powered and people will learn to be much more energy efficient.”

My response is: “Great! Perhaps this virtuous trend is at the horizon and we can see some timid signs already. But – what if not?” Let's be fair to ourselves: we are not reinventing our society at the appropriate pace and depth. What happens if no magic wand comes into play and everyone keeps fighting for what appears to be best for his or her own country – and the “realistic” or even “extreme” scenarios continue to develop?

While these hypothesis can be discounted as a simplification of the genuine complex challenge ahead of us, they enable us to at least calibrate the size of the risk that we are facing and to appreciate the urgency of the preventive reaction needed.

We need a radical concerted political anticipation and an engagement of all countries together to quickly and drastically reduce their emissions. Without this, the future scenario will be extreme. Its impact can be a military conflict or a protectionist economic blockade between the rich, the new rich and the future rich, or a mix of all of them.

- Thirdly, environmental “hot spots” are worse precisely where populations and economies grow the fastest. The zones between 30° and –30° of latitude are most vulnerable. It is unfortunately there that the risks associated with climate warming will be the greatest, creating shortages of drinking water, famines and an acceleration of migratory flows – peaceful or not.

On the positive side, the growth in human fertility rates will possibly decline following a peak in 2050. After that, population could stabilize or even reduce, with birth rates already falling in some developing countries like Brazil, Indonesia and certain parts of India.

A 2:1 fertility rate represents the equilibrium of replacement between the old and the new. Already half of Humanity has dropped below this line. If the trend continues, the species could stabilize in 2050. At that point, we will become an aging population with fewer children. It has happened in the more developed societies already. While appealing, this thesis is challenged by

the UN, which currently predicts that we might reach 11 billion people by the end of the century – still a slower growth than what was experienced over the last fifty years.

If we anticipate a reduced demographic pressure, *the essential problem to be attacked and resolved becomes the reduction of the individual consumption and pollution per capita*. We must solve for the upcoming waste/consumption of resources per capita of emerging and developing countries rather than for their birth-rate. It is the factor of further destabilization ahead of us.

As we saw earlier, this means attacking the foundation of our civilization, which is growth-centric since the beginning of History. While numbers speak for themselves, they are apparently not sufficient to create the needed “fear factor”. Can we see what the shock of a pandemic can do? Suddenly people stay at home – they obey.

*The risk of dying tomorrow – of Coronavirus – even at a 2% probability - is much more convincing than a 100% chance of destroying the environment. Even if 100% of our children will suffer from it, with their own children even bearing the risk of disappearing.*

We have seen these scary numbers for quite a while already. I had related an extensive summary in the first version of this book ten years ago. Global surveys from the World Meteorological Organization (WMO) for the decade 2001-2010 came out by mid-2013, showing that “94% of reporting countries had their warmest decade in 2001-2010. No country reported a nationwide average decadal temperature cooler than the long-term average.” Secretary-General Michel Jarraud of WMO had declared: “*On a long-term basis, the underlying trend is clearly in an upward direction, more so in recent times (...) The observations highlight yet again how heat-trapping gases from human activities have upset the natural balance of our atmosphere and are a major contribution to climate change. The laws of physics and chemistry are not negotiable.*”

Professor Piers Forster from the University of Leeds went further: “For the past decade or so, the oceans have been sucking up this extra heat, meaning that surface temperatures have only increased slowly. Don’t expect this state of affairs to continue though, the extra heat will eventually come out and bite us, so expect strong warming over the coming decades.”

The ultimate official authority for climate issues is Costa Rica born Christiana Figueres. When she was Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC), she broke down in tears speaking with the BBC in London in October 2013 about the impact of global warming on coming generations: “I’m committed to climate change because of future generations, it is not about us, right? We’re out of here. I just feel that *it is so completely unfair and immoral what we are doing to future generations, we are condemning them before they are ever born*. We have a choice about it, that’s the point, we have a choice. If it were inevitable then so be it, but *we have a choice to change the future we are going to give our children*”.

There isn’t much hesitation any longer from climate specialists about where the Great Waste is ultimately taking us. It is now broadly accepted that we are the influencers of the change. To be clear, such a fast climate change has never happened before without an external cataclysm – such as the fall of a meteorite. When slower natural warmings or coolings took place, we were not here to measure them. So, for the future, we work on predictions based on scientific models that have

limited references with the past, while we accumulate a ton of evidences from the present (ice, hurricanes, sea level, temperatures...). Unquestionably, all trends are converging. It's getting harder for anyone, including the Trump administration, to continue to argue that there is nothing to worry about and to further delay the urgency of massive action. Any non-partisan pragmatic observer can measure the evident effects of our industrial civilization.

Melting of glaciers is our easiest indicator. It is simple, visible, precise and irrefutable. Liquid state or solid state - water or ice - is binary and a direct function of temperature, within a degree.

Here is a short extract of an analysis put out already in 2009 on the impact of warming in the Arctic (*The Intelligent Life*, December 2009): "Since 1979 – in thirty years' time – almost 40 percent of the summer ice of the Arctic has melted into the oceans and the rate is accelerating. One day – some scientists predict in 2015, others in 2030 and a small minority hope for 2070 – there will no longer be anything in the summer except for an expanse of silent water at the summit of the world. The North Pole will be a point in the open ocean, accessible by boat. The Arctic, as it has existed for all of human History, will be no more."

Same could be said for the subsequent rise of sea level. The Intergovernmental Panel on Climate Change (IPCC) estimates that sea levels could rise by 23 inches (60 centimeters) by 2100. A different source, a panel of EU-funded experts named "Ice2sea", sees a mid-range global warming scenario of 3.5-degree Celsius by the end of the century, with sea level up to 15 inches (40 centimeters) and a one in twenty chance that it would go above 33 inches (85 centimeters).

Now comes the most important factor, because it is the root cause of most others. Carbon-dioxide concentration is the key source of global warming. On May 4, 2013, the barrier of 400 parts per million was passed (US National Oceanic and Atmospheric Administration, Mauna Loa Observatory, Hawaii). The first CO<sub>2</sub> number measured was 315 ppm in 1958. It went up by a quarter in only fifty years, with a rate of increase of 2.1 ppm per year – 0.5 percent. At current rates, CO<sub>2</sub> concentration will exceed 450 by 2037 and is clearly taking us above the conservative warming scenario of 2 degrees Celsius.

There is a huge amount of scientific materials available, of which 99.99 percent are headed to the same direction. Frankly, even without scientific simulations, the destruction of the natural state of our ecosystem and resources is clear enough to the naked eye. We can see by ourselves the increase in temperatures, massive melting of glaciers, rise in sea levels, increased frequency and strength of storms including never-seen before typhoons, deforestation, decreased air quality, permanent smog over metropolitan areas, deteriorating water quality in rivers and oceans, atrophy of the diversity of animal species and of bio-diversity, increasing scarcity of fish, expansion of cities and of human infrastructure and consequent shrinking of natural space, proliferation of cars and of their emissions, increase in non-biodegradable waste, rise in pollution related to food production, littering of old or unusable objects (from plastic bags to metal carcasses) - just to name a few. There is an endless list of man-made devastation of which we are the first ones to unmistakably see the first wave of full-scale effects.

What else do we need? *We miss the evidence of an immediate life-threatening global cataclysm* – such as the panic shock of Coronavirus. We miss a general wake-up call. 99% evidence is not

enough just yet as long as it doesn't hurt us in the face... Until the irremediable effects impact us in a massive way, we seem to be collectively blind, ignoring the obvious root cause despite its evident daily testimony.

There is another reason, beyond the lack of panic, that makes us so impermeable to the loud and clear message of our ecosystem. We have become accustomed to the constant degradation of our surroundings. We co-habit with almost no natural landmark in the urban areas where most of us live. We have immersed ourselves in a state of collective anesthesia, in which the abnormal artificiality of our constructions has become our normal parallel to Nature. If a caveman man from 12,000 years ago was transported for a day in our new world – New York City or Shanghai – he would feel like landing on another planet, a totally alien setting. In a matter of hours he would collect enough viruses to die in a week, but might collapse even earlier not even able to inhale normally without suffocating.

Our man-made environment looks normal to us, because we are used to it. It's our second Nature as we forgot the primeval setting of our ancestors. We can only calibrate our normality with what we see during our own lifetime. Since we were all born only a few decades ago, we don't know any better. Our eyes and smell cannot compare our setting with what it was a couple of centuries ago before industrialization, not to say 12,000 years ago before deforestation.

Are we even asking ourselves in good faith if we believe that our planet will cope with the growth of mankind indefinitely? Do we wonder if there is an end to what was in motion when we were born and when we eventually will die? So short are our lives, we adapt to change almost instantaneously. None of us can contemplate what preceded us other than through abstract scientific or historic reflections. How many of us do even have the time to care about this with everything happening to us already? Why to bother instead of dealing with the pressure of the day and try to optimize our present?

To be fair, we are not the first humans to make an impact on Nature. While animals kept playing their immemorial role in the ecosystem, humans have been deviating from theirs since the beginning of their epic tale. Starting at minuscule scale, they have invented and applied innovations to their surroundings. They have cut down forests to construct their dwellings and to make fire. They have over-hunted other species until they disappear. They have polluted rivers with their tanneries and other pre-industrial activities. They have mined ore and coal. They have carried plants, animals and even microbes on their ships, to new destination. Pre-industrial endeavors were not so benign. They could even cause self-destruction when scaled down to the size of a small setting like Easter Island.

But the volume was innocuous at the planetary level, relatively to the small number of humans limited to the bare force of their own muscles. The degradation of their habitat – paralleling their “progress” – developed little by little, aligned with the growth of their population and of their technological evolution. Before the Neolithic revolution, man-made pollution was negligible. We were just an animal among others. A very tiny quantity of us survived, gathering treats offered by Nature. It was level zero of human pollution.

When we learned to domesticate Nature, the curve of man-made pollution ramped up slowly, mostly with deforestation. Our effect was linear, parallel to the expansion of our agricultural civilization, which spread in concentric circles around Eurasia and Mesoamerica.

We then exponentially catapulted our ecological footprint with the industrial and agricultural revolutions and kept endlessly accelerating since then. The invention of machines activated by fossil fuel was the defining moment, it gave us the capability to dramatically impact our legacy environment, with unlimited scale. The industrial revolution enabled the systematic production of immensely larger volumes. Man's natural engine – his own body – and later his “natural” extension through domesticated animals, multiplied with the acceleration and power of new forms of energy and mechanized productivity. Man's capacity of disturbance to Nature grew proportionally.

Burning fossil fuels replaced arms, horses and wood – indirectly, involuntarily and unpredictably impacting our finite ecosystem's equilibrium. Man's energy consumption took a quantum leap. Human population grew, benefiting from technological and scientific progress. Life expectancy got longer through reduced infant mortality, allowed by medical breakthroughs such as vaccinations and better nutrition. Material comfort became a new finality in life.

The ease of extraction and utilization of fossil fuel energy has unleashed the economic explosion of the last two centuries. Fossil energy is cheaper than any other one discovered to date. Its transport and storage are equally simple. All it takes is a tank or a pipe to replace a multitude of horses or donkeys. One day, “industrial revolution” will be replaced by “fossil revolution.”

In less than two centuries we have constructed the entire structure of our industrial society on the plentiful availability of accessible fossil fuels. Coal, fuel and gas took millions of years to biologically develop since the emergence of life on our planet. They are the buried remains of the living organisms preceding us. Still, they could be extracted and burned at massive scale in a few decades, funneling smoke and pollutants into our fragile atmosphere and challenging its fragile equilibrium.

The fossil revolution has engendered trains, cars, planes, plastics, electricity, heating, air-conditioning, steel and metal production. It has reinvented the human society as the foundation of the modern civilization that we know today. It has recomposed our “natural” horizon. Cars, roads, bathtubs and lights are as natural for us as trees and rivers for our ancestors. We take comfort with our man-made world...

Nothing is more efficient than burning fuel, including our clean energies as they stand today. Oil and gas have become the engine of Humanity. Alternative cleaner energies have to face the unequal strength of this established colossus. Green energies are still struggling to win a solid footing. They remain more expensive or less practical - intermittent - with the exception of nuclear energy, which generates fear. Consequently, the rule of free-market still favors fossil energy. It keeps enough attributes to remain the economic winner for a while.

Unfortunately, time is running short. Combustion of fossil fuel pollutes. It generates gas into the atmosphere – primarily carbon dioxide. We discharged CO<sub>2</sub> into the atmosphere by the billions

of tons since we started burning oil. In 2019, we generated 36 billion of tons of CO<sub>2</sub>. This amount alone represented 150% of the total pre-industrial concentration altogether.

Once emitted, CO<sub>2</sub> stays in the atmosphere for around 100 years, while we keep emitting more. Even if we could stop our emissions today, the effect of the past would continue to haunt us for a century. We aren't dealing with a one-off situation that we can eradicate at any time. We have ignited a process with profound long-lasting consequences, a time bomb for future generations. We see only the tip of a melting iceberg. Independent of what we do now, the harm to our atmosphere will generate a chain of effects for centuries to come and is already irreversible.

CO<sub>2</sub> is the first pollutant gas and represents half of all gases responsible for the greenhouse effect. The other half comes from a variety of sources. Methane comes second, with around 600 million tons generated per year, through the raising of livestock and intensive agriculture. Levels of methane reached record highs in November 2018 with 1,900 parts per billion. Third is black carbon, which comes from poorly combusted fossil fuels or bio-fuels. Finally, nitrogen and ozone make for most of the rest. *Science* classifies the greatest causes of global warming in the following order. The top two are road transportation (CO<sub>2</sub>) and livestock production (methane). They are followed by gas production, rice agriculture, coal production, domestic/commercial fossil fuel use and polluted water runoff.

These are the first symptoms of what is coming soon to further disturb our ecosystem:

- **Climate warming.**

Global mean warming just exceeded one-degree Celcius above the pre-industrial level. Our climate has been the warmest in more than 11,000 years. February 2020 hit 1.17 degrees above the 20<sup>th</sup>. century average. Only February 2016 was warmer (source NOAA-NCEI).

The GIEC assesses with 95 percent certainty that this rise is purely man-made, due to emitted gasses that have created a thin layer in the atmosphere and hold in the heat created by the rays of the sun, resulting in an effect similar to the one of a green-house.

*Lately, rises in temperature have accelerated with 0.2 to 0.3 degree per decade, the average of the most current estimate is 3 degrees by 2050 – almost two degrees above current levels – according to the International Energy Agency (IEA), with a greater than 50 percent likelihood that this number gets higher and closer to 5 degrees by the end of the century.*

To put these numbers into perspective: *the current global temperature is only 5 degrees greater than it was during the last ice age.* What we are talking about is almost the difference between the ice age and now!

Furthermore, average global temperature increases are not spread evenly around the globe. Changes are higher on the poles and in the middle of the globe. Climate change also reinforces storms, hurricanes and typhoons and modify the pattern and amplitude of sea currents. Weather-led cataclysms of an unknown amplitude (floods, typhoons, droughts) have already started.

Finally, we are only looking at the century ahead of us. It is nothing at the scale of our species and even less for the chain of life – just an instant. More than a 5 degree difference is now very likely for the 22<sup>nd</sup>. century. It will have effects that are yet impossible to anticipate. Never during the previous millions of years and for sure since the existence of man and of its close humanoid predecessors has Earth been as warm as it very soon will be. No one can really predict the effects of such a flash warming. Many experts think that the climate has already entered an irreversible cycle that will take us to an irremediable and dangerous level. There can be unforeseen scenarios as well. For example, the enormous quantities of methane that are enclosed in ice and the polar permafrost can free up. They can cause a brutal and even greater warming. In other words, it can even get worse, but there is probably no way back.

- **Rise in sea level.**

Polar ice caps and ice floats are melting from above the sea level, due to the effect of the greenhouse heat trap. Below the surface of the oceans, the water temperature is increasing as well. When warming up, water expands its volume - think about mercury in a thermometer. Due to both factors – ice melting into water in the oceans and the seas getting warmer – sea level is rising fast.

Good news in the short-term is that seas act as a magnet for the CO<sub>2</sub> in the atmosphere. They delay the atmospheric warming effect and act as a time buffer to climate change. With their huge deep cold masses, they have a slower internal heat diffusion than the atmosphere, and they absorb CO<sub>2</sub>. As CO<sub>2</sub> is captured in the water, seas warm up slowly, getting ready to ultimately redistribute the temperature differential at their surface later on. Seas are temporarily hiding the full extent of the overall warming, they act as a buffer. This cycle ultimately affects sea currents, sea volume and the melting of ices. Additionally, as oceans absorb more CO<sub>2</sub>, they become increasingly acidic. More acidity harms the marine chain of life.

Indeed, oceans represent two thirds of Earth's surface and are very complex to understand and modelize. We are learning the effects of the overall warming on them, there will be surprises and discoveries ahead.

For at least the last 2,000 years, sea levels have been quasi-static. Since the end of the nineteenth century, they started to rise by 0.07 inches a year (2 millimeters) and for the last thirty years by around 0.12 inches a year (3 millimeters). What was a 12 inches rise last century (30 centimeters) is looking more like 23 inches for the 21<sup>st</sup>. century (60 centimeters). The water level curve parallels atmospheric warming, with the delay of waters' heat retention.

A rise in sea level of 40 inches - one meter - is currently the higher end of predictions for the end of the century. It will displace in theory approximately 1 billion people and will force the disappearance of entire states, countries or sub-regions like Florida or Bangladesh. Metropolitan areas located near the water will be primarily impacted.

The UN estimates that climate change could create 200 million refugees by 2050, more than the total number of worldwide migrants today. Recent floods in Bangkok and the shrinkage of many island-states already demonstrate the imminent effects of rising water level.

- **Deforestation.**

We started to clear up forests thousands of years ago with our first agricultural settlements. We continue today, as cultures, cities, highways and golf courses nibble away at territory and land. Forests still cover one-third of Earth's non-liquid surface, managing to absorb 12 percent of human carbon emissions. The massive deforestations in South-America and Africa – the two largest remaining natural sanctuaries – reduce further the effect of this indispensable lung. Tropical deforestation is responsible for 20 percent of the world's greenhouse gas emissions.

Between 2000 and 2013, the planet lost another 2.3 million square kilometers of forest, while it's grown 800,000 back, making for a deficit of 1.5 million square kilometers (580,000 square miles) - an area as big as Mongolia according to the University of Maryland. Brazil had shown the best improvement of any country during the period, but just reversed its trend in 2012 when its rate of deforestation increased again by 28 percent.

According to the magazine Nature, the footprint of cities has almost doubled between 1985 and 2015, their space has already increased by 10,000 square kilometers every year, occupying 650,000 square kilometres in 2015 vs. 360,000 thirty years earlier. Researchers from University of Delaware estimate that this trend will accelerate and the footprint of cities could be multiplied by six this century, hosting two-third of mankind. Cities could occupy 1.6 million square kilometers by 2100 (600,000 square miles), impacting agricultural land and forests with a cascading effect.

Submarine forests in the oceans are also essential to our ecosystem. They are preventing a catastrophe through the CO2 absorption of aquatic plant life.

- **Mass extinction of living species and reduction of biodiversity.**

We have massively shrunk biodiversity and are continuing to drive mass extinction of species and life diversity. According to National Geographic: "It may be the fastest ever, with a rate of 1,000 to 10,000 times the baseline extinction rate of one to five species a year. Humans are largely responsible for the striking trend. Scientists believe that pollution, land clearing and overfishing might drive half of the planet's existing land and marine species to extinction by 2100".

It's a genocide of massive scale. The last time such a crisis occurred at a similar pace was during the extinction of dinosaurs, which was due to an extra-terrestrial cause. We are reaching a similar effect to the planet, this time with an intra-terrestrial cause: ourselves.

The number of animals living in the wild continues to shrink, both on land and in the seas. There are not many non-domesticated animals species left on land. Industrial fishing – the marine form of massive hunting – is also emptying out the oceans, already stressed out by their higher acidity levels.

- **Generic pollution.**

Pollution, both visible and invisible is affecting us every day. For centuries we have dumped ever increasing quantities of pollutants and waste into the ground, the oceans and the atmosphere.



The results are now even visible in the atmosphere in the form of fine particles that make up clouds of brown dust, covering towns and sometimes entire countries. The volume of pollution is so vast that it filters the light below the gas greenhouse layer, so that the quantity of sunlight reaching Earth is now 10 percent less in some areas. In some megalopolises, the effect is already quite stunning. The degree of people's passive tolerance in Beijing for instance is amazing. Some days in this city in which lung cancers have already increased by 50 percent, it is hard not to cough when walking in the streets.

Putting all these symptoms together is what I call the "Great Waste". It's the toll of industrial mankind on Earth. As dark as the present may be, the picture becomes more worrisome when we project ourselves thirty years into the future and worse a century from now when our "triple whammy" expands its effects: a larger human population, with a multiplied individual consumption per inhabitant and a 100 years gas retention in the atmosphere.

- First, as we saw earlier the world population by 2050 will be higher by a third than today and three times more than in 1950. Such an increase will have to be fed and will mostly come from geographic areas that are the most at risk to climate change – where agriculture will struggle even more. This will result in massive relocations, with the potential of creating a chain reaction of conflicts over livable space and resources – in particular water.

- Second, the continued economic emergence of developing nations, coming from far below the standard of living of the rich, will rise their level of carbon footprint near the one of the US today. This factor alone risks to duplicate the carbon footprint of our species. One way or another, overcoming this material wealth difference among regions can generate a major conflict for the appropriation of resources and cause a climatic cataclysm as well. Polluting cannot just be the "privilege" of the rich, now including China which has accepted to become the factory of the West and therefore a unique magnet for pollution. Everyone wants a better quality of life and material progress, establishing a puzzling ecologic equation.

How do we achieve the objective of a relative equal standard of living across all growing populations of the planet, in a way that is sustainable for our environment? Can we reinvent our world economic order accordingly, despite every country wanting to position itself to compete for maximized production and consumption? Can we find alternative measurements of individual economic success and satisfaction – beyond owning and consuming more demanding fabrications?

Usually, when people agree on a problem definition, the solution is not far away. Here, the hope comes from a broader recognition of the great waste, so much more today than one or two decades ago. The coin has turned and deniers are starting to play defense. The argument between those who finally recognize what is happening to the environment and the ones who deny it will soon be defunct. Then will come the time for a popular movement around the world that stimulates politicians to dare and act.

But there is no consensus yet. This delay between generic evidence and public opinion is bizarre. It is reminiscent of the religious debate that continues to question Darwinian evolution. Post mortem in the future, worsening facts and measurable numbers will irrefutably prove the issue

and then everyone will agree. It might be too late. Let's analyse how such a chasm can possibly happen. Anyone looking at our climate and waste has the choice between three interpretations:

- The first interpretation is ours – *active and assertive*. What is coming is going to have major consequences on the fragile conditions needed by our chain of life if we do not make an about-face quickly. It implies that we must act fast, in proportion with the risk at stake and steer Humanity toward a route of sustainable development. The critical path is to resolve the problem of our political fragmentation and to reach the full globalization of our capabilities to implement a holistic solution. Global governance is absolutely necessary to breed a cohesive economic, industrial and consumerist model toward a zero carbon society.

- The second interpretation is to wait until we are “sure” that we completely understand what is coming at us – *sceptic and opportunistic*. “Maybe it is not so terrible. Experts are still bickering over their predictions. We observe symptoms but do not understand the precise causes.” We can hear: “this winter there was a lot of snow, so how can we be sure that climate is getting warmer?” The implied path of this approach is to take more time to better understand and then act if and when the “necessary day” comes. This is going to impact future generations more than ours, so why to take the pain of resolving it now? Meanwhile, we should stay alert, look for new ways to make this a better place as long as we do not disrupt our current economic and political castle of cards. Eventually, let's get ready for action when evidence solidifies and gives us no choice.

- The third interpretation is now only supported by a minority – *negationist and egoistical*. It is one of denial. Deniers of man-made climate change refuse to observe the facts and to consider the associated risks, pragmatically and logically, with an open-mind. At worse, this can be called revisionism of what even the bare eye can see. “I don't believe it; therefore, it is not true. And there is no proof that it comes from us anyway, so why should we change what has no link with the potential problem?” One can relate to people being in the oil business trying to delay the inevitable and selfishly defending their own wallet. But for the others – are they just fools?

With the level of evidence that we already have in front of us, it is impossible to accept such a point of view. It denies factual realities that any bare eye can now see. It comes with a dimension of “belief,” ignorant or by design, that climate change is not real. “The melting of glaciers has come and gone throughout History and has not been proven to be the result of our man-made pollution. Climate has been changing since the eve of times with causes we don't understand. This may be another climatic cycle as we've had before. In any case, we are not even sure that climate is changing. A warm year comes after a cold one, who knows?” For this third group, the response no action, continue to charge ahead with consumerist growth. All is good, business as usual, more of the same. Climate activists are leftists making noise with “fake news”, just a political nuisance.

One wonders what would need to happen to change their minds, if not a catastrophe at their own front door. Does the evidence of Coronavirus killing more than 100,000 Americans change their mind? In these circumstances, many of these people obeyed and stayed at home. Nevertheless, some armed protesters holding Trump banners flooded the Michigan capitol against the Covid-19 lockdown at the peak of the outbreak. Deniers can be stubborn...

For people sharing one of the first two interpretations – proactive or doubtful - there can be only one responsible reaction and strategy: we must deal with a major risk. To be safe, given the risk, we need to take immediate action. We must mitigate the *greatest risk that has ever threatened us*. *Our responsibility is to focus on reducing the risk, even if we don't have complete evidence.*

For any responsible person in 2020, the risk has become absolutely irrefutable and for most of us, the evidence as well. These two positions do not coincide in their degree of conviction, but they do at least agree on the elevated probability of a risk that highly threatens Humanity in the very near future. Even the most skeptical people can recognize with simple common sense, that the pollution of our over-consuming civilization is incomparably greater than before and that the ecologic impact will be immensely larger moving forward.

Consequently, a majority basically shares a compatible understanding on the situation at hand. Activists and sceptics both support the logics of extreme contingency planning. It's like saving for retirement, health insurance or building a saving plan for a difficult child. Both camps are prepared to invest in risk management. In such a situation of major future risk, a responsible person will act decisively, as early as possible, to keep it from ever happening. In economic terms and at a world scale, it means that we want to allocate a percentage of our GNP to cover for the risk. Have we done that? No, we haven't. We have not invested anything yet in our risk coverage against the Great Waste. We lack the combativity to challenge the deniers, who have managed to let us go unprotected.

Deniers are still powerful enough, they muddy the waters of change. Incidentally, they run the White House. Even when most of us agree with the problem definition, a minority of deniers is sufficient to delay the inevitable. We know why this is the case: the solution is expensive and will change our habits. And truthfully, many believe - right or wrong - that the solution will be a little painful. So, we don't fight back as hard as we could.

Al Gore called this situation “*an inconvenient truth*”: inconvenient because so annoying. We have to spend money for no immediate reward and we are not totally sure about its future impact. It is not a positive event to deal with. Instead, it is a risk – negative by essence - that we have to mitigate in advance. It takes policies that would potentially challenge more positive short-term economic gains. It's hard to win a popular contest, crusading for such a responsible plan. It becomes an “unpleasant” undertaking for any politician: allocating funds, building new regulations and fighting against powerful established lobbies. In democracies, it forces elected politicians to make voters unhappy in the short-term. In totalitarian states, it hurts the economy of regimes relying on economic growth and makes popular tolerance more delicate.

It is an issue of popular opinion before anything else. Popular recognition of the problem and general support for the risk-management policy are essential. It is up to us. Our popular voice can empower elected officials to finally dare to do what it takes to mitigate the risk. It is an act of responsibility for every citizen, anywhere, now and in the future, to support such a bold and decisive investment. We must raise an active *Vox Populi* that stimulates our politicians to come with answers - as “*inconvenient*” as they can be.

Remaining passive or deciding to do nothing is a dangerous stance when such a risk is so evidently pivotal for our civilization in its entirety. We must fight. Even if there was a very slim statistical chance that global warming would suddenly stop, or that the cause of climate change would be independent of human's activity – less than 5 percent probability according to the last UN report. Why should we take the foolish risk of betting Humanity's future for generations to come, against a 5% chance of being right and 95% of being wrong?

The time has come for such “*negationist*” interpretations to become totally obsolete. We cannot let what is now turning into a minority endanger the safety and the future of everyone else.

There is hope. The debate's sclerosis is starting to shift on a more active ground internationally. From generic denial outside the EU a couple of decades ago, a somewhat unanimous consensus has formed among progressive and responsible leaders of the world. China has moved a long way. President Trump and President Putin remain the most notable exceptions. At least one of the two goes through electoral referendum soon...

Assuming political recognition is in sight, the discussion shifts to economic grounds. How seriously do we want to invest into a remedy? How big of a budget should we allocate to win against this existential fight? What are the priority actions? Who is going to pay? How to coordinate a genuine global effort across functional and national boundaries?

Financing the reinvention of our societies against waste and climate change unfortunately remains a distant second in our national priority lists - at best. Economic growth always comes first. There is relative progress, although frustratingly slow. It remains a David-against-Goliath competition against economic growth. The first priority is to find ways to escape a recession, which has required the use of the very public funds that are lacking for the environmental struggle.

Coronavirus is raising trillions of dollars of public money in an instant, while our ecologic survival moves from conference to conference, awaiting a decisive punchline. It's kind of mindblowing: Coronavirus has led governments to accept the largest-ever impact on their economies through mass-confinement (immediate threat), while no sacrifice has ever been tolerated for climate change (longer-term threat): there is a lot for us to reflect on.

Still, investing to limit greenhouse gases below 500 ppm of CO<sub>2</sub> globally has emerged as a consensual line of sight. Fundamental international agreement on the necessity of placing the environment “near” the top of the world's political agenda has been reached, except for the US as of late and Russia among major powers, leaving the nations with the need to come up with a truly effective plan to finance it.

The good news is that reality of global warming is truly taking hold in our collective consciousness and is starting to get the attention that it should. Thanks to the integrity and credibility of the United Nations which is assembling everyone together every year, we are moving the needle in the right direction. Annual UN Climate Change conferences inject the issue on the international agenda constantly and force permanent negotiations among countries. The Kyoto agreement was the first official signal of climate change recognition, hammered by Europe. It already called for a 5.2 percent reduction of greenhouse gases by 2012. Of course, the countries

did not execute. The agreement of the Paris conference in 2015 was probably the most decisive move, signed by 174 countries. The expected wishful result was to limit global warming to two degrees Celsius, with a zero net anthropogenic gas emissions level to be reached in the second half of the 21<sup>st</sup>. century. The plan assumed that all UN member states – in particular the biggest polluters - would reduce voluntarily their carbon footprint. There was a momentum after the Paris agreement, now lacking a sense of urgency given the U-turn of the US administration. Out of the seven countries which generate more than half of the world’s greenhouse gases (China, US, India, Canada, Russia, Indonesia and Australia), only the US under President Trump pulled out, despite the initial ratification of President Obama. This was an unthinkable hit to the US global credibility.

All in all, the highly commendable UN crusade has shown how global evidence struggles to influence locally empowered ears. After sixteen years of frantic efforts to strike a binding agreement between the nations to limit climate change to bearable levels, “noise” is the simplest word to qualify honestly the level of practical achievement. This is absolutely not a critic of the UN which deserves an immense praise for its efforts – but instead reflects its lack of empowerment.

Experts judge that the level of the real investment required to stop and stabilize climate change to a sustainable 2-3 degrees Celsius line is in the order of *one trillion dollars* per year at a minimum, while the transition is being executed. It represents about 1.2 percent of the world’s GDP. This is ten times the amount envisioned at the Durban conference. However, it is only one third of the national stimulus just announced by the US for the Coronavirus. So, it can be decided under pressure... An investment of 1 percent is the lowest possible amount that the experts think could have a real effect, but it assumes a very efficient use of the money. It truly represents the lowest possible limit. To execute efficiently such a plan in a multi-national context without global governance may not be realistic.

An investment of 1.5 trillion dollars per year – almost *two percent of the world’s GDP* (1.8%) - is a safer number to shoot for if we want to definitely succeed to contain a derailment of the climate. Let’s visualise what the needed rescue package - two percent of the world’s GDP – would represent in a more practical way:

- Two percent of the WW GDP equals the world annual military expenditures. Cutting most of military budgets would pay for the “cost” of Humanity’s sustainability. Would the trade make sense for anybody?
- Two percent of the WW GDP is less than the cost of the 2009 banks bailout. But once again, the banks’ meltdown was an immediate catastrophe, with chain bankruptcies, millions of jobs eliminated, countries at risk of defaulting. Climate change goes slowly in comparison, like an invisible enemy politically much easier to marginalize.
- Two percent of the WW GDP is only a third of the global Coronavirus public response. We don’t have a holistic number as I write these lines, but the US alone has announced 3 trillion, the EU 500 billion – the global ballpark will certainly be around 5 trillion.

*A stabilized economic model – one with no need for cyclical public rescue packages in economic down cycles – would more than pay for Humanity’s sustainability as well. There would be no need for an emergency bailout every ten years in a stable global society.*

In summary, if there was such a thing as a genuine global political ambition, our ecologic sustainability could be financed. It can be done. It would already be sealed if we had a proper global governance. If we were in a total societal crisis (much worse than Coronavirus who will kill only a few hundred thousand souls out of billions), the world could allocate the money that cannot be found in the “long-term/slow-motion” mode that we are agonizing with. An ecologic “September 2008” or “March 2020” would find its immediate fix as well. If the state our planet was as alarming to our civilization as the economic warning given by Lehman Brothers to the financial markets or the risk of catching a nasty virus, we would be already on the other side of the Great Wall. It is just that *popular and political momentums are still far from being strong enough. Global warming is still seen as a theory, an opinion, not a fire burning in the basement of our own house. Carpe Diem remains the modus operandi.*

How can we create a sense of urgency before a climatic catastrophe unfolds? Is there a way to win the *Vox Populi* before we hit a tremendous climatic panic mode? Can we win recognition for a preemptive- emergency status? A huge typhoon or a disruptively warm year would certainly “help” – although some people could still challenge its origin and diffuse the consequence of the message. With a big ecologic shock wave, would there be final victory and massive concerted global action? Maybe – although we would still need to agree on who pays for what, how to channel funds efficiently across borders, make sure that each individual country maximizes its own benefits... Our fragmentation would still take us back to the reality of our global dysfunctionality. The 2009 funds went from public national money to national banks and enterprises. The 2020 funds will be spent from public national money to national companies and unemployed citizens. A global climate warming fund should have a borderless allocation.

Successfully establishing an agreement on such an investment is necessary, but let alone with a by-country governance, it would probably not be practically implemented, given the difficulty in obtaining funds and efficiently dispensing them through 200 nations that have different and competing agendas. The issue goes beyond reaching an official agreement and signing it – we already signed one in Paris...

We are, from this point forward, confronted with a structural problem of political dimension. Needed climate change policies will conflict with our national political fragmentation. Without doubt, it is the most difficult problem that politicians ever had to resolve. Hundreds of governments – one voice for each at the UN – share together a common situation of long-term crisis management. Long-term means that they have the luxury to ignore it for now, while the longer they wait the hardest it will hit their successors. For anything meaningful to happen, they must agree on a common analysis and must find a financial and societal solution to resolve it. Then such a solution must be implemented everywhere, so that all countries can trend toward zero carbon emission – nationally and universally – before the risk of the catastrophe that would impact everyone materializes and can be avoided or minimized.

It is hard to see how so many stars can align at once without a profound emergency call... Getting there with our current global governance system is beyond strenuous. In the meantime, the ecologic mouse-trap continues to close on an irresponsible Humanity.

Here is the response of President Giscard d'Estaing of France - whom I respect as the wisest European politician alive – after he received the first manuscript of “Earth our Country” in 2010: *“I share your analysis, but I am afraid that mankind lacks the wisdom to save itself.”* We should take this prophecy as a stimulating challenge, coming from one of the visionary founders of Europe.

To save ourselves, we must address the root cause of our challenge, not only its effects. We have tried to address the effects of climate change since Kyoto, with no tangible results. The root cause is the fragmentation and competitive nature of the nations, a system built by the sedentary-Neolithic Homo sapiens Sapiens. The anarchy of the nations competing through a rein-free economy has led us to our current sustainability impasse. The effect – twelve thousand years after the inception of countries - is the extraordinary ecological crisis in the making.

*I do not see how we can resolve climate change – the effect – without reinventing our political system – the root cause – and make it universal. Our equation only resolves if we turn the page toward the Homo sapiens Universalis, with a shared peaceful and sustainable society for everyone on Earth.*

Until the club of the most important democratic nations shake hand and take responsibility to behave as one, we won't stop to endanger future generations of all nations. It is hard to see how, after already so many symbolic trials, we can even continue to believe that nations will ever be able to respond to the problem of the Great Wall. To succeed, there are four main challenges that we need to address:

- **Reach a global agreement to finance mass-replacement of fossil fuels.**

Such an agreement must be enforced even though oil as we know it remains the most efficient and economical energy source for a few more decades to come, until its scarcity makes it uncompetitive. We cannot wait for oil to disappear – it's still too far out. Free-market timing could take as long as a century given the latest discoveries of shale gas reserves and soon Alaska and Antarctica. The switch has to be accelerated through political stimulation, limiting supply and demand of fossil energy.

Limiting oil supply means implementing quotas or taxes. Quotas would basically regulate the volumes of fossil fuels extracted. Since entire nations rely on oil, this approach is impossible in the world of nations. Limiting demand is already happening in many places, with the taxation of fossil fuels or highly polluting products to even out their end-consumer pricing. It benefits their cleaner competitors which are still more expensive to produce. The “carbon tax” is based on the “full cost” to the society of the polluting energy, not only the cost of its extraction and refinement, but an estimated cost of its polluting impact.

Either way, only a global public stimulus can bring about this economic change. If only one country implements a green taxation, it makes it uncompetitive against the ones continuing with the short-term free-market appeal of oil. Global economic actors can still use cheap oil where they don't face this “nuisance”. If one country cuts its fossil production, the state runs out of business

and cannot take care of its people. A cohesive program can only be implemented with at least the largest countries acting in unison and with solidarity.

If we are all serious about the challenge, every government should become both a taxer of pollution and a stimulator of massive investments in new energy sources. The goal is to create a long-term economic acceleration for new energies, attractive enough to investors to bring the private sector in. The action of governments should be clear and sustained in duration. Private investments can then rely on stable regulations to have time to make a profit, regardless of a long or difficult economic cycle.

The cycle of the energy sector is very intensive in capital from the very beginning. It takes investment in research, in development, then to establish an adequate industrial ecosystem (supply chain) and finally to market to new users. Only many years later comes the full return on the start-up investment. Such a cycle scares private investors away unless governments ignite and support this sort of change consistently. It is difficult for consumers alone, though informed, to willingly pay a higher premium for a greener product if given a choice – in particular during a recession. Investors also have short-term alternatives, while ecologic returns have a longer cycle.

Renewable resources have already made possible high-speed trains, electric or hybrid vehicles, self-sufficient “eco” houses, wind farms and solar power... The path for investment is clearly established and only waits for a large stimulus that will change the reality of our means of transportation and lifestyle. It doesn't take much to turn the tide if the public sector takes true leadership.

Our challenge is overwhelming, it is about replacing the engine of our industrial civilization. It creates its own opportunity: a new green sector will re-energize our whole economy. It is the clean energy growth story that every investor has been waiting for in order to jump in. If the public sector starts, the private sector will take over if regulations are clear and support a solid long-term model. There should be no political back-pedaling, which has burned quite a few already.

The virtuous cycle must start from the US and China. Together they represent 40 percent of our total CO2 emissions. With the EU, they emit the majority with 55% of the WW total. *The EU is sold for a long time. The US-China political partnership on these topics is the go/no-go starting point that will unfold the castle of cards.* Already China is making progress with its hydroelectric power which increased by 23 percent in 2012. In the US, shale gas replaces coal in the generation of electricity and is now responsible for one third of gas production and for almost one fourth of the total oil production. The EU's economic stagnation helps to contain its CO2 emissions. Still, despite the accumulation of these factors, global CO2 in the atmosphere continues to increase. At this point, the US holds the key. *Without the US leadership – or worse with an irresponsible US - it's hard for the rest of the world to make virtuous but painful moves. This should not be a partisan issue. It is about our civilization and shared future.*

- **Feed a growing population together with an increased GNP per capita.**

Emerging countries legitimately do not intend to stagnate and want their fair share of global materialist wealth. Getting richer, people multiply their consumption and accumulate an infinity



of goods and services, together with a richer diet. At the same time, their geography typically faces diminishing resources with a climate that will challenge agricultural yields in most places, due to bad weather and reduced arable land. Climbing temperatures will traumatize historical agricultural systems and impact their productivity.

Between today and 2050, the expected 30 percent population increase together with an improvement in standard of living for developing nations will generate a *70 percent increase in demand for agricultural products*. The demand for meat alone will double driven by the poorer countries. Individual demand for meat typically grows proportionally to per capita GNP.

These are good news for consumers of developing nations. They will be the beneficiaries of this accelerated consumption. Hunger and poverty will continue to shrink, with more people enjoying rich food, new cars, better homes and discovering international tourism.

We are taking for granted that the enormous growth in demand for food will be matched by the capacity of the agricultural industry – as it has been the case for the last 200 years in the West. Unfortunately, it is almost certain that farmers in developing countries won't be able to catch up. They would need to clear up much larger surfaces of land for cultivation and find more irrigation water, all while freeing land for the expansion of cities and adapting to changes in the climate that will affect their methods and products, as their soils react to new climatic constraints that are likely to be more harmful than good for agriculture – except in Siberia, Canada, Greenland and Antarctica.

The scarcity of water and available arable land is going to become the true speed bump of global food production, as demand will not cease to grow. *A large increase in food prices* appears to be the first inevitable effect ahead of us. Governments should take an initiative in anticipation of a major food crisis. We must stimulate an ambitious agricultural policy that copes with more stringent boundaries of tolerance for environmental pollution. Short of such a strategy, farming and food supply will become the critical bottleneck for the most challenged geographies.

For the last decades, investment in agriculture has been dropping. Today it represents less than 5 percent of global public expenditures. Consequently, the efficiency of agricultural techniques has not progressed much since the major yield improvements that were achieved until the 1960's. Innovation faces a plateau. From a 3 to 4 percent increase in productivity per year during the mid-twentieth-century agricultural revolution, the rates have stabilized to 1 to 2 percent – yields are flat. Yield improvements represent half of what was possible when dynamic food-centric policies were at the top of mainstream political agendas.

Nonetheless, agriculture today remains the number one activity of developing countries. Three quarters of the poorest people still live in rural areas, where too often they don't have access to a central market for their products. They cannot benefit from national or regional reach. In such places, investments should not only focus on production – agricultural techniques and irrigation infrastructures – but also on the logistics of communication, transportation and distribution needed to quickly move fresh products to hubs of significant scale. The ability of Africa for example to rise above subsistence agriculture and to start to export food crops would be increased tenfold with logistical and communication infrastructures that would be comparable to the rest of the world. This sort of investment has yet to be seen.

The key to the agricultural challenge will be to greatly boost the output without increasing the future use of water and land. The easiest solution is through an efficient global redeployment, utilizing the new lands in the upper North and the lower South that are becoming arable while soils will increasingly dry up and desertify around the tropics. We need a new agricultural revolution to ride on a wave of innovations that already exists, such as drip irrigation, better use of less aggressive fertilizers and widespread experimentation of seeds requiring less water. Overall, we must accelerate the investments in techniques that will re-accelerate production yields at a lower holistic cost to the environment.

Such investments are not affordable by poor countries, while they are the ones that need them most. They cannot grow their food supply without having an even greater impact on their environment – like cutting more precious primeval forests. Nor is it desired. Why should we force individual countries to cut trees, harass their poor soils and dry up their water resources in order to achieve agricultural self-sufficiency, when no country can be self-sufficient in anything any longer, with the economic globalization of everything else?

Soil quality, water and weather – as well as population density – are unjustly distributed by geography and climate. The problem cannot be resolved in autarky by a country under such a stress. It has to be addressed as a global problem, or the outcome will be more painful.

We must look at agriculture as a global business in the perspective of global resource management, consumption and preservation. A new model implies a more holistic approach. Only appropriate anticipation and international capacity planning for the growth in global demand will make it possible to feed the greatest number of people with the lesser harm on the ecosystem. Strategic planning of food production is required to map geographically the potential of the soils, to match them with the optimal crops and to maximize outputs while containing the stress on the land and its ecosystem, such as available freshwater. All has to take place dynamically, while climate change will redraw the available productive arable lands and the productions that they can best generate, given their evolving natural constraints.

Growth in demand will be the highest in places where the local ability is the most fragile. Most developing countries are grouped between the two tropical lines and cannot reach a level of self-sufficiency without causing an ecological disaster such as massive deforestation. *Globalized agriculture is the only viable direction for the future.*

This global opportunity represents an international chance. Agriculture will become again a truly strategic sector. It can be green and efficient, strong and attractive to investments and to technologies. Today, nations are making their plans for energy security. Soon, if not already, they should add plans for their food security. China is reported to have acquired or leased 2 million hectares of land in the Philippines and Laos (planning for 2 million more in Mexico, Tanzania and Australia), the Emirates just bought 900,000 hectares in Pakistan (planning for 800,000 more), Saudi Arabia 1.6 million hectares in Indonesia, South-Korea 700,000 hectares in Sudan (Amitava Mukharjee, Food Security in Asia)...

Modernization of agricultural logistics and distribution should take an equal part in the food supply equation. Access to consumer markets and the quality of trade lack the efficiency required to transfer increasingly scarce and more expensive products to the greatest number of people who are in distant or remote locations. As food becomes more precious, the entire chain from the producer to the consumer must be optimized, to minimize our endemic waste and transform the full chain into one that is truly modern and efficient.

Food waste is a huge issue. The level of waste from production to final consumption – those left-overs that are useless and cannot be consumed because their consumption date has expired, they have been spoiled or have been damaged in their harvesting, transport or distribution – has become totally unacceptable. Over 1.3 billion tons of foods are spoiled every year, representing a global loss of 750 billion dollars, according to the FAO (UN's Food and Agriculture Organization). FAO's president Jose Graziano da Silva declared: "Each year, the food produced and not consumed is equivalent to the volume of water of the Volga River and is responsible for the reject in the atmosphere of 3.3 giga-tons of gas with greenhouse effect." *This pure waste corresponds to an incredible 30 percent of the total cultivated land in the world!*

This is a huge problem and opportunity. The number of well-fed people who can be tolerated for the long-term on our planet can only be understood once the food chain is made as efficient as other strategic businesses. The potential for improvement is enormous. However the way to close the gap is still unclear, as this problem has captured little attention so far. It should now be in the top of the world's political minds as food scarcity will become our biggest challenge.

- **Anticipate millions of refugees pushed by poverty and climate change.**

The pressure on international migrations is a challenge with many fascinating repercussions. As man-made climate warming continues, our landmass will be redrawn with a new sea level, new deserts and a shrunk temperate living zone.

Last time such a change impacted mankind was the end of the ice age. Given the borders that we have artificially created in the meantime and the mass of our siblings, the warming of the planet that we are currently experiencing does not appear to have the same promising outcome. This time, the warming will plunge billions and not thousands of people into the instability of a new setting. To make it worse, we now have passports, countries and national borders, which did not exist at the end of the Ice Age. This time, borders block or filter the infiltration of refugees as well as the tolerance for demographic re-adjustment. It is an all new paradigm. We have frozen the localization of our people within a geographic perimeter, assuming that it will never change because Nature will remain the same. And Nature is now changing... While our ancestors experienced what appeared to be a natural phenomenon, we are dealing with our own impact, one filled with CO<sub>2</sub> gas clouds and other methane produced by our own activities.

There is a positive side to this transformation. It may soon be possible for us to colonize in mass large areas of Northern Canada, Alaska, Siberia, Labrador, Greenland and parts of Antarctica during the next century – countries authorities allowing. We will benefit from new arable land and from virgin underground richness as the warmest areas lose their liveability. Already, the maritime

route of the Great North has opened up with free moving water over the past few years; the first time in the memory of man.

The negative effect will be more impactful though. We should fear that the rise in sea level together with the desertification of about half of the inhabited landmasses of the world will render them unsuitable for human life. Latest scientific simulations assert that twice more arable land will disappear (and faster) than new land made available. In any case, current political borders will become a serious problem as climate led migrations and induced poverty will be blocked by these lines in the sand. Will walls be erected again – more Mexican walls?

Numerous experts estimate that there could be up to 200 million displaced climate refugees by 2050. It's almost for tomorrow. If 2050 gives us fifty times the volume of the Palestinian problem, what will 2100 or later bring us? What nationality and law will manage families coming from countries that are disappearing underwater or marshes or turn into deserted unfertile soils, much like what is already happening in the Maldives or Sahel? Only a truly globalized governing body could manage and regulate population flows of such disruptive amplitude. We need an orderly logic to optimize the sustainable development of the cold lands turning temperate, while the oceans or deserts will reconquer the lowest lying or driest areas.

Climate change will have implications on the world's population that will transcend borders. A new world order is needed to prepare for them, with efficient and legitimate solutions that otherwise will never be peacefully adopted under our current historic nation-state model. Our countries were built on thousands of years of a static environment, with stable temperatures and sea level. They are not prepared to deal with this. Such an existential stress to our legacy borders can only be handled strategically and non-emotionally at the supra-national level.

- **Empower a globalized democratic governance.**

A shared challenge takes a shared solution. Nation-states are not designed for sharing abroad. They are perfect to manage their well defined slice of solution for their local problems, within their closed borders. For a global problem, conflicting national interests will poison the common well of our general interest. The problem is never defined as “what is the right thing to do for all of us?” But instead as: “what can be a pragmatic compromise between the powers of the day?”

The issue is not about finding the best solution for our problem - climate change. We know that it is not a technological challenge. We can resolve it. Together we have the tools necessary to stabilize our emissions to a level that would protect our existence and stop further increases in new gas emissions. Also, economically the problem is solvable according to economists, by growing a green industry that can replace our fossil fuel energy sector. It can be done. There is no material barrier that we can't overcome - except one: our borders, our governance.

*The cause of our problem is our national and fragmented political dimension.* The artificial fragmentation of our interests and decision making is becoming the absolute roadblock of mankind's progress – or survival. In the politically fragmented world in which we live, no country feels safe to consign its destiny to another. The challenges of allocating the cost of any necessary collective action to one place (outside) vs. another (inside), to constrict one's own growth (inside)

to the benefit of another (outside), to place confidence in others (outside) to fulfill their part of a global contract (inside) are all alien to the country's model and establishment - even if the objective is evidently to do better for all (inside and outside together).

At the local and national level, centuries of policy making have taught us to manage issues for the city or state, but never prepared us for the management of a problem shared by all, friends and enemies around the globe. Most politicians have zero international experience. To be able to be elected locally, one must do his or her whole career locally. There is no reward to be a political globe trotter. To the contrary it is suspicious, you should instead have supported your own people.

For the first time our legacy model has to deal with a truly global problem, which is just a few years old in its widespread recognition. Our leaders and institutions are not yet equipped to address such challenges efficiently, that's a sure thing. Thanks to the United Nations, we have at least neutral assessments and forecasts (a definition of the effects to be addressed) and a negotiation table for everyone to share, discuss and argue. Even if no decision ever gets implemented, a solid link of information and potential cooperation exists. Confrontation of ideas and solutions can take place, so that there is a forum for consensus building if needs to be. But beyond sitting around the same table, the different and cumulative desires of each country make the progress painfully too slow. Mr. Trump's edict alone is sufficient to turn into ashes years of careful diplomatic work and global compromise building, probably worth millions of international super-high IQ's hours. In a way, such summits have almost turned into an excuse. They unintentionally justify global immobilism: they give the appearance of an action. *Global conferences lead us to believe that there is a world order when there is none.* Their best intent hides the root cause of our problem – our global leadership vacuum.

The political conundrum that we need to resolve in the context of a sustainable society is complex, given the very different development stages and agendas of so many national players. We must get over this one way or another and unify ourselves around a solution for all, instead of trying to resolve for each of the groups in presence.

Only a system of global governance will be able to embrace the greatest challenge ever faced by Humanity. At stake is the need to immediately stop wasting our natural resources and to emit combusted gases into our atmosphere. It requires a change in society and lifestyle, the creation of a new economic and industrial engine and the modernization of agriculture. In essence, the transformation will come about painfully for some and long anticipated for others.

The lack of success of the most forceful UN-led effort – its most ambitious endeavor – proves the limit of our current international governance model. The UN is doing all it can in surfacing the issue and tries to rally the countries around a common position. And still it cannot achieve substantial progress, while totally aware of what it takes to fix it. In short, the UN only lacks empowerment. The UN construction shows its transparency on an issue that is evidently global and would be in its sphere of influence more than any other. None of our governments can fix it individually and they cannot manage to unify around a forceful solution either, each one preoccupied with the immediate interests of its own political constraints, despite the evident risk of damaging the rest of Humanity. *We are facing a global political governance gridlock.* Stopping the Great Waste is in the interest of everyone. Humans must establish a system of governance that

can meet these great demands. The problem will not disappear following an agreement sponsored by the UN and signed by all, as long as anyone – even the world’s first superpower - can then step out and escape after the fact. This is way too serious.

The Club of Rome is a highly recognized think tank. It recently ran a study about the future of our planet called “Limits to Growth.” It used a computing model doing simulations for alternative models of growth, linking various constraints and opportunities. The group really tried to answer a very simple question: “*Is the planet full?*” Their conclusion was that only drastic measures for environmental protection will have any effect on the situation at hand and allow for the population to continue to grow with at least a constant wealth level. The main barrier that they identified, which will block a positive scenario of “continuity”, is the lack of political measures. They have reached the same conclusion indeed. *Our problem moving forward is the limit of our political construction.*

The world has become our unique megalopolis. The problems to be solved by our politicians have quickly moved from a national level to the level of the whole planet. We have not adapted ourselves yet. The survival of the species is in play. It therefore falls to the consumers and electors of the world – ourselves – to start to crusade and launch a great initiative supporting a new logic of global governance. If the global public opinion embraces it, elected officials will follow and a virtuous dynamic effect will emerge.

Each man or woman is responsible for Humanity and reciprocally. Millions of years of human evolution and thousands of generations have brought us to this point. We find ourselves incidentally chosen, being “*at the wrong place at the wrong time,*” or rather the opposite. I believe that we are at the best place ever. It’s a pivotal moment. We can together make a long-lasting difference to the world.

We have the chance to be the strategic change agents for our whole lineage. Now, we know what the risks are. We are the first ones who can reset the direction of our civilization toward a new, clean and global society. We owe this inflection to our ancestors who have allowed us to be who we are. *We owe it even more to our descendants, who will inherit the fruits of our reaction.*

*The future is now.* We are the first generation that receives the demonstration that the Great Waste is in motion. We now are aware of the impact of what we have done. We know the risks if we keep going as we have until now. We cannot ignore the Great Wall ahead of us and the opportunity of a promising Sound Wall if we change course...

“*Errare humanum est, perseverare diabolicum*” (“Error is human but to persist is diabolical”) – attributed to Seneca the Younger, Roman Stoic philosopher, 4 BC-AD 65).

Earth our country.

## Chapter Five: The Great Mix

For the last fifty years, a post-colonial flow of mass migrations from South to North – involving tens of millions of people – has replaced the North to South migrations of colonial times. When modern democracies opened their borders to welcome cheap unqualified labor, no one envisaged that migrations would reach this scale.

Despite the economic slowdown which led to the chronic European unemployment of the late seventies, this migratory tide has continued to expand over the last decades, especially because no regulation has been put in place in anticipation. Immigrants already represent a double-digit percentage of the European population. And it is just the beginning...

Western countries continue to act as an enormous magnet for the rest of Humanity. First Latin-America, the US, and Canada for centuries and then West-Europe for just fifty years attract increasing numbers of hopeful immigrants. Migrants hope for work, money, welfare and the chance to take part in the “American Dream” or to benefit from European social welfare.

With such a scale, the aspiration of migrants is becoming much harder to fulfill, in the aftermath of the 2008 economic crisis and now the Coronavirus recession. New immigrants find their target space already occupied by preceding waves of people like them. They become quickly disenchanted upon arrival when the initial welcome has been replaced by rejection, in societies that are already saturated with unqualified newcomers. New migrants are surprised by the misery of their predecessors, together with a landing made even harder by colder weather. The reality hardly approaches the dream seen back home on a television screen, nor does it match the tale of the ex-immigrant who returned to the village to retire so wealthy that he built the biggest house.

The poor and uneducated still don't have a choice. They flee a misery that systematically condemns them at home. The money they send back represents the primary source of income for their families – billions of dollars annually for some of the poorest countries. The phenomenon is irreversible. Most migrants end up calling their new destination home. They take anchor and sometimes the citizenship of the new land. Over time, integration works. Slowly but profoundly, the landscape of the formerly mono-ethnic Europe is turning multi-ethnic, while the US minorities are turning into the majority, both happenings coming with profound future implications.

New categories of migrants from the middle-class, who are much more cultivated and “useful” for the receiving country, have superimposed themselves to original uneducated first waves in the US, Canada and the UK. Engineers, MBA's and doctors of tomorrow will increasingly be the graduates of a virtual global university, whose curriculum will constantly become more selective

and international. Looking at the ethnic origin of students from the best universities in the world shows how quickly this process is developing. In the US and Europe, Asians are often occupying the front row of the classroom.

The result of this new mass migration is astonishing and effects still impossible to fully anticipate. It acts as an enormous force of change. Suddenly, the West has turned multi-ethnic. *Adding the West to countries that were already a mosaic since the colonization (India, Brazil, South-East Asia), the majority of the world becomes a kaleidoscope of races, ethnic groups and cultures that go beyond the immemorial borders of their religions and civilizations.*

Mono-ethnic countries will soon become a minority. In a hundred years, there may be none left. Diversity will settle everywhere and become our pervasive normality. The addition of minorities will make the local majority. China, with its scale, closed borders and the dominance of its Han people (90% of the population), may remain the sole sizable exception – a non-diverse China in an otherwise diverse world.

Even old European nations, foundation of the Christian culture, are losing themselves in infinite debates over the wearing of chador, building new mosques and the darkness of the skin of their national soccer team. This shock is multi-dimensional. It affects all aspects of their social structure. The core question is the new national identity. It is the core topic of modern politics.

This peaceful invasion at scale has developed so gigantically and obviously uncontrolled, that it took politicians by surprise. In the US, even the most open and unbiased democrats wonder about the evolution of the identity of their country. None of them can come with an answer, because a response can only take a global nature – Americans will be citizens of the world, with roots everywhere. The same will happen to Europeans, while Brazilians are already there.

Almost overnight – within twenty or thirty years – the color of the crowd has materially changed in London, Paris or Berlin. Los Angeles has a Latino majority, San Francisco is Asian, Houston is now as diverse as New York. Food habits and restaurants, musical styles, schools, sports and of course religious practices are going through a dramatic metamorphosis. “What do you want to eat tonight?” now translates into which country’s food vs. which local dish before...

Who knows on which new ground to re-define national identities, as they already differ so much from just a generation ago? Should borders be closed, should host countries focus on integrating the immigrants they’ve already got or continue to welcome new ones? Should they set-up quotas to accept only educated ones which fill local professional gaps? Are ethnic ghettos worse than openly mixed cities? Should immigrants be forced to learn the local language or should hosts learn theirs as US Anglo-Saxons who now learn Spanish?

The Chinese diaspora counts more than 50 million beings. There are more Jews in the United States than in Israel. The north of Paris is more African than Gallic. The majority of Brazilians is of mixed race. A third of Londoners were born abroad. Caucasians will be just another minority in the United States before 2050 – they are already out-numbered in many parts of the country.



*We are facing a diversity never seen before.* It impacts us at many levels from cultural mixing to ethnic inter-breeding. It is just the beginning of a new era.

Brazil is well ahead with *ethnic inter-breeding*. It has centuries of mixed racial ancestry. The predominant part of its population has some limited degree of mixing, while 43 percent in 2006 were *Pardo's* – “the brown ones”. The *Pardo's*, after centuries of inter-ethnic mixing, have turned into the country's core. America and the soon-to-be “diverse Europe”, together with the mosaic of minorities in India and South-East Asia are only at the stage of cultural inter-breeding: they haven't mixed their blood yet. They will move to inter-breeding like Brazil as well in the long run.

For these countries that are the current melting pot of immigration, the debate can be summarized with one simple question. Should they accept an amalgamated, universal mixture on their own soil, or should they reject the “overflow” of their immigrants?

One thing is certain. Movements of population flows are now unavoidable in our global village. Closing borders won't stop the problem and won't address its cause either. We live in a world where a plane can loop around the planet in a matter of hours, where we can see each other live on video calls, or where we can exchange messages instantly on our mobile phones. We are cosmopolitans who can travel with basically no constraints else than borders and money, with information and viruses spreading out at the speed of light. A businessman can fly 10,000 miles for a single meeting, a family jumps across continents for a short holiday under the sun...

In the short-term we are paranoid with the Coronaviris outbreak and while being confined, we are thinking about new ways of life. This is a good thing and changes may unfold beyond the habit of working from home. Still, I do not see how the clock could be turned back or the Great Mix even slowed down. *Earth has become too small and men too many for ethnic insulation to be manageable*, except in small religiously radicalized islands where the resistane of ethnic purity will remain the political objective for a bit longer. Artificial gates won't resist to the flood.

Isolationism can only create a wave of unrest, with immediate xenophobic implications. Rejected migrants are left in excruciating pain and disarray, parked in camps at the fringe of rich fortresses. The global house of cards will collapse if borders close. We can build new walls of shame but people desperate to find a shelter won't return to the place that they have escaped.

Yes, resistance to the Great Mix is and will be massive. We can see it right now with the Mexican wall, with the new resistance against African migrants in Europe. But it cannot contain the flow. There is no way back against the irremediable paradigm change of a finite planet which struggles to host billions of humans with no natural physical borders.

Instead of resisting, we should think about how to best manage the Great Mix with an appropriate planetary approach. “*Where to direct the flow?*” is the burning question. Inter-breeding of ethnic groups from all over the planet will only become more pronounced as we go along. Climate change, local wars and poverty will push millions on the road.

What will ultimately unfold is evident. It is a factor of the pace of migrations, creating more resistance, exposing even more the lack of planning. As the scale further accelerates, reactions will become more violent. It won't change the game for the long-term.

It may take up another thousand years, much more or much less. But *over time, the Great Mix will give birth to a majority of men and women of mixed-race all over the world.* Today's Brazil is tomorrow's global norm. At the time when gay marriage is being legalized, remaining "pure breed" will become an exception. Historic ethnic purity's survival is just a matter of time.

This will challenge the fabric of nations – because there won't be "pure ethnic tribes" to justify their fences any longer. Most societies are already turning multi-ethnic. We are becoming one people again. The case for our separate physical evolution is disappearing forever. The Great Mix is definitely happening. All we can do – if we still want to resist and remain ethnically and nationally pure – is to slow it down artificially, defending against it with great pain.

Inter-breeding will become mainstream. Man *will* generically become darker, back to his original homogeneity. *Pardo's* and Obama's we will all become over time. *The Darwinian factors which drove our differentiated physical evolution and led to the divergence of human races have vanished forever.* There will be no new race. Instead, all races will converge and inter-breed. Eventually, all of us will belong to one single global human race again in the future.

This is not a point of view or a thesis, but an absolute evidence. We already share everything everywhere. Evolution and/or marriages will continue to make us more of the same diverse people. Ethnic purity will be more and more the exception. We will blend. It is only a matter of time.

Let's make a simplistic experiment to demonstrate the evidence. If you drop a few colors of paint in a single pot, then start to mix the paints slowly together. What happens? The colors are not blending into one. There are different mixing patterns, it's hard to see what's going on. Some spaces remain pure, others not. It looks like a kaleidoscope. It's the beginning of the mix.

As you steer faster, blending accelerates. Do you start to see the emergence of a single dominant color, becoming almost homogeneous? To get a perfect blend will take more time. Ultimately the mix will be completed when your full pot turns into a single homogeneous color.

Had any of you chosen black, yellow, white and brown? Are you getting... a yellow-ish milk-chocolate color? It depends on how much of each color you injected in the first place. Earth is our pot, the colors are our races. It will be a beautiful outcome. In any case, one color at the end.

In case you change your mind and would like to reverse the experiment. You will never get the original colors back. The mix can happen only one way. You cannot de-mix and turn the movie backwards. All colors, free in the same pot, are blending into one, the mix only goes in one direction. Remember the *Pardo's*? The pot is Earth and us the colors.

The only variable in this experiment is the speed at which we steer the pot. In the 20<sup>th</sup>. century the speed of our mixer has accelerated with urbanization, travel and communications and the removal of more cultural barriers. Earth is turning into a faster human planetary shaker.

Increased multi-culturalism will erase prejudices over time. In most places, we are moving closer to each other. Some rugged spots remain, places where the paint is definitely thicker. But the true physical mix – our children mating with each other across ethnic lines – is an inexorable process that will ultimately re-unify mankind. In another millennium, Earth will be like the beach of Copacabana, we will be milk-coffee-colored.

Some remote islands of self-insulation will diffuse the pervasion. But there is no way back. Ethnic particularism was the pure result of the geographically separated evolution of our distant and isolated ancestors. The cause is forever gone. We have become the children of a finite environment. Earth is our pot of paint. We are paint cells. We keep shaking - more and more.

The unrestrained development of *urbanization* is the largest accelerating factor, on all continents. 55 percent of the world's population live in a city today - 68 percent in 2050 according to the UN - compared with less than a third half a century ago. Urban growth is occurring three to four times faster in emergent countries, which are now quickly catching up with developed ones. Though all continents are on the urban rise, Asia and Africa are moving at light speed.

Throughout History, urbanization has been an indicator of advanced development and of prosperity for a civilization. As progress in agriculture freed up workforce, more hands became available for specialized roles not physically attached to the land. Such roles were more efficiently centralized in a city, which acted as the hub of surrounding agricultural areas – the “market” where all products of the land were sold and transformed.

Developing cities act as an obvious magnet for desperate crowds. Young peasants leave for exile into mushrooming megalopolises, where they are often reduced to extreme poverty. The megalopolis propels these young people into a migratory mode within their own country. They land into an environment that cuts them away from their original rural identity. They confront new lifestyles and willingly plunge into a diverse melting pot.

In Europe and the United States, the urbanization process is now stabilized. Interestingly, the trend towards urbanization in rich countries is even starting to retreat, as people rediscover more healthy country living, facilitated by an Internet-enabled “working-from-home” lifestyle.

In most of the world however, urbanization continues at rapid pace. The blending of identities speeds up. In large cities, all ethnic groups are neighbors or colleagues. They are all part of the same cultural diversity, with every newcomer adding its own layer of variety. People connect in the street, on the bus, in bars, at work, in supermarkets, at the mosque or on the soccer field.

The Great Mixer is at work and there are four dimensions to its acceleration:

### **1. The acceleration of the *cultural* mix:**

Beyond our archaic frontiers, we increasingly have access to common international information thanks to new medias. The Internet also allows 2-way communication with active individual engagement. Facilitated by search engines, social networks and unmatched interactivity,

“many-to-many” services enable the first true global community. We have seen this new power emerge during the Arab Spring, the Yellow Jackets in France or the students revolt in Hong Kong.

TV and radio are also turning international. Almost everywhere in the world, half of TV series and movies are American. Surfing through the numerous channels available, we are likely to see or listen to the same content and the same core of international news. Beyond local topics, general subjects largely follow global themes, starting with a shared bank of images and transcripts received from a global news agency.

Despite the new digital reach, censorship remains active in authoritarian countries. Filters calibrate available contents through the official local lens. China has mastered a process to take control of the Internet, with 2 million dedicated agents – also Russia, Iran, Syria, North-Korea...

We consume a central and globalized core of information, even though most of what we digest comes from local, national or regional relays behaving as active filters. Insiduously, new knowledge broadens our curiosity and universalizes our information gathering. The same topics is now covered almost everywhere in an instant. This was not the case a few decades ago. We now take access to worldwide news as a given, while it’s so recent. We are citizens of the world just by watching the news or surfing on the Internet. Reciprocally, while most people used to care about what happened next door, they have deepened their interest for international issues. It’s a virtuous cycle – more curiosity brings more knowledge and free thinking. The realization that there is a higher-level picture in a universal context matters more than ever before.

Alas, access to universal information is very uneven. Poor countries suffer from an endemic lack of access to the internet. Billions are insulated from the digital world. This huge issue prevents global education and culture to take off at a broader scale. There is one world in which all is accessible and information abounds to a point where some cannot even cope with the overflow of data available and suffer from a “Big Data” syndrome. There is another world where people are starving for basic information, poorly accessible due to lack of capabilities and affordability. The absence of communication infrastructures together with degrees of local censorship create a digital divide. Access to universal information has progressed, but remains far from perfect.

International education, once rare and elitist, is now expanding exponentially too. I can vividly remember how exceptional it was just forty years ago to go and study overseas. Nowadays it has become the norm for millions of talented students, who obtain a top diploma at home and then complete their final curriculum elsewhere. A stamp of international education – usually Anglo-Saxon – will make a crucial difference in their future professional success. The “global” campus is developing fast. Less than 2 million people were studying outside of their home country in 2000 according to OECD, over 3.3 million in 2008 – a 60 percent increase in eight years. English-speaking universities are the prime destination, with America alone hosting almost 20 percent of the world’s global students and two-thirds of the post-graduates studying abroad.

These students win an open vision of the world. They go back home with a new spirit and offer a new lens for their friends and family. Some stay where they finished their studies and get a job – as new educated migrants – adding to the diversity and quality of the local professional community.

## **2. The acceleration of the *linguistic* mix:**

The explosion of English as a second language is proving to be an indispensable tool for global communication and education. Mandarin or Hindi are the most widespread first languages. But English has developed as the vehicle of cosmopolitan communication everywhere on the planet, following the pervasive rhythm of universalization. Multi-national firms now make English their internal channel of communication, independently of their home language.

English is the first second language and the official administrative language for 2 billion people in 75 countries. It is the number one foreign language taught everywhere and the omni-present language of the Internet. English has become the unique vehicle of communication between nations and within international organizations, as well as the undisputed language of “business.”

English is the long missing tool of diffusion for our universal cultural capital. It has succeeded where Esperanto tried by design and failed. This is not a small thing. For the first time ever since our species disseminated all over the planet, we have *a universal language*. English is the international bonding tool, the missing link between cultures and civilizations. It offers the opportunity for almost everyone to communicate with everyone else, as one single human group.

We must reinforce this advantage. English education should progress universally. It is not because it's a great language. Its own merits are irrelevant and its choice must be non-emotional. It's a matter of pragmatic scale. Factually, English has reached such a critical international mass that it cannot be challenged by any other language. Let's stop the resistance and jump on the wagon. Educational systems that wish to shield their people behind their local cultural heritage are old news. English is the only practical medium to enable everyone to communicate with each other.

Defending local languages against English and preventing access to quality English education is a form of resistance to the emergence of a global community. It's another form of border. It creates a heavy handicap for those children who won't be able to master the global language. Other languages will survive and flourish in parallel, but we should all be capable of speaking at least two languages – ours and English. We need one universal vehicle of communication for all.

## **3. The acceleration of the *geographic* mix:**

We travel more than ever before for work, holidays or in search of a better destiny. Tourism has turned into a major industry and is now the principal resource for many developing countries. We can breathe different cultures more than ever before. Coronavirus will not change that – it will slow the pace temporarily, but over time we will travel again.

Let me share a cute personal story. Fifty years ago, when I was a child in the Southern French Alps, I spent time with an old shepherdess who was keeping her heard of sheeps from dawn to dusk every day. From the top of the hills we could see the sea, fifteen or twenty miles away. She was spending hours meditating and looking at the not-so-distant water. She loved the sight of it. On a clear day she showed me how to even identify the shape of Corsica. I asked her once when she had last been to the sea. “Never” she responded with a grum look. “I haven't had time. It takes two days to get to Nice and I have the sheeps.” I understood that she meant two days walking, as

the drive was only an hour. “I could never make it. There are too many people for me down there anyway.” And she turned her eyes back to the sea, with a mix of fascination and fear. Maybe she was not interested enough to waste a few days away from work. I rather think that what mattered to her was all here around her stable. Her “city” was a nearby village of fifty inhabitants. It sealed her complete universe. What was happening down in Nice by the sea was not only completely alien to her. It was completely irrelevant, like the mirage of another planet. My old shepherdess was not unique. She symbolized the forgotten norm of a not-so distant past. This is how most people defined their universe for many generations. It sounds unbelievable to us today.

She was last of a long lineage though. Her children learned to drive and got a car, a TV and a cell phone. For most of us at various degrees, in a world where millions of passengers are in the air at any point in time, it has become unthinkable to spend a lifetime in a single place. We are living in a new world where the planet is the finite space of our life, the one we dream of discovering as much as we can. We all have our own lifetime dreamlist: visit London, Paris, Venice, Rome, New York or San Francisco. See the Great Wall of China, Yosemite, the Pyramids and maybe go for a safari in Africa. Borders are the vivid evidence of our past and of our temporal political powers, but already we dare to imagine our life beyond their contours. We have dramatically expanded our living radius in two generations.

While countries totally govern and control everything, we are starting to envision a realm that matches the size of our expanded individual footprint and the one of our children’s dreams.

#### **4. The acceleration of *inter-breeding*:**

Inter-ethnic dating is the culmination of the Great Mix. Love cuts across culture and origins. It leads different people to give birth to the infants of diversity and tolerance. Love is the ultimate glue between people. Still, inter-breeding develops at very different paces depending on geographies. Local cultures or societies have different degrees of (un)tolerance - it may even be illegal in some archaic societies. It will take some time for the world to match the reach of the American or Southeast Asian racial mix. Nevertheless, the wave is here to stay and is unstoppable.

We will be one people again. There is no need for the pigment of our skin to mitigate the weather around us any longer, this was the fruit of a long-gone adaptation. To the contrary, our bodies now adapt to a convergent lifestyle and will adjust and optimize themselves to a growingly common evolutionary process. We are “fat giants” everywhere, taking on weight and growing at the rate of an inch every twenty years worldwide. We use air-conditioning when it’s hot and heating when it’s cold. We spend more time seating and using our brain than walking, running or flexing our muscles. With no more evolutionary reason to continue to diverge into differentiated human kinds, the human species is on a path to return to homogeneity.

The Great Mix is definitely underway. As it spreads though, it stimulates its own resistance. It reinforces the fear of change for those who are least prepared for it and know nothing else than the tiny place where they were born, grew up and lived. Instead of daring to see the big picture, they panic with the color of the crowd changing around them and try to protect their pure identity.

This rejection is a natural reaction. Hosting populations need time to adapt to the drastic demographic transformation around them. Even if the US is a relatively new country founded entirely on immigration, we start to feel the limits of our own tolerance with an always stronger alien inflow at the Southern border. Fear drove the outcome of the last presidential election. As non-Caucasians begin to out-number descendants of European colonizers or immigrants, many Americans no longer believe that immigration continues to strengthen the country. They see mass immigration as a danger and feel besieged by a peaceful invasion which precipitates the decline of the dominance of *their* WASP (White Anglo-Saxon Protestant) America.

In Europe, the principal cause of rejection comes from the lack of a sufficient end-to-end capacity and preparation to endure such a brutal surge in alien population. The economic gap and the differences in culture, education, religion and language are hard to close. European immigration almost uniquely comes from the poorest places in Africa. Most immigrants are totally uneducated. It puts pressure on the welfare system, lodging and security. It confronts the lower classes of the population – already challenged with an endemic lack of unqualified jobs - with a mass of new workers “competing” on their own soil. Finally, most new entrants come with a rigid religious baggage which proves surprisingly difficult to mix with the European secular society.

Indeed, when immigration reaches a too rapid pace, assimilation fails. Immigrant groups now have a sufficiently critical mass as a stand-alone group to avoid integration, instead of being slowly but surely blended into a citizen foundry as before. They can remain isolated as a distinct and homogeneous ethnic nucleus in their country of arrival. This is obviously dangerous. New immigrants keep sticking to older nucleus non-integrated peers, creating a resilient parallel society, culturally and affectively anchored to their country and religion of origin.

This growing mass of non-integrated people pose an enormous challenge to the host educational system. Public schools struggle to cope with two populations in the same classroom. Schools are encumbered by the task of educating newcomers. As a result, many indigeneous students shift to private schools when possible, shaking up the traditional foundation of the education system. With the two groups not blending at school any longer, the nation loses its most critical integration mechanism.

All in all, the general perception is that the current scale of migratory flows un-sustainable any longer for their few target destinations. If there is an overflow, it will only get worse looking at simple geography and demographics. Unless we proactively plan for them, migrations will lead to unavoidable humanitarian catastrophes. We need some form of global policy and there is none. Individual governments do not have any external authority. The problems to be addressed are pace, volume and diversification of destinations.

These are difficult issues for national governments to handle. There is no right or wrong national solution. Closing borders or letting millions of more people enter will further polarize opinions, even in the most tolerant societies. Since these movements will only amplify, we need a global strategy and there is none. We have to find a way to make migrations sustainable.

*We miss a logical cross-border process that defines migration capacities by destination and prepares for the integration of migrants. While migrations are irremediable, their destination is not.*

Such policies should also ensure that migrants make the appropriate effort to integrate. Host countries have an absolutely key role to play. Their tolerance, respect, and economical preparation are tantamount. But they are not the only ones to be blamed in case of a failure to integrate newcomers. Migrants must help themselves to be helped. They have taken a conscious decision to move to a new place, for whatever reason. To accept them is a tolerance from their hosts, not a right. Nothing comes for granted. Migrants own the duty to maximize their chances of success.

Mutual openness, respect and tolerance are the attitudes and values needed. The responsibility absolutely resides on both sides. It is a mind-set issue. The direct duties of the immigrant include the assimilation of the language, laws, customs and habits of his new home. It is a mutual pact, which comes with reciprocal behaviors and duties.

Having personally emigrated several times and lived in eighth countries or states, I must convey a deep respect and gratitude for the people who have welcomed my family and I. Behaving with humility, curiosity and respect for the new country is essential. It can be an enthusiastic experience. I hope that it has been an interesting exchange as well for our welcoming friends and colleagues. They have done much better than just tolerating us...

For the first time in History, being a resident alien has become common around the world. Belonging to a minority is normal. The attitude of the majority is more inclusive, in places where there is no overflow of such a minority. *Soon, the addition of minorities in a given place/country will represent the majority of the people.* Being originally Chinese in Paris, Indian in Dubai or Haitian in New York doesn't turn any head. An enormous amount of change has been digested already in a short period of time. Remember the old shepperdess in the Southern Alps? Most likely she never saw an Asian or an African in her lifetime. We have moved such a long way so fast.

Not so long ago the "alien," the "other," the "different face," the "one with the odd accent" came from the next village, five miles away. Now he or she comes from another country or even continent. The further away an alien comes from, the deeper the discovery and potential divide will be. Nevertheless, despite larger original differences, "others" are now part of our normal landscape rather than the exception they used to be. It's easier to feel at home almost anywhere.

This has been the story of my life... *A tenth of the population of the richer countries was born elsewhere* and the growth of this ratio is exponential. Hundreds of millions of voices can claim: "I am a foreigner, but this is home and I love it here. I belong to a minority but I am a citizen of a new universal civilization in the making."

According to the UN (AP September 11 2013), more people than ever before have chosen to live abroad: "232 million people or 3.2 percent of the world's population were living outside of their homeland in 2013 – a significant increase from the 175 million in 2000 and 154 million in 1990" said Undersecretary-General Wu Hongbo. The US remains the single most popular single country destination with 46 million and gaining 1 million additional migrants per year. Europe is the most popular regional destination with 72 million a year. Asia is growing the fastest, having added 20 million migrants between 2000 and 2013 and is now reaching 71 million. International migrations remain highly concentrated, with ten countries hosting over half of the total: US,



Russia, Germany, Saudi Arabia, UAE, UK, France, Canada, Australia and Spain. 75 percent of migrants are of working age, which shows that the primary reason for international migration is linked to the attraction of a better professional opportunity.

However, short of a system of global governance and of any well-enough organized positive logic or structure, mass migrations will encounter reinforced local stop signs. Protectionism is a natural defense mechanism against fear. Isolationism would inflict an incalculable impact to our stability and sustainability.

We lack any form of global governance to prevent the South to asphyxiate the North, the countryside to become deserted and megalopolises to turn into monstrosities of pollution and inhumane survival... We have no strategy to spread out human masses on Earth in a more cohesive manner and no strategy to regulate our overall population either. There is no higher level of thinking - not to say master plan - behind such massive inflows of people. There is no legitimate international organization in place to manage cross-border “invasions” at the supra-national level. If there was such an authority, it could at least encourage populations to be channeled toward destinations that provide opportunities for migrants, places with with economic and social capability, preparedness and environmental sustainability. At such a scale, anarchical migrations – often from the perspective of the receiving country – can only generate an equally un-controlled reaction. And this is what is happening to us now: populism, isolationism, refugee camps, walls and a new cold war in the making.

Issues are surfacing everywhere as the Great Mix unfolds in our planetary shaker.... Whatever way we look at it, the global melting pot is in march, with a pace and amplitude never seen before. A new world is in the making. The day will come when love between couples of all sexes and origins, made free by a universal and tolerant culture, will be celebrated across ethnic groups in full normalcy. We need to strategically manage such a paradigm change, we owe it to them.

Let's prepare for the greatest Samba of all times.

Earth our country.

## Chapter Six:

### A Global Political Vacuum

Earth is like a condominium building. Each country is an apartment, in which men live. We just discovered big widening cracks in the foundation of the building, expanding quickly. To repair the problem – it takes joint action and funding.

Our challenge is to execute the sixty-year-old vision of Martin Luther King who saw that Earth was becoming a neighborhood and asked us all to stand up for the next step: “*We must make our neighborhood a brotherhood*”. A place where truly, there is only one country.

What is a country? Which purpose did it serve in the past and tomorrow in the global era? The question is so simple, seemingly stupid. It’s like asking why we have two legs and two arms, isn’t it? The question is brutal because we are so accustomed to being citizens of the country where we were born. We live with our flag tattooed on our foreheads, we sing our national anthem with a pride that gives us goose bumps. We feel like strangers when we cross a border and we hand our passport to the customs agent who gives us a circumspect gaze.

Most national borders are physically invisible though. There are lines that do not materially exist on the ground, although there have been walls and iron curtains built in the past to help visualize or enforce them. Nevertheless, borders materialize something so solid and so important on a map, in the human imagination and in our political organization that they have become like a physical geographical element that humans only can see.

It is enough to simply step across a borderline and be “elsewhere”, in a place suddenly so different that is culturally, politically, linguistically and religiously alien. You and I know when we cross a border – although my dog doesn’t, because only the man-made attributes are different.

A quick look at a dictionary tells us that “a country is the land occupied by a nation”. “A nation is a group of people living in a particular country, forming a specific political and economic unit.” Have we not always been taught that our country is our home, our place, our protective shelf, our second mother and family and that outside of it live some other kind of people – aliens or foreigners? In all cultures, this is an obvious fact, a building block that has constructed our understanding and interpretation of the world since childhood. *Countries are the fabrics of the organization of men.*

Countries prevailed over the human challenges of History. The most resilient tribes under the wisest leaders survived their neighbors and managed to maintain their independence and identity.

They became the countries of today, the winners of endless wars, shocks and revolutions. They have the right to have their own flag, proud identity and their own national laws and sovereignty. These tribes have been luckier and stronger than others. Kurds, Tibetans or Jews before Israel for instance only reached minority status across several countries. Countries have won over minorities, it makes it even harder for them to consider to give up their “luck”.

Humanity is divided into one hundred and eighty-nine countries. Eighty-nine are “democratic states”. The remaining hundred is an assemblage of principalities, kingdoms, dictatorships and religious or Communist states. Each country is reputed to be independent and sovereign under its own government, elected or not - “legitimate” or not. They own absolute power and authority over their territory and citizens. With the partial exception of multinational companies operating on their soil and of the globally distributed Internet, their governance spans over everything else.

Each country has its own army, police force, laws and regulations. Unless exceptionally rich with oil or casinos, it has to finance its government which includes public servants and infrastructures, using the taxes paid by its citizens who can be individual (people) or moral (corporations) taxpayers. This social structure was basically invented 10,000 years ago and has not changed much since then. From the first country-empire in Mesopotamia, the country model has turned so resilient that nothing could alter it to this day. It took different political forms and sizes but the essence of what a country is has remained unchanged since then.

The size and relative influence of each nation varies with extreme differences between the largest and the smallest. Canada and Russia extend over almost entire continents, while some countries cover less than a single square mile, such as Vatican City or Monaco. Two countries – China and India – host over a billion people, while three less than a thousand (Vatican, Coco Islands and Pitcairn Islands). If we divide the number of humans by the number of countries, average national population is 30 million. This number illustrates that a typical country has to deal with: a large assemblage of people. It manages a social cluster so numerous – millions of souls – that the individuality of a person is largely dominated by the characteristics associated with references associated with nations, after centuries spent together behind closed borders. Collective characteristics have become stereotypes of national identity. Russians drink vodka, Italians are artists, Americans are big children, Swiss are timely, Koreans work hard, Brazilians play soccer, English have a great sense of humor, Japanese are meticulous, French are wine experts, Chinese are submissive and Germans industrious.

Continental countries have won a dominant power in the the concert of nations. Smaller ones often try to compensate with alliances, forming homogeneous geographic groups – like Europe (EU), ASEAN or the Arab League. Their combined voice can sometimes weigh in against larger ones. Certain countries have an influence that largely transcends their borders – like the United States – owing to their economic or military power. On the other extreme are minuscule and historically tolerated[ historic anomalies.

Each country develops its own agenda. Their government is organized by public sector: health, education, justice and defense for example. Only one department or ministry in the government deals with the external world: “foreign affairs” whereas all other ministries manage the “inner

national world”. Indeed, public activities are fundamentally national. The great majority of public work is dedicated to internal issues, over which national authority excels.

We evidently all know what a country is. Apologies for boring you with such evidences. An avid reader from planet Galactica is planning to visit Earth soon. He is asking some questions:

- “Outside of the countries themselves, who is responsible to deal with anything that goes beyond the country’s geographical limits?”

- “Well, we have a number of non-elected international organizations on Earth, but *none is empowered to decide or to act*. Their role is to analyze and recommend, not to take actions. International institutions are the fruit of our country-based construction. They have been designed by the countries to be their missing link, not a layer of empowerment “above” themselves. One country like the US is enough to block any decision at the UN – the “veto”. The role of these associations is to bring countries together and to be their forum to negotiate international solutions. Countries are the masters. Cross-country organizations act as a parallel international diplomacy to essentially justify through their existence the complete vacuum of global governance. Their influence is in assembling, counselling, connecting, stamping or advising – not much more. It is not for their lack of capability - they are capable and could even be empowered with an elected assembly, had they been framed that way. It’s about their empowerment. They are not allowed to rule. Fundamental powers are organized by the nations to be *all* at the national level. The world of politics is *all* national. Enforceable laws are *all* national. Elections are *all* national. Even Europe is not an exception. Each EU nation elects its EU Parliament members to represent *their* nation at the EU level, not to have citizens from other EU nations to stand for them. Make no mistake, dear reader from Galactica. Earth is a world where only nations rule. You will find soon enough when you visit. Rules and regulations will change each time you cross a border. Please make sure that you keep your passport with you all the time – I hope that you have one?”

- “I have a Galactica passport, there is no other. Did you think about re-building your governance from scratch? It sounds fragmented and unefficient. If you started with a clean mindset, wouldn’t you immediately sketch a central government? This is what we did on Galactica. Are you guys fighting with a taboo that prevents you from looking at meaningful alternatives?”

Our alien friend from Galactica may have a point. The importance of borders is occult, countries never confess their incompetence. Instead, they keep protecting their “sovereign” turf. This attitude hides the need for an alternative and their intrinsic weakness to their citizens. They let us perpetuate the same closed loop that fuels itself again and again. We are like mice endlessly running into our old national wheel.

Worse, countries make international organizations the scapegoats of their own inability. The UN was “guilty” of failing to fix Saddam or to reach an agreement on climate change, the WHO failed to prevent the Coronavirus epidemy. The UN blocked an intervention in Syria. Likewise, in a European context Brussels wastes Europeans’ money, paralyzes Europe and steals the sacred sovereignty and beloved identity of European nations. The culpable can only be outside – right?

Our ubiquitous *country-based model is a self-perpetuating system*. There is no alternative source for any political authority to come from anywhere else. Every politician belongs to a country. To be a politician, you need a local career – or you have wasted your chances if you went abroad or came from abroad. You have been elected only if you cultivated your local voters. If you are a good mayor, you must have the skillset for a president of the nation...

As a result, politicians around the world see the world through a local lens. Their prism is incompatible with mine as a global vagabond. On most issues, they take the opposite lane. With my global experience I cannot be a politician. I am a traitor who self-exiled from his home town and country. Worse, I carry two passports – to whom do I owe allegiance to? Had I stayed in my beautiful home city of Nice my whole life and known nothing else, I could be an engaged local politician, maybe a national representative. Would I be an expert in global business, green technologies or climate change? Could I possibly grow through the local civil ranks while becoming a true resource for my citizens to help them deal with the global issues that they face?

The system keeps recycling itself endlessly. It has alienated the potential curiosity or discovery for an alternative construction. Until the day we hit an explosive and immediate crisis – which I call the Great Wall as a symbolic image – it will be hard to change. Some kind of mega-crisis has got to make us raise our eyes above the fence of our narrow neighborhood and think bigger.

The reason why we keep running in this endless loop is not that it works better. We don't even think about it. It is only because we have nothing to compare it with. It has always been like this since historic times and became a self-perpetuating model. Alternatives are utopia.

Al-Assad can exterminate hundreds of thousands of his citizens and force several millions on the road to exile. He survives it. Because he is the official ruler of his country, until defeated from the inside or from the outside. Above him, there is no supra-national power who can say and enforce: “Mr. Assad, enough is enough, go away.”

The need for orderly governance is well understood at the level of all the subdivisions of the planet – countries, states, regions, cities, villages – but surprisingly not for the ultimate level that matters the most: Earth. Earth is the level which needs coordination and management more than any other of its subdivisions. But it has none. Isn't it completely amazing?

Curious, our reader from Galactica has decided to come and visit to judge by himself. After landing, he asked the first person he met: “Dear citizen of Earth, could I please speak with your leader? I have an important message from the leader of Galactica.” In the US he was taken to Mr. Trump at the White House, who told him that he knows everything about ruling the planet and offered to make a deal between the US and Galactica. In Russia he was taken to the Kremlin to meet with Mr. Putin who offered to build a shuttle for Russian oil and gas. In China he met with President Xi who proposed to launch a spatial Silk Road between China and Galactica. Europe was more difficult: in every place he visited there was a different leader, he run out of time. Eventually, he was advised to go to Brussels or Strasburg to meet with the European Commission or the European Council, he was not sure where to go. Finally, just before leaving he was offered to make a speech at the UN.

Do we agree with the definition of the root cause of our problem? If we do, we now can think together about solutions. How can we fill this vacuum? As unrealistic and immensely utopian as it may seem, what if Humanity was one? What if we could make Earth our country? Imagine... with the help of John Lennon:

*Imagine Earth as a single, large, free and democratic country, our new home.*

*Imagine a federation of our countries, a place for everyone.*

*Imagine Earth as an US-like construction with states reflecting our identities.*

*Imagine the "United Democratic States" to anchor our needed freedom.*

*Imagine that all of us have elected a president, to represent everyone.*

*Imagine that he or she makes decisions for the general benefit of Humanity.*

*Imagine a world in which there's no countries, there is only one.*

*Imagine all the people living life in Peace.*

*You may say I'm a dreamer... Is this imagination absurd?*

- It is absurd because it doesn't make any sense and will never happen. It's idealistic. Men are too different. Additionally, governments will refuse to sabotage their own power. So many people will resist and go back to what they know and like – their nation.
- It is absurd because Earth would become an immense bureaucracy. Individual citizen would be marginalized with one voice out of nine billion. People would lose their identity. It would seal the end of the civilizations and cultures that we cherish.
- It is absurd because there are more poor people than rich. If we empower a global democracy, the poor will rule as a majority and ruin the rich.
- It is absurd because there would never be consensus for anything. It's too complex, too many people to rule in one country. We will never get everyone to agree. We will remain fragmented and indecisive.
- It is absurd because everyone will oppose. Anti-globalization movements will oppose. People will be lost about what to do and resist the unknown.
- It is absurd because some countries may join and others not. Then what? Totalitarian regimes will anchor down and fight back.
- It is absurd because we lack wisdom to make this happen. While we fight for ourselves and for our tribe, who really cares about the universal picture? It's untangible and intellectual.
- It's absurd because life is too short. Why to make it even more difficult for the sake of the potential future survival of mankind?
- It is absurd because man is not a honeybee programmed for a predefined social role. Humans are free, their behavior more complex, their future is random and not planned for.
- It is absurd because we don't want to build a Big Brother that can eradicate any national will.
- It is absurd because it's unrealistic. Nobody ever asked for this. There is just no point to waste cycles on this.

Fellow countrymen and countrywomen we now all are one. It is just that we do not feel like it yet and miss authorities to cope with our new boundary. The frontier of our eternal country is so simply defined. It is the only frontier built for us by Nature, the same for all living beings. The atmosphere is our only "border". *The sky is our limit*, the atmospheric skin of Earth is our lifeline.

*Earth is truly our single Country.* Then the question becomes “how do we organize ourselves accordingly?” Getting over 200 sovereign countries to structure themselves under one roof and passing some of their powers to an overarching federative level evidently appears to be such a daunting task that it is nobody’s serious political project. You may be as convinced as I am or at least intrigued with the idea that unifying under one elected democratic roof is ultimately the right direction. But it is not trivial to try to conceive how unification could take place, which cross-national steps to take to get there – even in theory.

The ultimate concept is a global federation, with ex-countries turning into its member states. The states continue to carry the flame of our identifies and to manage cohesive human clusters, below the umbrella of the global federation. It’s a two-layer building: the federation and its member states. Several existing countries are already federations themselves and have two layers on their own. In such case, *the United Democratic States* would add a third layer.

Three layers for ten billion people appears to be an acceptable span of control. Alternatively, we could come down to two layers and put all larger states and countries on an equal footing, as direct members of the global federation. Texas, Bavaria, Singapore, Taiwan, Italy and Sao Paulo would then be states members of the global federation. This raises many options if we take a clean sheet of paper. We do not need to take a position yet.

We want to “think big” first and see if a path of least resistance emerges to get us started. The state-level construction matters, but comes later. There are basically three possible scenarios for the formation of a global union at the highest level:

- Scenario one is to *create an all-new greenfield global political structure:*  
This is the model that comes to mind first. Let’s empower the UN with a strong democratic constitution and an elected assembly and make it our federal government, with two hundred countries becoming two hundred states, all part of the global federation when they join.

On the positive side, it’s pure and simple: one federation rallies all the countries. They all insert themselves into the same global constitution. For instance, the USA would join as a single state, Spain and Monaco as well.

On the negative, it’s greenfield. There may be the lack of an embryo of pre-existing federal construction or constitution to manage the process and the integration, as the UN has absolutely not been designed to be “operational” as a political entity. It takes a recognized leader and a very willing core of founding nations to make it happen.

- Scenario two is to act in two steps. *First, accelerate the formation of regional poles of equivalent sizes; when done, make them member states of a single federation:*

Two hundred countries under a single roof may be hard to manage, so consolidating countries as regions first has its merits. Having the US or China be an equal to Monaco in the federation is not optimal. Thus, we could form several clusters of countries that are willing to unify regionally as phase one. All regions could use the same template of regional constitution during the first phase. Then as a second step, regional federations would become member states of the global federation. Under this model, we would first complete the EU federation and duplicate the EU

approach to five or ten other regional clusters. Each of them would form a strong regional union on their own rights. Finally, all regional clusters would unite under a common global roof.

On the positive side, this approach builds itself around pre-existing “regional clusters”. It’s regionalization on steroids: North-America around NAFTA, Asia with ASEAN, Europe and the EU, Africa and the African Union, Latin-America with a new UNASUR or PROSUR, Russia with part of the former USSR and finally China and India may be large enough to stay alone on their own rights... Taiwan and Pakistan set aside.

On the negative, it’s a double whammy.

First, these regional clusters are all dealing with their own issues right now and none is on tracks. The EU is the most advanced, still with a fair chance to unity, but it takes a re-boot to which the global union could be the catalyst. Others regional constructions are non-existent in practice.

Secondly, even assuming that such regional constructions can be taken to the next level under the stimulus of an imminent global framework, the ultimate outcome could be dangerous and divisive. The world would turn into an assemblage of structured regional super-powers – a formalized multi-polarization. The global federation would have to be strong enough to supercede their individual regional power and interest.

- Scenario three is to *pick an existing federal political structure and to expand it into the world federation:*

Large democratic federations already exist and host many states under their wing. One of them could be selected to welcome more willing member states and become the foundation and magnet of a global political construction. For instance, the US could make a complete U-turn in its current leadership and international policy after the November election and become the willing architect of a global federation. The EU could play such a role if it was already more advanced in its construction, but it does not even already exist as a federation yet. Others - like India or Brazil - lack the global power of influence to play the role of an international magnet.

On the positive side, it looks like a practical scenario. The US already stands out as a strong federation. It is the oldest and most resilient democracy in History. If Joe Biden, now endorsed by Barack Obama, wins the next US presidential race, it’s a totally new situation. While weakened, the US can resuscitate its influence in a lighter and more inclusive form to eventually lead a responsible full political globalization process. New member states would be added to the existing union. USA would be rebranded *United Democratic States* and Spain would become a new member state on par with California. At least, we would have a solid foundation to start with.

On the negative side, it creates a two-dimensional problem - internal and external. Internally, the US is in the midst of a destructive bi-partisan antagonism. It will be Biden’s first priority to soften such a divide and our project will not win instantaneous support from both sides. Externally, the US is weaker than in 1991 which was a magic moment when such a project could have been put on the map while the US had undisputed influence. Since then, a lot has happened. We have re-divided into a multi-polar planet, China is so much stronger. The US has made controversial moves in the Middle-East post 9/11. Then came the idiosyncrasies of president Trump. The rest



of the world has to forgive and be willing to join a pre-existing US construct, morphed into a global nation. The shared evidence of the global Wall and a proof point of genuine universalist intent from the new US administration would have to re-balance the momentum. Work to do.

Which scenario offers the path of least resistance? Scenario one is simpler in theory and at first sight. To build *the United Democratic States* from scratch comes with the purity of a new beginning. It doesn't have the luggage of the struggling European construction (scenario two) or of American imperialism (scenario three). Scenarios two or three are using controversial intermediary steps or constructions to make the final destination more manageable.

Let's look at the issues with scenarios two and three first, so that we can later focus on scenario one and ways to improve it.

With **scenario two** comes the risk of a polarization of the world - the opposite of globalization. With this scenario we would first take the regional pooling model to conclusion – multiplied by the number of regions - and then merge the regions globally. We would have two layers of integration: first regionally and then globally. We would regionalize before we globalize. Such a process is prudent and logical if a one step approach is unlikely. However, it may very well kill the final outcome. If we succeed with step one, we obtain five to ten huge and powerful regional federations – each one as big as a successful EU. They could suddenly polarize the world into equivalent competing powers. We could go back to a Cold of Hot War with a risk made four or five times higher. Once successfully consolidated, would regions still want to partner - or would they compete with each other? Would step one lead to a complete gridlock and kill step two?

Another consideration is to identify the true driver for multi-national integration. Is geographic proximity the best vector? Nations can be close geographic neighbors and archrival enemies for centuries. Germany-UK-France, Japan-China-Korea, Poland-Russia-Ukraine, Hungary-Romania, Turkey-Greece, Iran-Iraq not to say Israel-Palestine, illustrate the challenges of geographic integration. There can be other axes than geographic proximity such as religion, race or color of skin. What about the political model? Democracy can be powerful glue. Unifying all democracies may be easier than unifying a geographic cluster, because what democracies have in common – a culture of Freedom – gives them more to lose and to protect than just being bad neighbors.

Certainly, the level of globalization required to meet our great challenges calls for a political construction that is less fragmented. But there is no guarantee that a regionalized planet rather than one with many nations would allow for greater flexibility and decisiveness in global negotiations. Instead, it could freeze the decision-making process. A handful of powerful players could neutralize each other - and make the world totally multi-polar. The Cold War was just that between America and Russia. We basically had only two “political regions” – “North/West Capitalism” and the “South/East Communism.” Imagine what could happen with five or more mega-powers...

All in all, there are two main concerns with scenario two and its regional approach.

The first concern is realism: the difficulty to build regional federations is overwhelming. It may be even harder to unify countries into regions than going straight to a global assemblage. Building Europe is hard enough already and it was probably the easiest regional construction in

1945 after the trauma of World War II. There was a magic moment, with visionary leaders and a shared spirit. Still, the EU got stuck before the finish line, sixty years later. The core issue has been a lack of a popular compelling argument for political regionalization. A region brings a larger market and provides a larger scale to compete against continental countries. These are evidences for politicians but not really for the citizens who see these issues as futile. The regional scale is rather unclear - “in the middle”. What is really an issue of regional scale? What does the intermediate “regional” layer solve for? It’s not easy to articulate. This led to Brexit.

The second concern is the risk of regional polarization. Regionalization can move us in the right direction, pooling smaller countries into more powerful clusters. In doing so, it can also dilute the global effort and obsess everyone with not-so-important regional issues, instead of positioning our efforts in their necessary universal dimension. When we move from small to bigger borders, we lose clarity of where the borders are. What is the geographic limit of Europe – of Asia? Who belongs to a region or not – is Turkey in Europe or in Asia? It’s a difficult process but if we ultimately succeed to make regions, we remain divided with even more powerful individual players. A truly united EU would be a powerhouse capable of challenging the US and China. It’s a great dream and an absolute win for europeans, but a scary one for others. While regionalization helps to simplify communication between fewer players and to dilute fragmented positions, its success would inevitably result in a few large and less flexible fortresses of similar size and strength. It would rebalance and equalize forces between regional giga-powers. Wouldn’t the result amplify the risks of world scale conflicted situations or additional complexities linked to regional protectionism? There could always be one region blocking the rest of the world to reach a global agreement on pretty much anything. Not only Trump could block the Paris agreement.

More than one country gets us back to division. Regionalization is a positive process but no panacea. Worse, it could indeed become a threat to full political globalization. With multiple powers competing for the same resources – two hundred small powers or five or even two huge ones – the fundamental problem remains: the lack of single global leadership. Two or five players are enough to disagree. In fact, there are more likely to disagree. Fully politically integrated regions would equalize multi-polar powers over time and create a case for intra-regional fights, making regions feel that they can exist as stand-alone through regional protectionism.

It’s interesting to see that no existing great power – the US, China or Russia – tries to help Europe to unify. They all know that they should fear the result of a powerful integrated EU. Europe continues to try very hard – president Macron of France keeps pushing Europe continues to try very hard and Mrs. Merkel’s last days may become pro-european after all, sharing all the debt as one. It’s worth looking at the EU integration process and see what we can learn for globalization.

The EU is the only “live” trial for building a regional federation. It was initially driven by a pacifist motivation – no more war in Europe. It has granted Europe with its longest Peace since the Roman Empire, a region otherwise chronically challenged with endemic aggressive nationalism. The struggle of the European construction proves that the right level of political integration is the planet – not regions. The missed European integration opportunity, despite the extraordinary chance that the region had after the war, demonstrates that it will take several lifetimes to build a regional then global integration process. We will get stuck in the mud of

regional complexities, without the light of global simplification, which is the true “pull” that the EU misses.

Europe has not been able to unify after fifty years. It is not even clear that its relative success - Peace and a common market - could even be duplicated around the rest of the planet. The case for the EU was probably more compelling than any other regionalization processes – although Africa and Latin America are great candidates. The problem of Europe is that there is no clear geographic boundary, unifying language or clarified “next and final step”. What is the dream that European people should share - a federation? It has been the intent of the Founders after the war. Over time, it got polluted by the confrontation of two visions which turned the initial momentum into paralysis and then Brexit:

- The *federal vision* is to drive the integration of the European nations into a regional federation. It was the position promoted by Europe’s historic founders. But who dares to believe in it any longer after the enlargement of the post-USSR and the North-South economic divide?
- On the opposite, the “*business club*” vision makes the EU a commercial association to serve the benefits of a larger regional market, while preserving absolute national sovereignty. This vision has so far prevailed and protected the nations, who did not try to convince their people with the European federalist dream – instead they made Brussels a scape goat for everything.

The lack of clarity and convergence between these two visions is destroying the European opportunity. Europe lacks the core leadership of an enlightened Germany while France is not strong and committed enough. It is a lesson for globalization. A complex multi-national edifice cannot be built without a clear shared vision and consistent core leadership. Europe seems to be moving backward and nationalism is at its door again. I am not giving up though...

Full-globalization can avoid the European political recession and allow Europeans to see a much stronger appeal with a united democratic Earth. The project of a global federation can resolve the European bottleneck. Our initiative can save Europe, not as EU 2.0, but as the ultimate logical form of supra-national consolidation.

One thing is for sure: Europe, buried into its internal problems, cannot be the core engine of political globalization. Globalization can save Europe but Europe cannot enable globalization. As counter-intuitive as it may appear: *unifying Europe may take longer than unifying the world*. Europe’s lack of leadership and shared strategic clarity prevent Europe to unify and certainly to pull the world in the next integrative path. Eventually Europe will continue on its own search for political consensus – but it cannot lead Humanity to unify.

It’s hard to see an example that we can leverage or learn from as a regional first step for our political globalization. There is no all-new green-field regional union of willing countries that can give us confidence that within a few decades a global federation could surface out of anything that is already in motion somewhere regionally.

*Climbing from a national to a global governance – in one step - appears to be a path of surprisingly least resistance and of much greater benefit.* The intermediate layer of the regions

creates a complexity which proves too difficult, without a clear case for it. Worse: if successful, regionalization may lead us to a very polarized world between hyper-powerful regions.

*It will be potentially easier to build a United Earth than it has been to build a United Europe. It is clear and simple, with an evident benefit. It aligns our political model to the scale of our challenge. It is much simpler because evidently needed and clear in its perimeter and objectives. Going from many nations to one Earth is the translation of our “glo-cal” (global-local) duality. It simplifies everything. A global federation has an immediate geographic foundation that everyone can understand: the planet. It resolves one of the two issues learned from the European construction. But because of the jump from the country-based model, it raises even more the criticality of the second EU issue: leadership. We need strong leadership to drive the global construction, the one Europe has been missing. We need a pilot in the global plane from day one.*

This raises the case for **scenario three**. The idea is to use the foundation of a pre-existing structure as the embryo and inner core of the global snowball that we want to build, instead of building a global political integration from scratch. Would a pre-existing federation provide the systemic starting block that we miss and offer the initial structure and leadership that we are now exploring for the initial global spark?

Several continental countries already represent a large assemblage of member-states and have demonstrated for centuries that the duality of a state and federal level system is a sound model of governance. The role of the federal government is limited to the unification of self-governed member states. This political construction differs from the nations where all powers are centralized into a single national government. In a federation, states maintain a number of local powers such as education and police. The federal government consolidates powers that must be common across the states and cannot be divided, such as going to war or printing money. A common constitution unites the states politically into one overarching unit.

The oldest example of a democratic federal statehood is probably Switzerland. The Swiss model is specifically a “confederation.” A confederation is very similar to a federation in theory but with a looser binding between its states, which are united through a treaty and not necessarily through a common constitution. Democratic federations can be multi-ethnic – such as India – or ethnically homogeneous – such as Germany. While India, Brazil, Argentina, Mexico, Russia, Canada and Australia are the largest federations, there is only one that clearly stands out and cumulates criteria that would be needed as a magnet for a global model: the US.

America has the strongest capacity of influence when used well, the economic dimension, the military power, the geographic scale, the political stability and the widest diversity. It is a country founded by immigrants, who came from all over the world and keep reinforcing its multi-ethnic nature. The United States is a continental country spreading across the two most strategic seas, part of the North American Free Trade Agreement (NAFTA) with Canada and Mexico. It was founded over two centuries ago as a federal presidential constitutional republic and is now the oldest large continuous democracy in History. Since then, every president has been elected by its people, without the ruling of a military junta, a king or any form of dictatorship. It has remained the “land of the free”... The US federal constitution is the oldest in existence and the most

exemplary at least in terms of stability and resilience: it has demonstrated its endurance over forty-five consecutive presidents.

*As the most robust democratic and multi-ethnic example of a sovereign, federal and multi-state system of governance* - could the US be the pre-existing vehicle that we are looking for and provide the global leadership that we may otherwise miss, to federate more countries? Can it be the embryo of our global solution? Could the American constitution become the foundational tool for a more global consolidation?

One approach is to add more states to the fifty states of the union. A more neutral proposition is to have America play the role of an engaged global integrator, in a way that would be acceptable to the rest of the world when coming from such a former militant and once dominant power. The US can offer its help, but remain a member-state itself, not the backbone of the global federation. In both cases, it takes recognition as a trusted and respected partner.

This is why it is so terrifying to see the US behavior at the moment. It is the only political force that could initiate the snowball effect of global unification under its universal democratic banner and the strength of its constitution, while its current policies lead to the opposite outcome. It scares everyone else and makes the US look like a rogue state at grand scale. As long as Mr. Trump is at the oval office, there is no chance to reach any kind of international harmonization process.

Let's assume that Mr. Biden takes over in November. This will create a magic window for a new beginning in international relationships, post-Coronavirus. Countries can either go on their own again and kill economic globalization altogether – many have this temptation. Or they can think deeper about the true big picture and resist a populist move. A lot will depend on the attitude of the US itself. It's a balancing act: having critically strategic products available locally in case of crisis makes sense – like masks or critical medicine. It does not kill globalization, it's a question of supply chain planning and investment in buffer inventories. Isolationism will kill globalization: deciding that countries must again achieve self-dependency on everything will send us back to the middle-ages and straight toward a third world war.

Option two and three both come with complexities that will be hard to overcome. Europe shows us that option two will take generations to build and once there we may have regional fortresses. Option three is questionable, but at risk of not having an acceptable existing federation to start from. The US of 1991 could have been it. Even with Joe Biden at the helm, the US of 2020 may struggle to rally the souls abroad after the Trump shockwave – people have a muscle memory.

This brings us back to **scenario one**, which is to build a global federation from scratch. The US election ahead of us has an extraordinary importance, not only for the US but for the entire world. If Trump wins a second term, the world is in danger, so is America's democracy. His first election could be seen as an accident, some people in particular Republicans may defend that they didn't know who he really was. Re-electing him is much worse, it would validate his behavior and policies and enforce his dismantling of the international system. The US represents 4% of the world's population and 15% of its GDP. It cannot be that someone elected to lead this country, not even with a majority popular vote, takes the stability of the world's democracies – its allies - further apart. Evidently, if he wins none of these scenarios can apply for at least another four years.

If he loses, a blend of scenarios one and three can emerge as our solution. Post-Coronavirus fear, recession and global economic shake-up open up a window for radical new thinking. Scenario one alone – a global federation out of nothing as a super UN – is neutral and clean. But it takes a big sponsorship. We need a core driver for this process to take off, one that the EU construction has so badly missed. It's all about transformational leadership with a clear strategy.

*Joe Biden should lead with a global dimension: "Let's Make Earth Great Again". He should ask Barack Obama to lead an international taskforce, with representation from all willing democracies, to architect a world federation - the United Democratic States.*

This is scenario one with a twist of scenario three. The US acts as the catalyst and leader of the free-world. Its role is limited to rallying forces around a new construction and to lead it initially, with a diverse proven leader like Obama – Nobel Peace prize. While Biden leads the US recovery and calms down the spirits at home, Obama spends time with his democratic peers to design a new global landscape.

One plus three makes for a fourth scenario. The US can be the active enlightened facilitator, not the one imposing its own constitution or adding more states to its own federation (unless other democracies feel that this is the preferred option which is unlikely). The US demonstrates leadership to ensure that option one reaches an outcome. This is the path that makes the most sense.

First, we must elect Joe Biden as the 46<sup>th</sup>. US president in November. It completely changes the current game and opens up a new path forward. Second, the US must become inclusive again and turn itself into a trusted magnet for a global "Democratic Club" – its allies. Third, given their long relationship, Joe Biden can offer Barack Obama the leadership role for the future *United Democratic States* project. And then everyone else can join as long as they are democratic regimes. Europeans (united or not), Japan, Korea, Canada, Australia, India (...). Even China is welcomed – if its Communist Party takes this opportunity for a complete democratic political facelift.

As any national politician, Joe obviously has to position in his campaign that he will lead for a stronger US. The point is that the US will be much stronger if they lead a re-inforced global cooperation than fighting against everyone else - "Let's Make Earth Great Again". Given the global challenges ahead, the US can only be strong with a sustainable planet and a never-seen before alignment around the world about what it takes to jump over the ecologic Wall. Barack Obama can be the lead architect of this new world and campaign with him for such a programme. With a global baton, he can invite all democratic countries – with all others to follow - to prepare for a global union.

Timing is magic. Joe Biden needs a grand plan to *Make Earth Great Again*. He will campaign just when the economic impact of Coronavirus around the world will be at its worse. Many economists anticipate the hardest recession since World War 2 and the risk of a few painful years ahead of us. Joe must message a flamboyant and compelling agenda for a fast recovery of employment, businesses, national and international cooperation. He has to fight isolationism, unify the minds at home and steer an accelerated transition to a post-fossil economy around the world – rejoining the Paris agreement and well beyond that.

At the international level, Barack Obama can echo this plan with two global initiatives:

- *Political cooperation across all nations to build a responsible full-globalization – towards democratic federalism,*
- *Sustainable economic recovery through the transformation of our industrial model, from fossil-centric to zero carbon - leveraging all available funds globally, public and private.*

The first initiative has the potential to generate a few massive reactions around the world – both positive and negative.

- Heated debates in democracies centered around the historic sovereignty of nation-states;
- Fear from totalitarian regimes. Despotic rulers could try to create their own alliance in reaction. In reality they already have one, but it is hard to believe that their people will support more of the same when they understand that the time has come. For instance, the Chinese Communist Party would get an elegant way out – calling for a referendum after having led China to an amazing economic leadership.

Agents of change everywhere would get a common forum and the missing common political link they can rally to. It is not a plan for anyone's domination, a new colonization or a new empire. It is a new world in the making, for everyone to join in, the new place for the children of Earth and the new home of the *Homo sapiens Universalis*.

Such a transformation must take roots from the people themselves. It must start with a huge buzz on social networks. Then a formal political process can emerge and ultimately lead to a formal popular referendum in all the countries candidate for membership. We all have a role to play.

Joe Biden – with his unmatched diplomatic experience – can calm bi-partisan emotions in the US and re-unite the country around a common platform. This program can help him. Barack Obama - with his logic of global cooperation and avoidance of wars – can win the trust needed internationally for influential global leadership.

We stand a chance. I don't see anyone else than this respected pair to be able to pull this off. They have won international respect as much as any other team, have a solid well-oiled relationship, they can personify the initiative better than anyone else if they want to endorse the mission.

The timing is ideal for Joe. He needs a vision and a project. He needs a muscular program to win brains and souls. He needs to rally the troops of Bernie Sanders in a pro-active mode and secure the votes of the ex-Obama fans. He needs to rally moderate Republicans who value an ethical president and want the US to be respected internationally. He needs to comfort the business community that he has a plan for a fast recovery. He needs to find jobs for over thirty million unemployed Americans.

The timing is ideal for Barack as well. He's had four years to take the perspective of an engaged spectator. He understands how much the US is in search of a new momentum. He acknowledges

the Great Wall. He can partner and work for consensus, knowing intimately a lot of the international players. He can become neutral territory - with no personal agenda any longer in his country, because he has already run his two terms. Free of any US-led agenda, he can focus on the sole objective of convincing other presidents or prime ministers to put their weight in their national balance and engage in leading the process for national referendums to join the federation.

This is not a mission for the faint in heart. We have to trust that most leaders in their inner conscience are already reflecting on their own. They must understand in good faith and behind curtains that the Great Wall will not be eradicated with the anarchic political construction of which they currently lead a national fragment. Obama can play the missionary and further convince them. They need “one of them” to carry this through. One who is not just another local leader or a non-elected member of an international institution. If he takes the challenge, Obama will know what it takes, both for him and for his fellow country-leads. He is the only one today who has the charisma and credibility to federate a global team behind his name. He can lead us to find a solution against the lack of a cohesive global vision for Humanity.

Countries have lost the dimension needed to resolve the sort of problems facing all of us. With one country on Earth we can behave as one people while continuing to enjoy our age-old identities. We can still cherish the richness and wisdom of our roots that came from millennia of polishing. Being slightly different doesn't imply that we have to be aliens. We can be one global nation with all the diversity of mankind into it.

Transitioning from where we are to where we should be is difficult. It will take a few great leaders to lead enlightened crowds with their respected credibility and intellectual integrity. To get started, we must ignite and embrace a positive dynamic momentum to carry the idea forward. The evidence has to hit as many of us as possible. Dear fellow citizen, you have to stand up and help.

It's only a matter of time. The evidence of our unification is unavoidable or the species will lose its capacity to continue as the masters of Earth. Will it take a century – at which point the consequences of our pollution will be irreversible and Earth won't be able to host billions of humans any longer? Or is it possible for us – individual citizens – to initiate a huge reaction of public opinion and act now? Can we stimulate a handful of our most visionary and courageous leaders to overcome national divisions and act as if Earth had become our great country?

Individually we are consumers, business people, electors, children, parents, grand-parents, public employees, soldiers, doctors or nurses, politicians.... We are the elementary atoms of the great magma of opinion and action, the influencers of the world we live in. We should give our leaders the mission, the right, the responsibility and the empowerment to *think big* in the name of us all.

In tough times we feel like isolating ourselves. We wish for the opposite attitude. Such periods are the chance for shared solutions and for brotherhood.

*“When goods don't cross borders, armies will.”* (18<sup>th</sup>. century economist Frédéric Bastiat)

Earth our Country.



## Chapter Seven:

### A Vision for Mankind

These first chapters have prepared the case for *why* we need to elevate our governance from many to one country. We also tried to encircle the possibilities of *how* we can shift to a global political construct. No-one can plan for the future of politics... The second part of the manifesto is about *what* can be done with a single plan to make our species durable on our planet. We are moving from building a case to designing a plan.

#### Our vision

The foundation for such a plan starts from a *simple and engaging vision of what we want to do*. Everything starts from a vision. Without it, we are just a bunch of individual souls or nations running with our bare instincts and ambitions. Any commercial, military, scientific or non-profit enterprise exists and progresses with a vision for its future. Then it develops strategies to make the vision a reality and finally iterates plans for their execution. Firms are constantly reworking their vision, strategies and plans as a function of unforeseen events in the market. Liberal Capitalism does not mean random results based on wishful thinking and luck. Success or failure come from choices made in anticipation of an uncertain future and to properly organize around these choices for the best outcome.

The human enterprise – extraordinarily – has absolutely none of these “basics” to guide its destiny. “Mankind Inc.” has no vision, strategies or execution plans. We have no direction to prepare for our future. Future just happens, getting us all to live another day. There should be no surprise then, if we are struggling with our sustainability. Why should we survive forever if we do not even plan for it – just by an act of God?

Of course, countries are doing some of this for themselves. They have their own political agenda that citizens can vote for in democracies, watch the implementation and support or complain about the outcome. Elected leaders cannot be elected without a compelling program, whether put into practice or not later on. In dictatorships, the vision may just be to stay strong enough to remain in power as long as possible and to confine opposition. Governments have a good grip on the national future that they can control, for what relates to issues that don’t need global resolution. China Inc. has demonstrated, owing to stringent national plans, what can be achieved by a country led with an iron fist and a strategy of economic domination.

However, we – the people of Earth – don’t have any of this. We totally miss a vision of what we want to become and how to make it happen. We carry on with the anarchy of our Great Village,

each generation passing the baton to the next one, without an overall goal. We have no way to measure the progress or drawbacks accomplished by our generation, no channel for taking concerted corrective actions. Individually we try to plan for our lifetime (studies, career ambitions, children, retirement) but as a species, we live by the day like any other group of animals. Individually or in groups we innovate extraordinarily, but *as the global human herd we are totally dumb*. The accumulation of our individual or national agendas is all there is at the highest level. We cannot tell our children that in a hundred years, the world should look like this and how they could best contribute to make it happen with the time and energy of their life. We just live our life and go, while in parallel another life comes and does the same. There is no human “honeybee substance” to guide us to where this all is eventually going – or at least where *we want* this to go...

Without a vision, a strategy and a plan, without even some agreed generic scenarios of cohesive development, it is truly difficult – unless one is extremely lucky – to succeed in reaching an objective, especially because there is none either in our case. As a result, with the human species short of any form of vision or objective, we default to our bare instinct, the only one shared by the rest of living beings: *survival*. We will survive until some higher-level issue whips us all out. We are inflicting climate change to ourselves and will soon face the consequences of our acts. Still, we are not able to deal with it and anticipate, strategize or plan for what matters to our species.

Survival for oneself or eventually for one’s herd or country is – by default of a more sophisticated intention – all that we truly can deal with. Evolution has brought forth adaptation in every species so that it may better survive in its surroundings. Humans do not differ from this simplistic path. We can argue that we are so much smarter than any other animal. It is true individually or socially, but bottom line the unfortunate truth is that we are not doing better than animals at the highest level: we have not yet evolved to the level of being able to save ourselves.

We share with other species the minimal instinctive objective guiding evolution: *survival*. We don’t know yet how to translate it into a defined vision. Without it, even our individual and collective objective of survival is again at risk. Our species was at risk for the first time before the Neolithic jump and the reason was starvation. This time, the reason is the ecological wall that we have created. The first time we were lucky – we invented the civilization of the seed... What are we inventing now to mitigate our climate disruption? Electric cars – we knew them a century ago. Wind turbines? Solar panels? None of this is really new. We have these “new seeds” but haven’t got a plan to plant them.

The instinctive objective of *survival* is not good enough if not articulated around a holistic planetarian vision, strategies and plans to survive in the billions and for the long-term. A vision would express that we must reconnect with a path of harmonic and balanced development *in harmony* with our planet’s complex and fragile ecosystem, to maximize our chances to survive for many more generations. A vision would acknowledge our convergence and would tackle with a unified direction for our economic, ecological and political imbalances. A vision would define where we want to go, how we can jump above the ecological Wall to reach another phase of stability in our evolution.

Put simply, we need a vision for a better future, one that stimulates us *to push the accelerator for a better innovative outcome – not a brake against progress and development*. Such a vision can

only challenge our established political systems and highlight that they are unintentionally incapable of coping with our collective responsibility. Our lack of governance conflicts with the immutable and simplistic objective of survival of our species.

- In democracies, politicians are elected on a local or national level and cannot make decisions that are deemed locally unpopular in the short-term, even if viewed as necessary for the long-term. The job of politicians is to be popular. This is an intrinsic endemic problem. With the rare exception of a few visionaries who risk personal unpopularity for bold choices, politicians generally push for visible benefits within their country during a limited time period. A democratic tenure is typically 4-5 years. How can a leader bet his or her future on a decade or a longer impact? *“I’ll be gone, you’ll be gone”* (IBGYBG). Even with the best intent, this pragmatic approach strongly influences strategic choices and leads to the easiest way out.
- In autocratic states, rulers clearly have the opportunity to roll out a long-term agenda when their grip on the country is strong enough. China superbly demonstrates the benefit of its long-term thinking and planning over the electoralism of democracies. Inversely, despots must also constantly manage the perversity of their illegitimacy. It makes them paranoid. They have to politically protect themselves from their own citizens whom they fear will ultimately aspire to more Freedom. Although not paralyzed like democracies by the pre-defined limitation of their tenure (they can rule for as long as they last – see Mr. Putin), they are obsessed with the need to perpetuate and defend their own political model. It forces them into a defensive mode rather than proactively sharing a global responsibility – as we can see with imperialist nostalgia in Russia, isolationism in North Korea or the obsession for an atomic bomb in Iran.

If the fundamental objective of Humanity is its survival (at a minimum), then our vision should be designed accordingly. Let’s attempt to draft one, to help visualize the process that would derive from it – here is the draft of a vision for the survival of mankind:

*“At the dawn of the third millennium, we the people of Earth want to unify into one country and make it a brotherhood, to take responsibility for the long-term sustainability of our species. We recognize our common destiny and want to pool all our efforts and resources into a free democratic universal society which prioritizes the long-term betterment of life for all.”*

### **Our strategies**

To translate such a vision into strategies, we should capture its two essential axes. The first one is the overarching objective of “sustainability of our species to prioritize the long-term betterment of life for all” – which really means the capability for our species to survive and flourish for the very long-term. The second one is the vehicle that we miss to attain this objective: “unify as one country” to take collective responsibility and to pool our resources efficiently.

As a result, we can derive two essential strategies that unfold from our new vision:

- 1) *Build one country*: a strategy of political unification and solidarity in a universal society.

2) *Build a sustainable society*: a strategy of combat against wars, economic instability, pollution, global warming and protection of bio-diversity.

### **1. Build one country**

These strategies are both separated and intertwined, as one makes the other possible and they together enable a single mutual resolution. The success of the second strategy clearly depends on the execution of the first one. “*Build one country*” is the strategy that drives the realization of the whole vision. The metamorphosis of our political model is paramount. It embodies the foundational elementary block that makes our long-term survival possible. It provides us with the social and decisional system that we currently miss. Let’s illustrate our “*build one country*” strategic intent:

*“We want to build a global country that shares the social and peaceful values of Europe; the Freedom and resiliency of the American democracy; the diversity of Brazil and the long-term intelligence of China.”*

We want a vision that is compelling enough to engages millions of people into a popular movement around the world. We need a starting point and we need leadership. As concluded earlier, the shock of Coronavirus and the economic recession that unfortunately may unfold can create such a catalyst, with at the same time the US election. It provides a formidable opportunity for a big political shakeup. We have browsed the possibility of a tandem between Joe Biden and Barack Obama to provide initial leadership for a global agenda. Their partnership can provide immediate traction and international leverage and play the role of conductor toward this grand change. It can influence future members, manage the process and help to align the various agendas. If this happens, a few critical questions will still need to be addressed.

- Inside the US:

Can Americans take at heart to be inclusive global magnets and make their own metamorphosis from a proud nation – nationalistic and sometimes belligerent – into the world’s moral role model? The dream of the Founding Fathers is totally compatible with the universal creation that we are painting. The US was not meant to be exclusive, the federation has been a dynamic process which anticipated more states to join in, beyond the thirteen initial members. America is best positioned to help assemble more states into a construction similar to its own, as long as the grand design is clear, well understood and all ultimately belongs to the same democratic destination. There must be a way to engage the majority of Americans with pride into the journey of leading the unification of mankind. After Trump and Coronavirus, now is the time for Americans to bind again with a compelling mission.

- Outside of the US:

Can public opinions in other democracies “re-accept and re-recognize” the US as a guide after the tensions of the last few years? The free-world needs a compass. It’s a matter of communication and of political leadership in messaging the project. Joe Biden will bring back US international respect and trust in a non-intrusive manner, the US acting as the missing facilitator. The intent of

full globalization is absolutely not for the world to become American, but for America to provide help – “on demand” to form the federative democratic “Club” that will take us to the new model.

This is a paradigm change, an exciting and thought-provoking one. We can do it, because it makes so much sense and we believe that Humanity has a chance to save itself. With a common analysis of the situation, a common vision and a strong core leadership, the sky is our limit.

Barack Obama is an emblematic leader. His aura goes well beyond America itself, in fact he has the chance of being seen as a true citizen of the world owing to the diversity of his roots. He can be the leader remembered and recognized by generations to come – the founder of post-national History and the architect of our vision for a sustainable mankind. If he is willing to stand up for such a cause at this pivotal moment, does any of us see a better candidate? He can win a core support in America and abroad with the humanism that he personifies. He can help Joe to re-energize a positive and partnering America as this is a bi-partisan message. He can re-ignite America’s role for the free-world. If he is willing to endure what may be a difficult beginning, he can gain more popular support internationally than anyone else. It takes a first wave of national leaders to join in and then the snowball can roll on its own pace.

Indeed, the time has come to start our universal journey. The next US presidential election will be an historic turning point that can lead the world to two opposite paths.

- Extreme economic globalization with almost everything being made in China is coming to an end. The backward reaction has already started. Factories are coming back home everywhere.
- The evidence of the ecological challenge is broadly recognized and its imminent implications will raise yet more endorsement. Joe wants back into the Paris agreement.
- Common societal challenges face democracies and make them more compatible than ever. Three points are now unifying them: the need for solidarity inside, pressure from immigration and the burden of the public debt. The US will have to turn more social after the healthcare issue flushed with Coronavirus and subsequent unemployment benefits with a more European-like model. All democracies are now facing mass-immigration, not only the US with Latinos but Europe with Africans. Europe is struggling with its new diversity and given the competition from emerging countries will have to revisit more seriously the economical weight of its social welfare model. Everyone is coming out of this crisis with an even higher debt level, well above one year of GNP. Convergence is under way. Democracies share the same issues.
- There is a realization that the most powerful autocratic regimes are turning dangerous again. We risk a new cold war, in fact it has already re-started. At the same time, democracies are losing faith in America’s willingness to protect them, unless America steps up! Japan and South Korea are getting scared of the rise of a potentially aggressive China and Europe of Russia.
- The situation in the Middle East is a genuine mess; it is out of anyone’s control. Syria is a shame for mankind. Nuclear capabilities in Iran will provide further instability.

*The time has come for mankind to finally receive the revelation of its oneness. More geo-political stars are aligning for a shake up than since 1945 or 1991...*

With the US election, there can be such an interesting construction for whoever wants to see it. President Obama can position his post-presidential future initiative around the theme of a new

world order, while at the same time sponsoring Joe Biden as our next US President. These two have learned how to work together effectively and complement each other. Together, they can establish a mutually reinforcing duo. As Biden concentrates on US affairs, Obama can focus on the formation of a union of democratic leaders, touring the world endlessly to advocate for the global initiative. To impact change, leadership is everything.

These national leaders know deep down and through their personal responsibility toward their people and History that the battle against the Wall cannot be won nationally. If they face their responsibility with enough courage, they have already concluded that the solution to the crisis that Humanity faces goes through a new world order, which will diffuse their respective nation-states. The consequence for them individually is to take the leadership of their nation for the global cause. They may feel lonely at the beginning, their own political establishment may threaten them. They have to take a personal political risk, to engage their name and credibility. More importantly, they have to turn themselves even into global educators, communicators and evangelists.

Educating people is critical. With an intimate conviction, the role of leaders is to create a comprehensible bridge for their citizens toward this paradigm change. This endeavor requires leaders who accept to take a risk in their successful life, to elevate themselves to the true altitude of the role for which they have been elected for. They must be willing to crusade for a cause, because they know it is the right thing to do. They must for once get over the pressure of the next election. As a reward reward they will become our heroes for generations to come - *the Founding Fathers of the United Democratic States*. It is up to such a group to prepare a roadmap for the set-up of the federation.

Our best national leaders must have the intellectual honesty to *share an inner frustration when recognizing their individual weakness*. Never before have national leaders been obliged to workin so much with or against each other as they share common issues, all officers on the same ship - without a captain. They remain collectively paralyzed by the very system that has put them in place. They cannot escape the shackles that bind them. They are indeed presidents or prime ministers of great independent national powers, but their ambitions for solving the greatest of problems are facing the limits of their borders. Will the fear of attacking their own national establishment ultimately kill their determination in the nest? If we are millions to share our vision, actively engaged to promote it, we will help them with the authority to endorse it, in particular if Biden and Obama come out as the first among them to break the taboo. Then everything is possible.

Together and for the centuries to come, they have the opportunity to become our *Founding Fathers*. They can be those by whom the catastrophe of the big crunch has been avoided. The ones who gave birth to “post-history”. Like Moses, they can bring us all to a promised multi-ethnic and sustainable land.

*The time has come for democratic leaders to stand up and build a joint global initiative, as long as they remain strong enough to influence and win the global cause. We need a strong and united democratic club. The political clock is ticking in the opposite direction – democracy itself is going backward given the rise of China and others made possible by semi-globalization.*

Any country will be welcomed to join the *United Democratic States*, provided that they have established democracy in their homeland or are clearly in the process of doing so. Democracy has got to be the unifying factor.

The formation of *United Democratic States* would also facilitate the transition towards democracy everywhere, as never before. The Union would give everyone a chance to re-set their own model. The afterglow of global democratic governance would ring the bell of totalitarian rulers. Their anachronistic will be obvious in the light of global democracy. It will give these rulers an elegant and timely way out.

We have a vision. We have strategies. We can even identify a practical way to get started... Let's now look at the moral compass that we want for the future - **the core values of the Union:**

- **Universal Peace and tolerance** as Peace will come from the lack of enemies once we establish one country for all. Tolerance is essential given the differences in ethnicity, identity and religion inside of the federation.
- **Liberty and equality** for all men and women regardless of backgrounds or origins are the bedrock of our new collective conscience. Minorities must be respected, reciprocally they must respect the traditions of the local majority where they live.
- **Protection of diversity** of local identities. Globalization is not one size fits all, but harmony between local traditions and cultures. Global decisions are not to favor or penalize one group over another, or to crush minorities over the majority rule.
- **Universal education and information** are essential rights for everyone. Enlightened citizens empower the right leaders for the right cause and an efficient democratic process.
- **Basic healthcare** for everyone. We need a globalized capability to offer a minimum decent healthcare for everyone, including strategic planning and management of epidemics.
- **Fair liberalism** balances economic competition and free-market with the constraints of a sustainable society, focused on zero carbon emissions and which invests into most under-privileged human groups.
- **Protection of the environment** and the priority of managing our environmental impact are to be sealed as first articles of the federal constitution.
- **Democratic checks and balances** must guide the decisions on global issues with a spirit of wisdom and fraternity. The federation should not be a bureaucracy. What can be better managed at a member-state level should continue. State laws remain in force as long as they do not oppose to federal laws. The global federal constitution is the escalation path and documents the fundamental laws governing Humanity.
- **English as the global official language:** without an international language, it is very hard to govern properly. A global country cannot operate through hundreds of languages without a common one. We need English to become the official language of the new federation. English is already the second most used language in the world and everywhere. It is the first international language for business, diplomacy, education and travel – already used as the global language. Over time, all human beings should be able to communicate in English.

We can build a democratic society that enables shared progress and offers a positive and sustainable way forward, a realistic alternative to the current flow of pessimistic fears, uncertainties and doubts. Humanity can continue to evolve toward a better life and continue to

experience new ideas, lifestyles and technologies. We have to evolve. The way out is forward looking and innovative. We have to learn from our errors and rebound with a much simpler model – a global alliance.

It is all about change. Climate changes? Let's acknowledge it without undue emotions and deal with it. We did not know, now we know. Let's define how we can reverse the trend and accommodate our society to what is now the biggest constraint that our species faces. We have to share our vision and strategies and to execute our plan in response to the lessons of the mega-event that we face – with curiosity, honesty and no taboo. It can be a gigantic task or the simplest one. It is a mind-set issue. It is all about to understand the change, accept it and then deal with it... *Nothing condemns us to continue to barricade ourselves behind the bars of our borders* if they don't serve their purpose any longer. In the era of the Internet, the bars can fall if we know how to convince those who hold the keys and have the power to act.

## **2. Build a sustainable society**

We have just conceived a proposal and potential transition path for our first strategy – unifying all countries. The formation of a global political federation is necessary but not sufficient change to save us all. It is the critical pillar. It enables the management of another big change which is our second strategy – sustainability. We must reset the way we live and re-think our fossil consumerist model. We need a new demand from consumers and new offer from providers and this dual transformation takes a political guidance.

Gas pumps cannot continue to flow endlessly. Freshwater will become rare and more expensive. Food production has to adapt to a tolerable climate. Social and healthcare benefits are too much unbalanced. Ethnic purity is becoming wishful thinking. Migrants must be constrained to move to places where they can be accommodated... There is a lot to re-look at. Everything is inter-related.

At the forefront, we must revisit our historic concept of “growth”. “GNP growth = population growth = profit growth = progress growth = happiness growth”... GNP growth for all countries with all countries reaching the same level of wealth is a horizon with extraordinary implications as we saw earlier. But also, material wealth is not directly proportional to happiness or even well-being. While assumed to be the case, it's never been demonstrated. We run as a whole society – and most individuals do - after something that ultimately will not deliver its promise. As we do so, we challenge our ecosystem and get ourselves into a nihilistic spiral. Does it have to be that way?

Wealth has exploded during the last half century but no one can prove that we are happier than our grand-parents were. What leads you to believe that you are you happier than Grandad or Grandma? What we know is that many more people came out of poverty and can eat every day. This is great. We also know that we live much older – life expectancy at birth more than doubled since the beginning of last century. Not being hungry or living longer can directly correlate with happiness or well-being, though aging through artificial survival and intense medical intervention pose a profound question. What about having three cars, a McMansion and a week-end house? Are they the compulsory elements of happiness or only the proof a visible social ascension?



Social fulfillment has always been paramount in any society. Be the best hunter, the best warrior, the best farmer, climb the stairs of the religious or military or political ranks, accumulate money... That's what motivates most people to succeed: recognition of success against peers. There is always a form of competitive need for recognition vis-à-vis of a neighbor or a peer. This will probably never change.

The problem of our age is that such recognition translates into the accumulation of throw-away products which are the direct result of our industrial/materialistic consumerist model. Consumers are encouraged to buy as much as they can afford to, products that they barely need at all. And they replace them as soon as a newer one comes out. I want an iPhone 12 – although I don't even know yet what it does that my 11 doesn't. It's a virtuous economic circle – creating consumer demand growth that fuels offering growth and so on. Given the scale of mass production allowed by the industrial revolution and the pace of technology, the peer pressure race has turned into a self-perpetuating monster. Innovations make the latest product already obsolete, sometimes by design. Anything digital has a life expectancy of a few months, two or three years at best.

We probably all know that materialistic wealth is not the ultimate seal of a good life and more of a mirage of instant satisfaction after which most of us are running. We are like insects who come and hit a lamp at night. However, as long as it is the norm in the society, we are all part of the problem and it's pretty hard to extract oneself from mainstream behavior.

Before the industrial revolution, social peer pressure was much less impactful on the environment since the diversity and quantity of materials that wealth could buy were at a totally different scale. Today, we individually burn tons of CO2 just playing our standard Western middle-class lifestyle – having the same house and cars and holidays as our neighbor. Had we been the same people living two centuries ago, our carbon footprint would be a tiny fraction and we would look as socially elevated – happy - as we do today. We would have spent our money completely differently. Maybe money was less relevant in the first place. Business schools were not invented to make business a science. There was no Amazon to deliver at home. Advertising was only word of mouth... The need for constant economic growth, unintentionally fueled by enhanced technological capabilities, have taken us to a model of “always-more” mass consumerism. The society of over-consumption, accumulation and constant replacement has contributed to destabilize our natural environment. It is the direct result of the expansionist capability of our fossil-industrial-technology driven model. *The majority of today's “indispensable” products did not even exist fifty years ago. Many have been created in just the last ten years. Still we can barely imagine to be able to live without any of them...*

It is a very complex problem. Consuming is the foundation of our current society. The economy is based on constantly offering better products to create constantly more demand. In doing so it employs more people who buy more products and generate more profits for investors to re-invest into more capacity to invent or produce more. In the meantime, everyone pays more taxes, which fuel everything else. It's the virtuous cycle of the free-market economy and it has done a fabulous job to increase our overall consolidated wealth. It supports and pays for everything around us. It has killed Communism which was based on a totally different assumption.

If we can make this model *fair to our ecosystem*, there is no reason to change. It just works. There is no conceivable alternative. The problem is: *how to make the model fair and sustainable?* It will only happen through a clear political framework. The source of waste, pollution and gas emissions must be attacked at the highest level, from where the free-market will take over.

Emerging countries are trying to imitate rich countries to become rich as well. Are we offering them a sensible model since we know that we cannot sustain it altogether? Rich countries must set the tone for a sustainable society that offers quality of life without such a carbon footprint. Emerging will countries naturally follow the direction. The first nucleus of nations joining the *United Democratic States* will play the icebreaker and show the more sustainable path ahead.

On the demand side, we need a profound transformation of our consumption habits. It must turn into a positive phenomenon of society and a genuine fashionable movement. On the offer side, there must be a penalty for the full carbon footprint of the final product that makes the cleanest and most durable product the business winner against its fossil equivalent.

We start to see such trends with early adopters buying hybrid or electric cars. They associate their consumption habits with a responsibility on the environment. The beauty is that it also starts to look cool. Being frugal and zero carbon conscious can be a lot of fun. And it looks great on our neighbor... There is nothing fancier than driving a Tesla these days in California – your neighbor's Suburban is passé.

*Consumerist waste in fossil energy and materials, made possible by the first scientific and industrial revolution, has become immoral since we know from this point forward that such a waste will destroy the viability of Earth for our near descendants.* We must put a stop to the damage that we continue to cause – now in full consciousness. The time has come to prepare for our second industrial revolution: the clean and post-fossil revolution. It goes hand-in-hand with our universal political empowerment, because that is the only way to shift the economic model.

Previous generations were unaware of their ecologic footprint and impact. We are the first ones to discover the universal crime that we commit. We are like smokers continuing to smoke even though they know it is killing them. We are doing the same to our children by throwing them into an ever-warming climate. Once involuntary, our crime is becoming conscious. *Now, we know.* We cannot justify any longer our inaction in pushing for the necessary means that a solution requires.

The consciousness of the issue turns the utopia of global governance into a choice – how much do we want to fix ourselves? It is up to us to dare or not to. We are first in our long lineage to face the needed decision for such a paradigm change. The dignity and honor of our generation is to lead for a new vision, with a change so radical that it demands our unification to succeed. It will make our children proud of what we have done for them.

Think about our smoker's analogy. Smoking was trendy when we ignored the effect of tobacco on health. Playboys and starlets all smoke in the movies until the eighties. Smoking was cool. Today, smoking has become tacky and while millions of people still smoke, they are nothing more than the tail end of a defunct phenomenon, dragged along by the inertia of the drug. Is a non-smoker less happy than a smoker? Tobacco will probably be prohibited one day. In the meantime,

since banning tobacco is an unpopular move, it is penalized with higher and higher taxes. Smoking will be a distant memory a century from now. It will be the same with our fossil fuel society. Our problem is time. Tobacco finally reached its reversal after millions of deaths, decades of debates and powerful counter lobbying, until the issue finally prevailed in the general collective conscience of developed societies. The harmfulness of smoking was denied for such a long time. Smoking was an easier problem though. The cost to the society was limited to medical care for smokers, a rather small thing and more of a question of individual rights. Non-smokers are distantly harmed.

With global warming, everyone impacts everybody else and is closely harmed. It's a pandamia with a 100% contagion rate. It cannot be about individual rights or Freedom alone. One person's Freedom ends where another one's begins. We live in the same closed universe in which all share the same resources, biodiversity, air and water... It's a single setting for us all to protect or waste.

### **Our execution plan**

We have a vision and two main strategies. The final step of our innovative journey is to paint an execution plan: a program for the first elected leadership team of the *United Democratic States*... The objective is to encompass the extraordinary possibilities that will immediately open up for Humanity with the acquisition of unified governance. The program will take us to the next level of granularity and demonstrate the magic effect of global decision-making. We will see how a single agenda can resolve in a fascinatingly way the problems confronting our fragmented planet.

Presume that this first grand plan still in its infancy. The materials have been developed by a think-tank that the "*Founding Fathers*" have put together under the leadership of Barack Obama. Together, willing national leaders have reviewed it and blessed it. The program is articulated around eight chapters, one per priority. These are the recommendations that the *Founding Fathers* want to share with the future universal government. Although inter-twined, the priorities have been ranked by order of relative strategic importance.

### **“The Power of Global Governance”**

*The First Program of Governance of the United Democratic States*

Prepared by the global think-tank

- 1. Peace and Universal Rights**
- 2. Zero Carbon**
- 3. Sustainable Development**
- 4. Feed the Planet**
- 5. Natality, Healthcare and Migrations**
- 6. Green Economy**
- 7. Universal Education and Communication**
- 8. Space Exploration and Colonization**

Before we dive into the program itself, let's inject an emotional dimension. Here is what could be the speech that Barack Obama made at the occasion of the disclosure of the program. It sets the tone of the messaging that we want, to make a decisive impact on people's mind.

“People of the world, future fellow citizens. I want to make today an important declaration which will surprise many of you. You haven't heard from me during a few years. I have been reflecting about what I wanted to do next, how I can continue to serve a great cause and make a difference in the world in which we live today.”

“*Joe and I share a dream: we want to help Earth to be great again. A dream for a universal and sustainable Peace. A dream in which Earth will ultimately become our single country. You remember Martin Luther King's last speech on March 31<sup>st</sup>. 1968 in Washington, DC. He challenged us to make three revolutions. First, we should develop a world perspective. Secondly, we should eradicate racism. Thirdly, we should get rid of poverty. He pledged that *our world has become a neighborhood, and that we should learn, altogether, how to make it a brotherhood.**”

“We are standing here today, more than fifty years later. On all fronts we have made huge progress. We know that there is still a lot more to be done. But these three revolutions are not only incomplete, they also face the risk of a counter-revolution. They face the risk of moving backward as universalization of mankind stands in the middle of a bridge. Our countries are hesitant. Do we move forward together or back to the apparent cocoon and safety zone of our different identities?”

“Even more importantly: since 1968 *we have discovered the need for a fourth revolution. Reverend King could not have foreseen it yet. The signs were not apparent at the time. We didn't know. We are the first generation to discover the impact of our dominance on Earth. We discover man-made climate change. A Great Ecological Wall is ahead of us, as we continue to deal with our consumerist frenzy and independent nations compete for the rfinite resources of our planet that remain. The time has come for our fourth revolution: the one of *sustainability for Humanity.**”

“We need to deal with these four revolutions in parallel. They all come across each other right now. They are the opportunity of our new global civilization. We must succeed with these four revolutions to pass with responsibility a durable legacy to the generations coming after us.”

“I believe that the time has come to unite all the nations into one. This is a call for our global brotherhood and sisterhood. This is a call for solidarity and a promising common future at the scale of Earth. This is a call for us to federate all our countries as *United Democratic States*”.

“Like many of you, I have given all my soul and energy to my country, even more when I was president of the USA. I did my very best to try to solve the critical issues of our time. This is when I came to a big realization. People, I am being brutally honest with you right now, you can take this is a confession. Although I led the most powerful country in the world, I could not resolve any of the four issues facing America. I realized that when you lead a single nation among many others, you cannot develop solutions that match the level of these four revolutions. No nation alone can fix issues of worldwide scale. It takes all nations together to make Humanity succeed.”

“Let me tell you more. I concluded that countries block these four revolutions, despite their best individual intention, given their own definition. Countries miss the global scale and empowerment that match the problems to be resolved. You cannot make a nation durably stronger in a derailing planet. We are all stuck in the same governance dilemma and are facing the biggest challenge that any generation before us has contemplated.”

“I love my nation, I love Earth to which it belongs. When I look at our challenges at the level of our Blue Planet and well above each individual nation, I can also see solutions. The impossible suddenly becomes possible. United altogether, we can solve for what competing nations cannot. We can transform the Wall in front of us into a Sound Wall. We can jump into a great future. We can be the heroes of future generations.”

“The promised land is in front of us. We need to come altogether and give birth to a new era. People of the world, this is not about me. This has nothing to do with me. It’s about you. I am responding to an emerging popular movement, to many demands that I have received, which we hear and feel in so many places – *the immense desire for a global brotherhood*. Someone has got to take this flag forward, to lead us the unification process of our global community.”

“I am announcing today that I have decided to dedicate the rest of my life to the cause of a global country. Nations and Earth, war and Peace, rich and poor, identities and tolerance, purity and diversity, economic growth and sustainable society, local and global, opportunistic and strategic, Humanity and beyond... these are the balancing acts that we need to weight as a global team. My offer to you is to help us all to build the country of the all people.”

“I was granted the Nobel Peace Prize eleven years ago. All that I have done so far to deserve such an honor was not to start or join any new war, which was pretty tough I must confess. What I am offering you today is to serve a cause that is more profound. We need a game changer. It is about building a new world for our children, one of durable Peace in a sustainable society with a fair economic model. We need to invent a better world, one in which we all share the power to build a great future for our children.”

“Our survival and the moral progress of the revolutions put forth is not utopian any longer, nor is it a guaranteed success. It depends on you, citizens of Earth. You are the only actors in this endeavor. We can build a shared vision and save ourselves, or we can remain competing fools for as long as we last.”

“One thing is for sure. To execute that vision, we must give ourselves the economic and political means necessary to make it happen. I need your help. Together, let’s agree to press the reset button and to win a second life for Humanity.”

“Earth our country”

## **Chapter Eight:**

### **Priority One: Peace and Universal Rights**

#### **1. Peace:**

The history of civilizations is paved with non-stop wars. Violence haunts the paths of power since the beginning of historic times – when nomads settled with territories and wealth to protect. Dark forces have moved so many times entire human societies into extreme violence, sometimes leading to genocides or to collective suicide. Nationalism has stimulated our aggressivity since the eve of civilizations. As a result, we take war for granted, as if it was an innate human and social mechanism. We believe that war is part of Humanity and that there will always be war. War is assumed to belong to our intrinsic genes and instincts.

Let's challenge this assumption. There is no proven evidence that war existed as an endemic pattern in pre-historic times or that mass-organized violence between men has an anthropological foundation. Instead, many pre-historic clues go in a different direction. Whereas it is difficult to assess precisely the degree of aggression between pre-historic nomadic clans, scientists have now generally concluded that primitive societies were not driven by war. It has been proven that there were conflicts between pre-historic people and that there was violence, but typically these antagonisms only incidentally led to death. Humans fought like animals – to select a winner – then they quickly settled, without a social instinct for collective extermination. There is no scientific clue to show that nomadic warriors lined up in the hundreds on a battle-field, with the objective of mass-destruction of the enemy. Bones show that most injuries did not kill and were healed after a while. It suggests that inter-tribal confrontations were specifically about justice, personal conflicts or food-fights instead of large-scale battles leading to systematic elimination of a tribe, with multiple death sentences and mass graves.

Most recent findings suggest that war is not innate in humans but rather the acquired behavior of our post-Neolithic, territory-based civilization. “Our research questions the idea that war was ever part of our ancestral past” declares Patrick Soderberg (Abo Academy University, Finland – published in the journal *Science*, July 2013). Abo's research was based on isolated tribes that were studied when they still existed over the last century. These tribes lived like our hunters-gatherers ancestors did 12,000 years ago. Out of the 148 violent men-inflicted deaths documented, very few were caused by war. Most were homicides led by personal motives and feuds and 85 percent took place within the same tribe. Abo concluded that hunters did not naturally evolve as warriors until 12,000 years ago. Hunter-gatherers – our natural state – were predators against other animals in order to feed themselves, not for the business of killing their siblings. As hunters-gatherers

transitioned to farming, groups became territorial. Their social structures isolated themselves from each other and wealth had to be protected or stolen. War became dominant as we now know it – in order to attack or defend “countries”. Self-defense of individuals or small groups turned into conflicts of entire civilizations against each-other, at a totally different scale.

The first benefit of unifying ourselves under a single democratic federal country is to unlock the war-like curse of History. There is only one country – no other country against which to fight for. One country implies **universal Peace**. There can be internal and local internal incidents or unrest, but there is no case for mass slaughter any longer, no organized enemy or army against which to fight. As country-based History disappears, so does war.

Rather than massing arms and preparing for war, member states of the federation can instead articulate political programs and negotiate their specific interests through a democratic process at the state and if needed federal level. The federation becomes our missing global peacekeeper. When countries turn into states of the same federal democratic country in which minorities are respected and protected, war becomes pointless. War becomes History. War is unnecessary and unacceptable because there is no case for it any longer.

Potential conflicts will be resolved as domestic affairs, managed through a legal and democratic process which federal justice will deal with. Of course, civil war – within the federation – remains theoretically possible. But war within a federation – the same political entity – implies that the democratic and constitutional model are not sufficient to prevent it. It is possible but unlikely. If we look at democracies in History, civil wars are the exception while external wars are the rule. Instead of countries being instruments of war, the democratic global federation will be the universal instrument of Peace. The constitution should be designed accordingly.

The Union is magnanimous and exists for the general interest of all men and women, not for the partisan benefit of a single group – ethnic, geographic or religious. Its first priority is to manage proactively the tensions between ex-nations and to organize legitimate and peaceful solutions at scale. The federation will be multi-ethnic, multi-religious and multi-cultural.

With one single country and no enemy, there is no need for a veritable army. Progressively, the armies of the world will re-assign their troops to civil duties such as public order, justice and internal security. Over time, only a light federal military force will be maintained in case of an exceptional need for a specific intervention, most likely to fight terrorism or confront a unique internal security problem.

We recommend five priorities for a sustainable Peace, with an immediate priority on the Middle-East:

**i) End the Israeli-Palestinian conflict:**

A few million people are hostages of a situation that beyond themselves indefinitely holds the Peace of billions. Jerusalem can be turned into a universal protected sanctuary, an opened and international capital city. It could even be the future capital city of the *United Democratic States*. It will be so much easier for a global federation to decide if Israel and Palestine merge together as

a single, unified, multi-ethnic and secular peaceful state – or is being split into two separate states within the federation. The process can be managed totally differently under the unalterable protection of the federation. The “Peace of the wise” will have no winner or loser. Without this destructive conflict, the region is poised for a renaissance.

**ii) Eradicate terrorist groups:**

Al-Qaeda or the Islamic State have developed into global movements against the Occident. Like all terrorist movements, they draw their existence and heroism from popular support among religious radicals and survive with the help of private and secret public financing. We need a big reset. Rather than putting the whole Middle-East in fire and go to war against the region - demonizing all the inhabitants of the area - we must endeavor to make Jihad completely worthless. With the emergence of a world government, Islam and all Arabs will be completely welcomed and integrated, with clear communication to make them feel that way.

Step one, national Muslim leaders will work hard to find resolution with Al-Qaeda and Isis and convince them to dispose of their weapons and to rejoin mainstream. The UK showed us that such a process is possible, the IRA ended-up participating to the Irish democratic process. Step two, after an initial call for wisdom and forgiveness, any remaining Al-Qaeda or Isis loyalists will have to be eliminated by the federal intervention force.

The federation will have full tolerance for political activism but none for violence and terrorism. Terrorism won't have legitimacy any longer. One way or another, violent extremism will be eradicated, with no more capability for any nation to support them directly or indirectly.

**iii) Integrate totalitarian states:**

Dealing with dictatorships in a divided world where one always finds a big brother is elusive. Russia for El-Assad in Syria, China for Kim-Jong-un in North Korea show that unexpected survival is possible... With one federation, despots can't be protected from the outside any longer. They will be instantly weakened. Following the same logic of initial openness, we want the totalitarian and illegitimate leaders to pass the baton to their people and to allow their country to join the Union as part of a democratic process. They will understand that they are surrounded by the inevitable advance of global democracy.

We will be tolerant and merciful with the ones who chose a graceful exit and offer a decent way out. We will put them in a position to say: “I have decided to abdicate, because the world is becoming one country, my role becomes unnecessary as democracy becomes the rule everywhere.” Those who willingly resign won't be hunted. Witch-hunting will be avoided. The priority will be on building a shared future and not on exorcising a painful past.

We won't repeat the shameful weakness of the Arab Spring though. People took the street, calling for democratic change. Democracies let them down. The Founding Fathers of *the United Democratic States* extend their apologies to the people who stood up for Freedom and ended up fighting alone. From now on, with the Union they won't be alone any more. Democrats are family.



**iv) Destroy military stockpiles:**

As a first step, all armies in the federation will be unified under a central commandment as their country joins the founding group. Over time as the full global process gets finalized and there is only one country, weaponry and armies will become essentially unnecessary. We will help the arms industry to re-focus on clean energy and technologies, and military personnel to transition.

Nuclear warheads around the world will be centralized under the control of the president of the federation, then destroyed. A symbolic nuclear force will be maintained to keep control of the technology and for exceptional deployment in case of a threat to Humanity such as the re-emergence of a rogue state, an uncontrollable terrorist attack or an external risk from outer space - the impact from a meteorite for instance. It is impossible to be certain that a warhead cannot possibly be re-invented or hidden somewhere. Therefore we must keep a hand on the technology to react if needed. Nuclear weapons will be kept exclusively at a minimal maintenance mode to protect Humanity against any unforeseen risk or aggression.

**v) Create a lean federal force of intervention:**

We recommend to create a tiny global force of intervention of around 100,000 troops, passed the transitional global the military wind down. There will be no other army on Earth – private or public. It will be an arm-free world. The use of this force will be limited to anti-terrorism and support against public catastrophe. This elite army will be multi-ethnic and multi-lingual, led by officers of diverse origins and report directly to the president of the federation.

An arm-free world will spare the money that we need to finance the transition to a new green sustainable civilization. The total annual cost of wars and of military is huge, although hard to measure. It varies as a function of conflicts. We cannot quantify the price of the dead and wounded, of displaced populations, ruined economies, ecological and material devastations and of their after-effects which can last for decades. However, we can estimate the current annual cost of actual weapons and military personnel around the world. This number alone is only a fraction of the total cost of wars, but is fairly well calibrated. In the last decade, it represented a *global annual military expenditure of around 1.5 trillion dollars per year* or about two percent of the world's GNP. This total includes very different spendings by country.

Extraordinarily enough, this amount corresponds pretty much exactly to the annual investment that experts evaluate is necessary, realistic and possibly sufficient to halt climate warming on the planet. We are proposing to *shift the entire global military budget toward a global investment pool that will fund our transition to a green economy*. The program will be based on the development and promotion of clean energies, industries and agricultural techniques.

It's a minblowing discovery. The elimination of our military budgets alone can finance our new world. It is not so difficult to find the money that we need. We can dramatically accelerate the shift from fossil fuel which represents today more than eighty percent of our total energy consumption through Peace. It's an economic bonanza. Universal and permanent Peace will free-up the capacity that we need to finance our ecological salvation and to pass the Great Wall. This is the basic formula of our new world, and our first priority.

## 2. Universal rights:

*Universal federal law and rights* will prevail over state law. Each state will conserve its judicial framework as long as local law do not contradict the fundamental law and rights inserted in the federal constitution, which will be designed to protect all citizens equally. We are working on a new constitution which will document the fundamental rights of the *Homo sapiens Universalis*:

- One man, one woman, one vote: all citizens above the age of eighteen will have voting right regardless of gender or background.
- One man, one woman, one set of rights: all genders will have equal rights. Contraception will be accepted in support of women's rights and as an aid to contain birth rates. Members of all ethnicities and minorities will be treated equally. Positive discrimination may be necessary to ensure consistent education and work opportunities for all.
- School will be mandatory for all until the age of sixteen. English and universal History will be part of the curriculum. Children will not be allowed to work before the age of sixteen.
- Healthcare for all: the federation will support the development of medical infrastructure everywhere. The number one priority will be the battle against epidemics with massive vaccination campaigns, management of buffer stocks of tools of first necessity and the capability to exchange medical instruments across states as needed in case of crisis. We understand that climate change bears the risk of accelerating the frequency of pandemics and may hit tropical areas the strongest. While economic disparities won't allow the same level of public and private medical care everywhere, the policy will be one of long-term global convergence, at least enforcing of a minimum level of medicare everywhere.
- Justice for all: humans will share the right to be assumed innocent until proven guilty. All will have the right on an exceptional basis to appeal to the federal justice system if a contradiction between state and federal law surfaces. Nobody can be arrested without the involvement of a lawyer and the length of custody will be limited. Special laws may apply to anti-terrorism.
- Eradicate extreme poverty: our intention is for everyone in the federation to get out of extreme poverty as soon as economically achievable. We recognize the right to a decent global minimum income, but need more time to modelize how this could possibly work and be financed. In the short-term, we do not see the concept of a universal minimum income as manageable globally given the pre-existing differences in standards of living around the world. Today, the difference between the wealthiest and the poorest state measured in GNP per capita is over one hundred times. Our policy will be to drive pragmatic long-term convergence. An immediate equalization, even at the scale of a single generation, is economically inconceivable. Our objective is to totally eliminate extreme poverty by 2050, as defined by the right to have at least a daily meal of 1,800 calories, access to clean water and a decent shelter.

We view these **human rights** as unalienable. Today they face constant arbitration and compromises between democracies and totalitarian states. Typically, the economic priorities win.

This subject has become almost taboo given our competitive trade relationships. This political tolerance has led to extraordinary humanitarian tolerance on the part of democracies. This will come to an end with the global federation. *Free-trade will take place between free people.* The Union will place democratic values at the top of its constitution. We will only make temporary accommodations as a transition path, for countries willing to join-in and preparing for it. We want to build a planet for the people, not to compromise political Freedom. We make it loud and clear: this is not Freedom zoo. Democracy and Freedom come first. We will support and have mercy for despots who are willing to exit, but there will be no room for totalitarianism in the federation.

We want to share our pride for the world that we want to build and have composed a pledge of allegiance to inspire and stimulate our sense of belonging to our universal community: *“We pledge allegiance to Mother Earth and to the United Democratic States for which it stands. One people, one global country, indivisible with Peace, liberty, equality, brotherhood and justice for all.”*

Earth our country.

## **Chapter Nine:**

### **Priority Two: Zero Carbon**

**F**or the first time ever, we will have a world government. We will create a level of empowerment that countries have been individually missing. Our federation will align all political and economic forces available, to undo the planetary human crisis that is driving us to the Great Wall. Our priority is to shift Humanity's efforts toward a society that emits low enough greenhouse effect gases that Earth's ecosystem can re-absorb them and maintain its fragile climatic balance. This is the ecological equilibrium level, that has been baptized "zero carbon." *We aim for the invention of a zero carbon society at scale.*

First of all, we will stop subsidizing fossil fuels. It sounds obvious – like pushing an opened door. Wrong... the Overseas Development Institute (ODI) estimates that rich countries are currently spending seven times more money supporting coal, oil and gas than they are on helping poorer nations to fight climate change (BBC Science and Environment, Matt McGrath, Fall 2013). Fossil fuel subsidies are worth half a trillion dollars annually. They come from public funds of various sources, with financial aid provided to oil, coal and gas producers and their consumers, by local governments and even by international agencies. "This is a reckless use of public money at a time when people are very concerned about energy costs" says Kevin Watkins, executive director at the ODI. "Why are we spending 112 dollar per adult in the OECD countries subsidizing an energy system that is driving us toward dangerous climate change when there are alternatives?"

Research from the International Energy Agency (IEA) also shows that such global subsidies for fossil fuels are six times higher than those for renewable energy – unbelievable. Another surprise: the OECD has stated that coal is subject to the lowest level of taxations of all energies - amazing as it is the highest polluter.

Our first recommendation to reach our carbon zero global priority is simplistic: no more public support for the fossil economy. Period: looby or not, jobs at stake or not, specific economies at stake or not – game over.

We are designing a policy to drive a complete and cohesive framework to help the emergence of a zero carbon society. Our intent is to enable a model in which people of the federation will organize their behavior around a lifestyle that is compatible with the sustainability of the environment. We will continue to do everything that our society does today. Almost - just a little differently. We will change what it takes to achieve amazing differences to our carbon footprint. We will learn and develop together *better* ways to eat, live, play, travel, produce and consume.

What does “better” mean? It stands for an overall new way to consume and produce end-to-end. It stands for a strategy that modelizes upfront, embeded in the price of the product, the total impact of making and consuming this product – not just the direct cost of manufacturing it. “Better” recognizes that our human society inextricably belongs to the overall chain of life on Earth and has the responsibility to protect it. We are not only utilizing finite resources with a short-sighted financial benefit, we want to insert such a benefit in a wholistic societal perspective. “Better” recalibrates our attitude in front of peer-to-peer success: we want to re-invent our social needs to best fulfill our happiness. “Better” resets how we can minimize our waste and dispose of it, how we can use cleaner energies, how we can enhance the natural cleansing mechanisms of our ecosystem. “Better” ultimately replaces “more”. “Better” matters because we are coming to the realization that we do not have a future if we do not love and cherish Nature. “Better” starts from a responsible mindset and a profound new sense of responsibility. The bottom line of “better” is: we are just a link, inserted into the unique and finite setting that we utilize and harvest generation after generation. Our duty in everything we do must be to end up with a neutral environmental effect, so that our species can continue to survive and flourish after us. “Better” means that we want to handle to our children a world at least as promising as the one we found ourselves when we grew up – or even “better”... Each generation must leave behind a “better” Earth.

To get to to such a place, we have to act altogether. We need everybody’s support. As national leaders, we work to resolve our endemic political governance problem. We plan to empower the missing link among us all and to implement a global solution. Once this is done, the next challenge is the allocation key to finance the implementation of our new model. Experts estimate that the necessary funding to shift our civilization to carbon zero fast enough equals to a trillion dollars per year. It represents 1.2 percent of the annual GWP (Gross Worldwide Product).

We will gradually leverage the funds made available by the savings of universal Peace – 1.5 trillion dollars - to fund our carbon zero initiative. We commit to reconvert the military spendings as follows:

- One trillion dollars will be invested in the direct acceleration of the green energy transition, including technology development, infrastructures and support for alternatives to fuel.
- 500 billion will be invested to finance the non-traumatic reconversion of the military industry and personnel, also toward green energy and associated products and services.

This transfer of budget *from military to zero carbon* will only constitute the public part of the total financing that we can leverage as a global team. The objective is to pull more private investments to the cause, so that free-market forces take over quickly. Public funding will act as a stimulus to help the green economy mature until it can sustain itself with a straight and independent business logic.

We want this all-out public stimulus to be the ignition key of the new model. Once the proof of long-term public commitment is demonstrated in regulatory and financial terms, full confidence in the transformation will drive a defining economic shift. Private investments will follow. Public funding will sponsor a snowball effect. Public and private will then combine and amplify each

other, until the need for public intervention disappears as new energies mature and take over on their own rights.

We want to drive an industrial and social revolution – right now. Free-market forces alone cannot resolve this problem and will instead continue to steer with fossil for too much longer. Federal public money must act a booster of the clean alternative. If we only wait for the free-market transition, we will have to wait for fossil fuels to disappear or be rare enough for their price to explode. With the vast discoveries of shale gas, it will take even longer. We cannot wait. We are not socialists fond of government spending. We want the market to lead when it can. But this is a truly critical strategic exception. We have to accelerate and manage this inflexion altogether, so that our free-market advances the next wave of sustainable growth engines.

After universal Peace, zero carbon is our most important move. They go together as one will fund the other. The entire economy is waiting for this mutation. We all hear and see the effects of climate change but do not see much changing in what we do. We will drive this revolution, it will occur when we engage our unequivocal will and resources on all fronts. Private investors are waiting for such a strong signal, having already burned their fingers a couple of times on the green sector. All private equity funds of the world have tried to start too early, lacking consistent international public commitment. They are sitting at the gate, waiting for a clear motion: we are now cutting the ribbon to boost a tidal wave of investments never seen since the emergence of ICT (Information and Communication Technologies) in the eighties. Green will be cool and rewarding, we will prove it altogether. There won't be stop-and-go policies of local governments any longer. We do care about business. So far the lack of a readable momentum has turned the potential green golden goose into a bad deal. We will prove it the other way around. The green economy is the greatest business initiative ahead of us which will impact all sectors beyond energy itself.

*With the zero carbon revolution, our objective is to create a new engine for the entire economy, the overall catalyst of our future development.*

We are starting a new form of industrial revolution. In such times, it's all about timing, curves of ramp-up and endorsement of new techniques and technologies. Typically, technologic cycles start with a *luminary phase* in which a lot of money is invested with a promising but uncertain return. During this start-up phase, few users pioneer the first benefits of the invention. They love innovation enough to accept to cope with the immaturity of its first implementation. Then for those innovative products that have survived the first phase, the market takes off and goes into fast growth. In this second phase, the success of the technology attracts new entrants; the leading products are growing faster and are called "stars." After a lot of growth and success comes a third phase: maturity. So many users and competitors have rallied the race that the solution commoditizes, its price goes down and growth flattens. The maturity phase can last for a very long time, then turns into a plateau and eventually a new technology comes to disrupt the "old" one which starts to wind down, before it gets "dog" status and ends totally replaced – a full circle.

We live in an age where fossil fuel technologies have reached their full maturity phase for at least half a century. They have been in their luminary phase in the middle of the nineteenth century and in their growth phase in the first half of the twentieth century. Their success continues because fossil fuel is so cheap and still relatively easy to extract. Fuel energy remains temporarily

plentiful, still naturally available in the soil for extraction and processing despite the highly polluting nature of its combustion. Fossil technologies near the end of their maturity phase. We want them to be “dogs”. For them to decline, green-tech must win “star” mode, which is not yet the case. This is the transition that we want to drastically accelerate.

For the most part, newer cleaner technologies have barely been able to take off and to seriously reach competing mass-volume with fossil – except nuclear. They have remained somewhat economically immature, keeping us at the dawn of the clean industrial revolution. In terms of life-cycle, they are still in their “luminary” phase, only a few percent of the consumers have shifted away from mainstream fossil. Electric “plug-in” cars only sell in tens of thousands against fossil-powered cars being bought in the millions.

To better visualize: it is as if we were at the end of the eighteenth century for the textile technology; at the middle of the nineteenth century for the fossil fuel industrial revolution; at the very beginning of the twentieth century for the mass production techniques or at the beginning of the 1980’s for ICT. We are just at the beginning of the green learning curve. Green technologies should have already taken off ten or twenty years ago when fuel got more expensive and was seen as turning potentially rare. But more innovation took place for oil and gas extraction, shale gas discoveries kept coming and extraction and distribution remained relatively cheap. The natural free-market barrier to entry for green tech has not been crossed yet: fuel is still cheaper and easier (extremely cheap as inventories are maxed out following the Coronavirus recession).

If “green-tech” was a “normal” business sector without extreme societal consequences, a pure free-market led investor would conclude in good faith: “all in all, green-tech has been a business disappointment. It cannot get cheap enough soon enough. Technologies are not yet mature. Fuel continues to win; more shale gas is being discovered in the US and soon under the Arctic and the Antarctic. It may take another twenty or hundred years until green-tech really takes off to the level where I can make money out of it. I will wait until it gets financially real.” It makes complete sense in a business-only context given the pace that we have observed to this day.

But here is the point: it is not only about business. It’s about our impact on the planet. It’s about changing our society. Fossil-fuel-based activities (almost everything we do at scale) are the source of the greenhouse effect that engenders climate change. Carbon based fuel cannot be looked at just as a normal business or technology, that should be governed by pure free-market rules. Its mass utilization/combustion derails our ecosystem. If we let the natural liberal business curve play alone, it may take another fifty years until green energy reaches its maturity phase. By then, we may have turned into as an endangered species ourselves...

Green technologies have reached a fragile turning point where every little thing can tip them toward an industrial explosion and make them “stars” – or they can keep failing as fossil fuels manage to continue to remain cheaper and dominate, while their active lobbyists succeed to let some of us believe a little longer that they are not really impacting climate change.

Fossil society we are. Fools we will be until we forcefully decide for a change and drive for the “un-natural” (accelerated) inflexion of our cheaper fossil free-market course. We want our world government to drive a massive commitment that initiates the virtuous spiral of the green

economy transformation and anchors the green economy – undisputedly – into the growth “star” category.

Though CO<sub>2</sub> emissions are by far the principal source of global warming, they are not the only cause. Methane comes next, with a risk of a brutal acceleration as the ices of the poles melt and release trapped gas. Also, black carbon, halocarbons, carbon monoxide, volatile organic compounds, nitric oxide and massive deforestation together create the necessity of a large front of actions, that will not only affect our fossil fuel energy consumption. In the broadest sense: our lifestyles, the places where we live, our natality and our agricultural methods will have to change. Our civilization enters a new stage. We will measure the total impact of our lifestyle on the environment and its relative cost, as opposed to only measuring the size and growth of our GNP. It is about making balancing acts with proper awareness of the end-to-end situation, looking at full environmental impacts instead of point pollution or direct cost.

Our zero carbon plan is based on a holistic and foundational strategy that establishes our species’ ability to become sustainable and permanent, with a neutral coexistence with our ecosystem. We already have listed some of the principal elements of this strategy. However, we need a complete zero carbon global plan, one that is fully baked, quantified, articulated and financed. We are constructing this plan right now. We are bringing together the capacities and means of all hands and brains from all countries together. We believe that we can still turn the situation around, provided we act quickly and enable our global society to dedicate a massive financial commitment to the challenge.

We have selected *four critical zero carbon initiatives*. Their objective is to “**cool down the warming**”. We will mix quasi-mature technologies like nuclear with future - although more unproven - technologies such as carbon sequestration and mix them up to achieve faster results.

### **1) Shift to renewable energies:**

We commit to rally all efforts to move from an energy consumption based on 80 percent of fossil fuel today toward *80 percent of clean renewable energies before the middle of the century*. Fossil energy will be used only when no practical alternative exists.

Renewable energies are available in Nature at infinite levels, like the heat from the Sun. But the technologies that transform these raw energies into useable ones are not yet efficiency optimized. They have not reached direct economical parity with burning fossils. Their carbon impact or the emission of CO<sub>2</sub> that comes from their transformation is absolutely marginal compared to those of fossil fuel energies, however the fundamental economic problem is that the price of fossil fuels does not currently integrate a total cost to the society, including their resulting pollution. Fossil fuel price to the consumer only integrates the cost of research (where to find it), extraction, transformation and distribution - not all the environmental impact that comes down the road when using it. As a result, fuel or gas look like they are much cheaper than anything else. The immense indirect cost of their consumption – in pollution and greenhouse effect – is not accounted for. Clean energies keep losing on price as they only compare with the direct cost of pure energy efficiency. They do not get any bonus – we should say societal equalization - for their cleanliness. This has to totally change moving forward. Until renewable energies hit a sweet spot in usage



where user's stickiness compensates for their higher direct cost, their consumer price must compete with a fossil "full true price" (including total cost of pollution or carbon tax), with which they will compare favorably. The "full" fossil fuel price will be implemented through a tax on fossil fuels, public subsidies for renewable energies usage (tax exemption) and development and production stimulation. Basically, it's a *positive clean discrimination*.

Green energies are not all created equals though. There are disparities in their cost and availability, mostly based on the degree of maturation of their extraction technology. Nuclear is the most competitive, followed by wind power and solar as a distant third. Nuclear has now reached its phase of industrial maturity, but remains challenging in terms of security. The other techniques are still emerging and relatively immature, such as solar, wind, geothermal and bio-energy. They offer tremendous room for further innovation and future cost breakthrough, to be stimulated with mass adoption and public/private investments to come. We are just at the eve of what they can do in the future and of the technology inflexion curve, with amazing potentialities ahead of us:

- **Solar energy** is infinitely available and has benefitted from massive technological advances, in particular owing to the progress achieved in photovoltaic panels technology where China now leads. However, this technology suffers from the constraints of an intermittent source – only available during daylight. We are only a few years away from being able to compete in direct cost with fossil fuel energy, disregarding the indirect cost of pollution. In some countries the investments are already ahead of the economic curve and advances in installation are rapid, with national and political support (although intermittent too).

With global warming underway, solar farms will flourish in the deserts as deserts expand. We are looking at farms that could stretch over hundreds of miles, with distribution stations needed to move the energy toward the zones of consumption. At a more distant horizon, a second generation of solar energy – not yet tested at scale – could rely on placing solar panels on geo-stationary satellites in space, where the sun is available twenty-four hours a day. Energy will emit to Earth via micro waves, eliminating the problem of intermittence. In the meantime, the challenge lies with the intermittence of the source and consequently its storage at night. The solution is the energy storage network, or "Grid" – the Internet of Energy. The "Grid" is a network of intelligent and interconnected energy reserves (typically transformed into electricity) which constantly moves energy into storage before it is being distributed.

- **Wind energy** also has enormous potential. The technology is in constant progress. Alone, it could provide all the energy that we need. Today's turbines have a technical capacity eight times larger than they had in 1990 and generate seventeen times more power. Still, because the business relies on public subsidies which come on and off, there is a chronic under-investment in research and development, which slows the potential price reduction curve. Yet, wind power has already managed to be the cheapest source among all renewable energies.

Like solar, it also suffers of its intermittent availability. The wind generally blows about 2,000 hours per year in the very best sites. It is critical to integrate wind power energy into the Grid as well, so that a reserve system allows for constant distribution. Nevertheless, there is a positive scale effect. With a growing number of turbines being installed and interconnected in distant enough places, the supply evens out as the wind is always blowing out somewhere.

We think that the future of wind power is offshore. The second-generation farms will be located on the ocean with stations anchored into the sea. This approach is particularly promising because it avoids any impact on the environment (like noise) and benefits from the heavy winds on the ocean, which are typically much stronger and reliable than those on land.

Solar and wind powers are both perfectly clean and risk free. They share the constraint of intermittence thus they both need to be stored on the “Grid”, which will direct power to consumers while temporarily storing unused electricity. There is also innovation to come from different sorts of storage units, among which are the large batteries that we are starting to see in new generations of electric vehicles and soon at home as well. A lot of potential for innovation remains untapped on this front with unlimited potential. Contrarily to fossil fuel, these two energy sources – sun or wind – are infinitely available, 100% clean and constantly renewable.

- **Geothermal energy** comes from the heat of the bowels of Earth. This power source is potentially unlimited and permanent – not intermittent. It qualifies to become a principal source of energy for the future as it could cover our total theoretical needs, but is not yet well understood. Of course, there is already hot water directly accessible from the surface. But the promising longer-term future resides in the development of technologies that could harness the heat that is stored everywhere below us – under the Earth’s crust all around the globe - and available at any time.

Its industrialization evidently implies investments in resolving some heavy-duty challenges such as digging a few miles into the soil – crossing the crust – to reach an infinitely available heat. The opportunity is to access a clean energy source that has no CO<sub>2</sub> and is constantly available everywhere, although at various depth levels because there are variations in the crust’s thickness, with the thinnest areas being around the friction points of the tectonic plates.

- **Bio-energy** is the conversion of biomass into energy, such as ethanol or bio-diesel. Despite the momentum that this industry has won in Brazil among other regions in the agricultural world, there are still questions about its long-term viability. Indeed, the carbon footprint of this source of energy is very high by itself. Ethanol is already in full economic maturity in Brazil which supplies 50 percent of its gas needs through the cultivation of sugarcane. The rest of the world remains quite hesitant on the total net carbon footprint benefit of the full cycle – from production to consumption.

Production consumes land and eliminates forests as space is needed for the crops, which are principally waste products of wood, sorghum, corn, sugarcane, Miscanthus (a hybrid dedicated specifically to energy), switch grass (the original bison grass in the plains of the US Midwest), soy, peanuts or sunflower. There are also many more associated hybrids being studied to increase yield and output. Overall, the process creates a great deal of competition between the needs for people and animals food, with a technology that seeks to consume vegetation as well. Bioenergy uses a great deal of freshwater too. Like all modern intensive farming, it weakens and pollutes the soil and generates massive quantities of methane. Because of these factors and despite an initially promising start, bioenergy does not appear yet to be a mainstream viable alternative to fossil fuels.

- **Nuclear energy** represented historically our first real hope for a cleaner electricity. It is technically infinitely available. However, the sector has had to constantly cope with debates (including genuine situations) about its security. Its trajectory toward acceptability was completely derailed with the 2011 Fukushima catastrophe. This tragedy made the already reluctant investors even more nervous about nuclear power. Put simply, it froze everything worldwide.

Nuclear energy production is in stagnation despite the relatively advanced maturity of the technology and only few new nuclear power stations have been created lately. Its future remains a question mark. Nuclear power, in effect, has four principal handicaps:

- i. Public fear which paralyses democratic governments following accidents at Three Mile Island, Chernobyl and Fukushima;
- ii. Uncertainty about stability and disposal of nuclear waste – even though there has been great progress on this front;
- iii. The costs involved in developing new nuclear power plants – 15 billion dollars for a pair of Vogtle reactors in Georgia;
- iv. The risk of nuclear proliferation for military means, whereas a country could construct nuclear military weapons under the disguise of a civil program (all rogue states are currently trying as hard as they can).

Technological advances will continue to improve the safety of nuclear waste disposal and we can even imagine that in a few decades the moon or outer space will become a safe haven for waste disposals. Still, nuclear power remains a public safety dilemma for the new global government. We do not see a case for a nuclear renaissance. As we relook globally at the energy strategy, nuclear will certainly have a role to play at least for the existing installations and during our transition from fossil energy. Making a long term bet on nuclear is unlikely. On the positive side, our new global governance will make us more comfortable with two of the four nuclear handicaps: the risk of proliferation for military means will disappear and the investment needed for new nuclear plants will benefit from the reallocation of military budgets, including those of nuclear weapons. On the negative side, risks will never totally disappear. Given the other promising long-term safer alternatives at hand, it is hard to see nuclear energy as a global mainstream strategy.

## **2) Reverse the deforestation trend:**

Forests, together with oceans, are our natural air filters. Deforestation represents the second most prevalent cause of global warming after fossil fuels. Deforestation prevents the forests to compensate for about a fifth of man's total CO<sub>2</sub> emissions. Since the end of Humanity's nomadic days, we have conquered Earth to cultivate and to construct our villages and cities. We took down the forests as if they were infinite, to get a safer open field, use or burn their precious wood and make room for our agricultural activities. Deforestation has been a major and meticulous human activity across History. Today, *only a third of the Earth's land acreage remains covered with forests*. Their footprint is reducing daily. The last original forests are found in Brazil, Indonesia and Africa where they are constantly under aggressive siege by those who would like to clear them for agriculture, pasturing of animals, mining, real estate or just to sell timber. Almost half of the current deforestation in the world is taking place in Brazil. In contrast and to a smaller scale, industrialized countries – where forests have become rare – are running campaigns to replant.

We will help the poorest states with financing to stop deforestation. Primitive forests could be transformed into federal sanctuaries of the original ecosystem. We will compensate the future member states for the missed revenue that the natural parks would impose on their economies – *versus* selling timber, increasing land for agriculture or collecting raw materials. Additionally, global reforestation will be encouraged through federal funds. By maximizing the green space around them, metropolitan areas will develop with a more sustainable urban planning approach.

### **3) Preserve the soil with new agriculture:**

Mass-scale agriculture is not ecologically neutral. The soil is composed of fossil elements. It traps and holds a great deal of CO<sub>2</sub> in its humus. This CO<sub>2</sub> and other gases escape into the atmosphere following our massive soil disturbance. Agriculture has a big role to play in closing the green-house gas emissions gap. Additionally, agriculture weakens the soil and facilitates its erosion. Herbicides and pesticides pollute the water table and destroy fauna. Artificial fertilizers generate a variety of gases. Finally, crops consume vast quantities of freshwater which further contribute to its scarcity. The lack of efficiency in the current agricultural chain is a large source of extra-pollution and a key generator of CO<sub>2</sub> and methane. Emissions from farming alone account for more than 10 percent of the total right now.

According to the United Nations Environment Program (UNEP), simple changes in agricultural techniques could cut emissions by 4 giga-tons a year. “The potential is enormous” said Dr. Joseph Alcamo from UNEP to the BBC. “It is not with anything very exotic, it has to do with the way we apply fertilizers to our fields. It has to do with conservative tillage so that you don’t plough the fields so vigorously.” New agricultural techniques that do not include the devastation of topsoil and the repetitive over sowing of crops – no plowing and no direct plant seedlings – greatly reduce the problem. Conservation tillage includes leaving the previous year’s crop residues on the fields to help protect the soils. Techniques for a more sustainable agriculture are being used more and more in agriculturally advanced regions like the US, Brazil and Canada. These techniques already represent a twentieth of cultivated surfaces in the world. We want to encourage their accelerated pervasiveness. We will directly sponsor their implementation by the federal agricultural plan, at least in the poorest areas where agriculture has contributed to deteriorate the environment the most, through accelerated erosion and desertification.

Additionally, it is estimated that the continually raising temperatures will impact between 20 to 50 percent of current agricultural outputs, while there will be an increased demand for freshwater to compensate for the heat, making freshwater even more scarce. A new agricultural revolution is necessary and strategic – both for our ecological protection and for beefing up our capacity to feed our increasing number of citizens. We definitely plan to make a major investment in the development and promotion of these technologies. The priorities of this program will be to minimize the CO<sub>2</sub> and methane impact, reduce the consumption of water for crops, adapt production to climatic constraints and to rebalance farming zones between the warming North (more fertile) and the heating South (more deserted).

### **4) Develop carbon sequestration:**

Although still at an embryonic stage of development and lacking any large-scale tests, carbon sequestration could be very promising. This technology aims at capturing widespread carbon in the atmosphere and to then store it within pockets, buried in the Earth's crust; therefore, eliminating its environmentally destructive properties and greenhouse gas effect. This approach will allow us not only to reduce the impact of our future emissions – of which the excess can be stored underground – but even more importantly to return CO<sub>2</sub> to levels not seen since the pre-industrial revolution days. In theory, we could reduce the CO<sub>2</sub> currently in the atmosphere. If this possibility becomes a mass-scale reality, we could right the wrong that has been committed by the last generations and pass on a revitalized planet to our children... except for a few big gas bubbles lying underground. We want to continue to evaluate this project at a global scale as it uniquely allows to continue to emit gases and to re-trap them in parallel. Such a flexibility would greatly improve our chances to hit a net carbon zero footprint overall. This unique appeal can make the technology extremely attractive long term.

We will focus our investments on these four priorities to execute our carbon zero strategy. They will be financed through the redistribution of the ex-military spending. Such a broad and all-in program will get us in a matter of years to the goal of at least stabilizing the climate impact. Also, we may have a chance to do a little better if we perform very well with carbon sequestration.

Our assessment of the technologies available clearly concludes that **our future is predominantly electric**. The global energy grid – energy's Internet – will increase the availability of the massive production of clean energy created from different sources: solar, wind, geothermal and nuclear. They will all become electricity and the question is about the most efficient clean way to produce it. Exponential electric production already supports the growth of our ever-expanding information society which is a voracious consumer of energy. Today, professional computer farms – private and public clouds – already consume over 5 percent of the total electric output. This does not include TV screens or the many other electronic devices in existence such as phones, tablets and the future form factors in the making. If we add them all up, we will soon propel our total consumption of electricity for electronic tools into the double-digit percent of the grand total energy consumption.

The next horizon of our clean energy revolution – the next wave of clean/electric consumption - stands out in transportation methods. The increase in electric cars – first hybrids and then completely electric – will reinforce electric demand and drive further advances in battery storage, themselves part of the grid. Battery technology – storage – will continue to make breakthroughs in terms of capacity, weight and cost, accelerating the spread of electricity as the principal energy source. It's the critical pass. Battery innovation is essential because these issues have long been a major burden to the wider use of portable electricity-powered devices. Lithium has turned as a foremost strategic material.

This is only a snapshot of what technology will make possible. We will support and further accelerate the green revolution. We will be fully engaged, but we need you as well. We will allow you to consume “better”. We will help you to “prime the pump”. We will simulate the true full cost of energy to the society in your own wallet. Beyond this artificial and temporary taxing tool, we are recommending to all responsible citizens to favor clean consumption on their own. You should learn to estimate the total ecological impact of what you consume and make educated purchasing

and consumption decisions. Make the pollution footprint a key factor in your preferences. For this to happen, we owe you access to realistic and transparent information. We are preparing carbon footprint assessment toolkits. Consumers will be informed well beyond the opacity and taboos of today. We commit to help you to help us all.

Our zero carbon plan has to become a balancing act between a reduced level of carbon emissions (using clean sources) and our ability to sequester carbon (through forests or underground) since carbon emissions themselves cannot be zero. Our plan will include to regenerate our forests – especially around large urban centers – and to take a step to modernize our agricultural techniques, as we will see later. Given the uneven dispersion of energy resources on the planet, only a global solution can fix the problem and it will. You have our commitment. Within thirty years, we can reach a zero carbon civilization, because for the first time ever we will have the political and economic power to put these policies in place, everywhere.

Earth our country.

## Chapter Ten:

### Priority Three: Sustainable Development

**Z**ero carbon is our objective in order to stop the warming of the atmosphere. This is truly a crisis management approach to deal with the rapidly changing climatic conditions at stake. We hope to yield fast effects on the level of emissions. However, once that priority gets on track, we want to drive for an even more profound and long-term strategic plan, aimed at anchoring the sustainability of our species for many more centuries. We can't ignore that the way we won the domination of our planet has to end, if we want billions of us to co-exist for much longer in our shrinking finite world. Zero carbon is a the most critical and urgent achievement, but there is a number of other dimensions to be attacked, that relate more profoundly to the broader strategy of the re-integration of Humanity into its natural setting. Beyond the immediate horizon of our energy crisis, we want to build a society that is both durable, better balanced and drives a paradigm change in the relationship that we have with our environment – so that both can last permanently in a cohesive and compatible way. *We are and will remain part of Nature. Nature is not just a resource; we are part of it. We cannot only extract, transform, consume and reject again and again indefinitely. We need to start to think differently.* We see three main axes for this metamorphosis of our civilization:

#### 1) **Protect biodiversity:**

##### i. *Bio-diversity on land:*

We want a model for our society that allows all beings to cohabitate with us and to survive to our own development – animals and plants. Our ecosystem must be able to continue to exist, evolve and re-generate in parallel to our own existence and evolution. We foresee an ecological renaissance, with the creation of large protected areas – natural sanctuaries at the scale of the planet - that will re-create a natural stand-alone ecosystem for the species that have survived to the current bio-diversity crunch.

These “universal sanctuaries” will be the global equivalent of our national parks. Their locations will be negotiated with the states concerned. We will try to take care of preserving a representative panel of all our diverse ecosystems. Some of these sanctuaries will be developed sufficiently close to large zones of human habitation so that they can be easily accessed, allowing us to keep contact with our original natural setting. There will be a dual benefit: these parks will act as zones of ecological memory and regeneration for all living beings, but also become huge “climate lungs”, nesting immense forests. We are envisioning that some parks may individually

cover thousand of square miles, vast enough for Nature to stabilize age-old ecosystems, where our children will observe and learn first hand how the chain of life looked like in its original form. There will be no hunting, mining or agriculture – just pristine Nature.

Almost everywhere, animals in their natural setting have become endangered due to their extermination or the extinction of their natural habitat. So many species have already disappeared under the pressure of the human predator that it is too late to bring them back, unless their DNA can allow their recreation in the future. But at least, these sanctuaries will bring an abrupt end to the continued disappearance of species. Further erosion of the diversity of life will be stopped.

ii. *Marine bio-diversity:*

There is a need for a radical re-thinking of our relationship with the marine ecosystem. The inexorable and accelerated destruction of the greatest universe of life on our planet continues at an alarming pace, as no individual nation can police international waters. Nobody owns the oceans and anyone can fish. It's fundamentally wrong. Fish are still being harvested at a savage rate and cannot reconstitute their population any longer. Survival of many species is at stake. Tuna for instance is fished two to three times faster than its rate of reproduction.

Domestic fish farming is the alternative and it is seeing rapid growth, now at almost 100 million tons per year - half of our total fish consumption. However, it remains the least of two evils. First, most fish do not adapt to domestication. While the number of species compatible with farming is growing, it is primarily limited to salmon, shrimp, sea bream and trout. Wild fish are like wild animals – they struggle with captivity. Second, the industry is immature and far from having a neutral impact on the environment. Breeding millions of fish in small spaces concentrates an enormous amount of rejects and facilitates epidemics. Getting fish to survive and be healthy enough for consumption necessitates massive chemical treatments that are rejected in the sea. These issues and the resulting pollution have not been controlled properly yet as fish farming is new and current techniques embryonic. The full fish farming production chain today is unefficient, should be revisited and dramatically optimized. Notwithstanding its pollution impact, ecological yields are poor. It currently takes five pounds of anchovies to feed one pound of farmed salmon. If we were successful in domesticating tuna, it would take ten pounds of feed for one pound of tuna. We have work to do if we want to to farm fish at an even bigger scale.

Strategic fishing limitations and regulations are impossible to enforce. The countries themselves are involved in fishing “competition” with questionable maritime borders and diverging interests. Oceans essentially remain a zone without statute, which cannot be protected or developed in our current political fragmentation. The global government will take ownership and turn the situation around. At last, we will have a central authority for the protection of the oceans and the sustainable management of their resources. Unrestrained industrial fishing will be greatly diminished and severely controlled. Smaller quotas will enable re-generation of the marine ecosystem. We consider that the “industrial” model of fishing wild fish is obsolete. It perpetuates the anachronistic model of mass hunting, which disappeared on land long ago (by default of preys) and will soon reach the same status under the seas if we do not revert the situation.



We see a big opportunity to resolve the issue immediately. Just continuing to draw such volumes of wild fish from the sea is completely criminal to our sustainability. The protection and cultivation of the sea is awaiting pacemaking and re-invention. On one hand, we will create large sanctuaries in the seas as well - where species can get re-populated and no fishing. On the other hand, we will concentrate innovation on techniques of farming that are much more efficient than today. Finally, we will keep investing in enhancing alternatives to sea food with more sustainable sources of protein consumption.

## **2) Optimize our rarefying freshwater:**

The rarefaction of clean freshwater is a big problem that deserves our strategic focus. Already today, over a billion people do not have access to potable water. It is going to get worse due to climate change and pollution:

- Global warming will accelerate the evaporation of freshwater and increase desertification, while large freshwater reserves at the poles – ice - will melt more quickly than ever before. Ice will pour out into the oceans and become salty. The great lakes will evaporate more quickly and the average volume of streams and rivers will continue to decrease, adding pressure to reservoirs and increased irrigation needs.
- Chemical agricultural products are polluting underground water tables. With the permanent pressure on increasing food demand, it will make “pure” freshwater increasingly rare.

The struggle for water in a fragmented political system will sooner or later generate the case for a major military conflict. We are dealing with a time bomb for the countries most affected by warming and desertification. Water flows across borders. Here as well, global governance will make a big difference and help us to agree on strategies to increase available freshwater while improving its fair distribution across current country lines. If no international mapping and planning is decided, countries residing downstream will see their rivers emptied through the construction of reservoirs upstream, leaving those zones to accelerated desertification.

Desalinization techniques of ocean water continue to progress for human consumption. That is probably what they are good for – not for a full replacement of fresh water. The cost of artificially freshened water for agricultural irrigation will remain exorbitant for a long time, if not forever. More importantly, the industrial process of desalinization is no panacea for the environment and leads to significant chemical pollution.

From now on, freshwater will be treated as a rare commodity. Rarefaction of pure freshwater water makes it precious and strategic. We see it as one of our critical international pain points for the future. We have to stop treating pure freshwater as an endless commodity. Water needs to be protected and we will implement policies to improve waste control and usage optimization in agricultural, industrial and domestic consumption. A world water strategy is necessary. It will integrate a geographic balance between populations and available local aquifers. The presence of sufficient water will be an essential criterion for the sustainable development of a community or for its displacement if there is no source of supply to sustain a population any longer. Definitely, those are difficult issues ahead of us. They must be handled at the highest global level given that a local solution can only be partial and conflicted.

### 3) Align populations with natural capacity and infrastructures:

- **Re-align our geographic presence with natural disparities:**

Looking at currently available natural resources, mankind has spread out surprisingly inequitably on the surface of Earth. It is a result of History, with borders having shaped up when population densities were so much different. But tomorrow, with an ever-increasing number of people, economic catch up of entire new regions and the ongoing transformation of our environment due to climate change, the necessity to re-think and to more logically influence the zoning of our human footprint will become paramount. The “capacity” of a natural ecosystem to welcome a massive number of humans will quickly become tantamount to the optimization of our sustainable footprint. Some areas have the capacity to host so many more of us – like Siberia – while some others are being already ecologically saturated or even asphyxiated – like most of China.

Migrations caused by climate change could make the situation worse. The UN estimates that already 20 million people have been displaced by the impact of climate change. Some analysts forecast that the number of climate refugees will climb to 200 million by 2050 – as many as the total number of migrants today. Some new research positions the case for a billion people by the end of the century. These forecasts attempt to model sea-level rise and desertification. It is all about building scenarios in anticipation and then managing risks accordingly. The risks are clearly there, we acknowledge them.

There are a few critical levers that the global government can use to help aligning human density over time with what the environment can naturally cope with. First, we need to raise awareness for *natality self-control* and find a way to impact the curves. Secondly, we must *manage mass-migrations* strategically. These two key strategies will be covered in our Priority Five (Natality, Migrations, Identities and Healthcare). Third, we have to *optimize the chain of agricultural products*, which we will address in Priority Four (Feed the Planet). Fourth, we need *large-scale infrastructure improvements* in the most under-developed areas to even out the current geographic disparities.

The same “richer” places continue to attract always more people where there are already too many. More homogeneous infrastructures around the globe will enhance the general development of the most destitute zones of the planet. It will extend our global village, balancing more evenly the utilization of communication and resources. Such investments will offer a short-term economic stimulus as well for the most under-privileged zones. We believe that improving infrastructure in the poorest areas will limit migrations. Improved local conditions create a long-term sustainable and competitive economy in places from which people are now trying to escape. We want to initially focus infrastructure improvements on Africa. Africa needs an irrigation policy with drainage and canals and construction of dams, a decent road system, the modernization and extension of the rail network and a step function in availability of modern airports, hospitals, schools and universities. The northern territories will come later and may help us a lot to find space for our people. The ice and permafrost are currently melting in Greenland, Siberia, the Canadian

North and Alaska. If we truly reach the level of a 4-degree Celsius increase as anticipated by *New Scientist* during this century, even Western Antarctica can join the migration destination list...

- **Anticipate further increase in urban density with many megalopolises:**

Accelerated and apparently irremediable urbanization of our society has now pervaded everywhere, with alarming pollution levels and rising concerns about the ecological viability of megalopolises concentrating tens of millions of people within a few square miles. Most of us will live in cities, so we must study a plan of sustainability for megalopolises. Today, many inhabitants of large urban and suburban areas are living in a nightmarish scenario and so is the ecosystem around them, which deteriorates proportionally to the anarchic urban development. At the occasion of the Coronavirus epidemic, we also see how the cities with the largest concentration of people get hit the hardest.

Beyond the caché of an historic center, the horizontal expansion of suburbia is infinite, with ghettos and shanty-towns dotting the landscape of ever-increasing new worlds on their own right. This explosion leads to Dantésque levels of road maintenance and millions of hours of traffic jams that leave the air toxic with a sick smog, taking an immense toll on the inhabitants and any natural resource hundreds of miles around. Such gigantic cities used to be the exception. They are now becoming the norm and act as a magnet for growing or migrating populations in developing and emerging countries. This is where we must concentrate our effort of optimization and re-invention of our ecological footprint. This is where coordinated planning – the “smart city of the future” – will have the biggest impact. Concentration allows to scale advanced optimized infrastructures. If well re-designed, these gigantic cities have the potential to become better environmentally balanced. Megalopolises could evolve from environmental monsters to a privileged solution for managing global over-population. They can be optimized for the lowest footprint of pollution per capita if organized accordingly. Experts foresee that if cities were re-worked with better management of their space - thus growing more vertically so that the constructions are made more efficient in energy use - smart-cities would permit a considerable carbon footprint reduction per inhabitant. Their thesis intends to demonstrate that second-generation megalopolises could reach the lowest possible individual carbon footprint per inhabitant – less than any other form of human habitat. Their utilities would be specifically designed and optimized for human concentration, in a more efficient way than within a suburban or dispersed countryside habitat. Basically, they assert that an apartment in a tower is more efficient than a stand-alone house.

Al Gore already explained that a New Yorker is three times less harmful to the environment than the average American, because he or she is much more likely to take public transportation or walk in the street, share his heating system and live in a smaller surface. This is not the case however for the immense New York suburbia, where automobiles and individual housing are the norm and pollution footprints very high. Having less and cleaner cars owing to comfortable and safe public transportation will be critical for suburbia.

For the “city of the future” experts and architects are promoting vertical expansion which they prefer to our infinite and anarchic suburban spread, ideally concentrating the urban perimeter and surrounding it with enormous green spaces (maybe our federal parks) which will filter the air. Smart-city futurists envision that lifestyles in ecologically ideal megalopolises will foreshadow

those to come in future space colonies. They will be designed like human islands, carefully integrated in a preserved natural setting. They project city spaces optimized for social life, looking like comfortable self-contained urban clusters evolving into a better-managed relationship with their natural environment. They see a future megalopolis like an enormous ocean liner in the middle of the sea, with its integrated power and trash treatment facilities - instead of a multitude of small boats anchored everywhere and forcing nature to deal with the anarchic release of their dirty waters and waste.

We understand the scientific appeal of the self-contained cruise liner and the fear of the small boat owner having to turn into an anonymous passenger on a sanitized cruiser... These are two irreconcilable point of views. Also following the Coronavirus outbreak, human concentration in vertical towers or cruise ships is a valid concern that we didn't have before. Will downtown be cool again and suburbia passé? There will be very interesting popular debates. As usual the truth may end up in the middle... On one hand, we are tempted to support the best ecological footprint for the maximum of people. On the other hand, quality of life matters. Respecting the Freedom of a preferred lifestyle cannot be ignored.

- **Control rural and suburban ecological footprint:**

The image of billions of small boats scattered around the sea as opposed to a few dozens of huge single cruise liner highlights one of the most difficult problems for us to deal with as a global team in the future. We will have to manage a balancing act between individual Freedom of polluting anywhere and the benefits of optimizing and centralizing the infrastructures that we need. It's a question of individual and collective responsibility. We need to find ways to satisfy multiple responsible lifestyles. We need to steer innovation for parallel sustainable paths that also protect rural habitat so that there is still a choice and no urban dictatorship.

To achieve this duality, single family homes will have to be greatly improved too, because their carbon footprint is the highest by a factor two or more. For instance, we will have to find ways to insert them into the clean energy grid – use their individual solar panels as a power plant and storage unit. There will be more inventions and new solutions. We just want to stress out that it will be more challenging to accommodate sustainability with dispersion of the habitat if we need to continue to make room for additional billions of people to join us.

Management of natality may be a wiser path than locking us all into extreme megalopolises – we are experiencing the limit to how many of us the planet can bear. We don't see that our objective is to find a way to maximize our population it is neither reasonable nor appealing. These are complex issues, there is a lot for all of us to think about. All in all, it's all about anticipation, communication and planning, which we will do altogether.

Our sustainable society won't be the result of expert-led government regulations (more government), or pure free-market economics (no government) either. It has to be a blend, at least during the transition phase. We will be the club of all democracies, where all people have a voice and a vote. It is not right to impose the same solution to everyone. “Commoditization” of lifestyle is not morally sustainable as people are different and want to live differently in different place. However, we must all understand that we live in a finite world, and be conscious of the pressure

coming from a population continuing to increase in a non-expandable planet. Beyond pooled money, technology investments and regulations from the federation, this transformation will only succeed if and when we are intellectually and emotionally ready and prepared for it with a spirit of global responsibility and solidarity. *We* have to educate ourselves. Then, each of us has to make a profound mental shift and take care of what we can individually influence.

*It is up to us to adopt a new lifestyle in harmony with our finite environment, while also protecting and enhancing what gives a meaningful sense to our life. We want to have a “good life” while passing an even better baton to our descendants.* Sustainability starts from each and all of us. We have the individual duty of behaving as informed, mature and responsible adults who can draw by themselves the implications of the battle against climate change – what we buy, burn, use, waste and how and where we live. We are the actors of this play, not the spectators. Passivity is our enemy as much as denial. It is a challenge made much easier with the power of global governance. Without the conscience of our unity these issues will remain a never-ending dilemma among competing nations. Ultimately, we all own this paradigm change. We do not want a huge government but one that can guide us effectively through this journey. We want leaders who tell us: “people, you have elected us for a mission. It is your mission before it is ours. We are the organizers. It all starts from you and your personal responsibility in driving this change.”

*Each of us influences the big picture* as a consequence of how we define the impact of our life:

- How we eat – less red meat (huge carbon footprint) and wild fish (disappearing);
- How we buy – cleaner and more durable quality products that will not be thrown away or discarded unnecessarily (more expensive but will save money since last longer);
- How we limit waste – bio-degradable or more durable products;
- How we travel – prefer public transportation, buy or share low-energy or man-powered vehicles (easier in cities), be selective for long-distance travel;
- How we work – whenever possible work from home and optimize un-necessary commuting (video-conferencing);
- How we live – wisely use domestic utilities such as of air-conditioning, heating, electricity and fresh water, invest in insulation and self-sufficient energy production when applicable;
- How we relate to Nature – be curious, act responsibly with living beings around you and stay connected with Nature (walk, observe, smell, touch, discover and respect);
- How we relate to each other – behave as one people and demonstrate solidarity;
- How we learn – be curious and open minded about our fascinating world, be engaged with a point of view on important things, recognize needed change, avoid passivity or negativism and be a role model as an educated and active citizen;
- How we behave – cultivate our moral compass and care, our greatest enemies are ignorance, passivity and intolerance.

We are the first generation to know. We are endowed with the responsibility and the power to save and regenerate what we have damaged. The sustainability paradigm is the one of our discovery and consequently of our duty. The power of a unified global team makes a paradigm change as we engage in this crusade. Now we can get back on tracks as a global team, together.

Earth our country.

## **Chapter Eleven:**

### **Priority Four: Feed the Planet**

Nearly 10 billion humans have to be fed in 2050. Their majority – the economically emergent – will benefit from an increase in living standards, which will boost their consumption. With their enhanced lifestyle, they will discover more sophisticated alimentary desires in quantity, variety and quality. This is a puzzling dimension by itself.

Climate change brings a second dimension. Climate warming threatens our net global agricultural production. The risk is a 30 to 50 percent impact according to specialists, assuming that all other technological parameters remain equal.

Pandemic recovery adds a third dimension. The world risks widespread famines of “biblical proportions” caused by Coronavirus just warned David Beasley, head of the World Food Programme at the UN. A report estimates that the number suffering from hunger could go from 135 million today to over 250 million soon. He added: “the truth is we do not have time on our side (...), 30 million people, and possibly more, could die in a matter of months (...). One way or another, the world will pay for this.”

Modern agriculture is already the second source of pollution and of greenhouse gas – mainly CO<sub>2</sub> and methane. We will need a much bigger output. How can this happen and avoid further ecologic escalation? The solution to this equation is both arduous and extremely critical for Humanity. We make food security a very top priority for the federation.

Demand for food and agricultural products in general will rise by around 70 percent in this century. The first reason is the increase in population. The second one is the rise in individual consumption in countries growing their standard of living. Additionally, as tastes and habits Western-ize, there will be a doubling in demand for red meat.

The conjunction of this jump in demand with the additional stress on productivity due to climate impact will create a perfect storm. There won't be enough food supply if the end-to-end model remains static. Agriculture and the food chain are becoming strategic again. Innovation is needed.

Evidently, individual geographies will develop large variations and stress on their own supply chain, depending on their respective population growth, GNP growth, local change in their climate

and the aftermath of the pandemia. Added to the global challenge, we anticipate that regional difficulties will become more critical in tropical and subtropical zones which will be first to face the impossibility of agricultural independence; provoking famines, conflicts and the spark of climate migrations which will have global reverberations. A study just published by PNAS (US National Academy of Sciences) that was made by an international team of scientists shows that for the past 6,000 years the majority of mankind has lived in regions where the average temperature was between 11 and 15 degrees Celcius. The study adds: “future climate change will affect this average temperature and at its most extreme would mean that *3.5 billion people would be outside their current climate niche (in 2070)*. In fact, one of three of us would experience annual average temperatures of more than 29 degrees – a climate currently experienced by humans in only a handful of the hottest desert settlements.”

The constraints that will burden the agricultural sector will provoke penuries that will lead to short-term shortages and price explosions and to a veritable *strategic dilemma: more food or more environmental sustainability*. Today, 75% of the world’s food is still generated from the same 12 plant and five animal species that were domesticated at the invention of agriculture 12,000 years ago (source: PNAS) during which global temperature and sea level have been stable.

The first approach is *laissez-faire*, letting supply and demand work themselves out. We think that this will lead almost irremediably to extreme tensions within twenty years or much less, given the short-term complicating factor of Coronavirus.

We recommend instead a very strategic reaction. We want to stimulate the sector globally and pro-actively against an issue that we can clearly anticipate. We will prepare for the second modern agricultural revolution, after a stagnation in productivity that followed the first one in the mid nineteen to twentieth centuries. We will bridge critical supply and increasing demand in the context of their inherent environmental limitations. We will monitor the challenge of a global moving target in terms of crop types and yields as the climate continues to evolve.

In order to succeed to feed the planet in a sustainable way, we have to overcome five key difficulties:

- *Available soils will become scarce.*

We should avoid to free up more land for farming. We need more forests. There must be a halt to de-forestation and an acceleration of re-forestation. Additionally, we will face increasing desertification which will take over our existing agricultural land faster than new de-frosted lands can compensate in the upper North or lower South. The time needed for the permafrost to melt-down and for the buildup of green-field infrastructures are still hard to predict.

- *Soil quality will further deteriorate.*

Soils have been severely damaged over the last century of intensive “industrial” agriculture, with deep and intensive mechanical plowing techniques and the systematic addition of chemical fertilizers and pesticides. There has been a 50 percent decline in the soil’s natural fertility already in the industrialized nations since the 1800’s because of reduced CO<sub>2</sub> in the soil - it has been released into the atmosphere... With under even more intensive agriculture, we will face a basic quality challenge.

- *Fresh water will become even scarcer.*  
Due to the joint effects of pollution, increased consumption and the higher average temperatures, access to clean fresh water will become a struggle, in particular in tropical areas.
- *Proliferation of microbes and bacteria.*  
Also, increased heat will augment agricultural diseases. Insects will become more active transmitters. Insects are the living organisms on the planet that will profit the most from climate warming. We already see an acceleration of pandemics with palmtrees, olive trees and more.
- *Increase in the acidity of the oceans.*  
Acidity in the oceans will further increase as they absorb more and more CO<sub>2</sub> and further intensify the pressure on marine animals, already in danger of being overfished. Ocean acidification is a major risk. It destabilizes the ocean food chain by weakening the formation of plankton and shells of small mollusks, that are the base of the full chain of marine life.

Enough said. Our counsel to the future federal government is for a radical reform of food production. This reform will include breeding, agriculture, fishing and sea farming. It will scope all available food resources, modes of production and distribution – at the global level. Agriculture on land and on sea will once again become strategic for the society. The food industry can no longer be the laggard that continues to deliver its products without investments or any technological trajectory. Quite the contrary, agriculture will re-establish its position in the heart of human development. Collecting food from the soil or from the sea represents our most direct exchange with Nature. We need to make this trade very carefully as it represents our predatory relationship with the chain of life. It's about agricultural innovation to achieve a second revolution.

The framework of this program will be flexible. We will deal with huge swings and uncertainties. It is even difficult to know how many people Earth can support and feed – and where - while she undergoes such an unpredictable climate transformation. A population of 5 billion of well-fed people is probably a maximum safety level given our anticipated climate scenario. Dealing with 10 billion in three or four decades will be extremely challenging. Population growth becomes a headache when also trying to reduce and reverse our agricultural CO<sub>2</sub> and methane impact. Besides natality, we will have to lever global food efficiency, rationalization, technical innovation, stringent waste management and a step function in supply chain capabilities. We have identified five principles for future breakthrough:

### **1. Plan for food - demand and production - at global scale:**

The comprehensive plan must take a global view as there are inter-related moving pieces everywhere. Agricultural resources should be analyzed and planned for globally, with a strategic view. We acknowledge the benefit of local supply and logistical constraints for fresh products. But we need to think beyond the traditional loop of local-production-consumption. Production has to take place where it is most efficiently done, without the sole mind-set of national food supply independence. The trade-off between home-made and global productivity with enhanced environmental footprint must be addressed.



*If the prevalent model of national food production independence continues, it is almost certain that billions will die of hunger this century, igniting major international tensions. The poorest subtropical countries, especially considering their lack of freshwater, will be condemned. If we maintain our dominant model of food supply, in which people live close to where the essential of their food is being produced (within the same country) we have to anticipate migrations that will create strong reactions. We have to accept that millions of people will die of hunger where they are forced to live. Thus, agriculture must be looked at with a global lens. We must stimulate production where it can reach its most efficient yields with the least damage to the environment, together with logistics and infrastructures that can extend the reach of freshness. Ultimately, we need to be able to provide food for people almost anywhere they live. It will disconnect us from the pernicious cycle of hunger and implied migrations. It will prevent us from a scenario in which one poor local harvest due to widespread drought forces millions of people to escape an area in search of food – or die.*

This mind-set will be applied to the entire agricultural chain of production and distribution:

- Starting upstream, from *planting to harvesting* in the most efficient manner; selecting soils offering the best productivity with a diversification of crops adapted to their environment. We will see herebelow how new techniques can make a difference.
- Continuing downstream with the *logistics of distribution* to consumers; moving products fast at lower cost and waste, investing in a sophisticated international infrastructure. Widespread food availability at a more even cost should help the poor countries which have typically the poorest yields to move away from the inefficient production that harasses their soils. Anachronistic agricultural systems should gradually disappear and farmers will refocus into the most successful products for their soil and climate. We will help them to export with a world-class logistics chain expanding everywhere.
- Finally, we must put an end to the endemic *end-to-end waste* in the chain of food production and supply. A major effort has to take place in efficiency of operations and commercial practices of agricultural markets, reducing the *unsustainable 30 percent waste* of this sector. Waste from production to actual final consumption will be measured, traced and penalized. Current waste levels are an unacceptable price to pay, given the enormous ecological footprint of the sector and the penury that we will have to deal with.

## **2. Invest in technologies that will transform production methods:**

As we saw earlier, the challenge that we must address with the current agricultural chain of production and distribution will be to respond by 2050 to a potential demand that could climb by 70 percent to feed – well – our 10 billion siblings.

Such a jump in productivity has already been achieved before – even exceeded – during the first modern agricultural revolution. This was the result of the extensive use of chemicals (fertilizers) and of the clearing of large new lots of land with automated or mechanized irrigation, plowing and harvesting. During this period, we saw formidable yield improvements with a doubling of the output over the course of twenty years and 3 to 5 percent annual increase in yields

as the new methods were being implemented, until the sixties. After that, investments and innovation plummeted and we have remained in stagnation mode.

From this historic angle we could conclude that it seems quite possible again to do another big jump, applying Moore's law to agriculture, with yet more fertilizers and more land and more water... However, there is a big difference between the two sets of constraints that these revolutions have to deal with. The first revolution totally ignored environmental constraints, with results that we have now inherited after building dams, moving rivers and polluting the soils and the atmosphere. Assumptions were: infinity of resources and disregard environmental impact. The second revolution ahead of us in contrast, will have to be achieved by halving the environmental impact per calorie produced. In other words, *the total ecological impact of the sector will have to remain stable at best, despite the potential 70 percent increase in global consumption*. This is much tougher to achieve. How can we get there - if we can?

The first low hanging fruit is *waste reduction*, throughout the whole chain. If we can get the current 30 percent of overall waste end-to-end down to only 10 percent, it implies that we "only" have to yield a 50 percent overall increase in production (from 70 percent), at a flat carbon footprint level. Let us repeat: *we need a 50 percent higher yield at an equal ecological footprint*. The implications are: 50 percent savings in water consumption, in cultivated land and in greenhouse gas emitted - for each calorie that will reach the mouth of a consumer. That's our challenge.

We believe that such a dramatic step function in productivity can only be possible through the extensive use of new technologies. With a global plan that fosters innovation across the chain, the objective may be achieved. If not, we have too many of us and must enforce a population reduction scheme. The needed jump in productivity represents a stretch and potentially a maximum for our environmental sustainability. It is hard to conceive that we can continue to feed decently over ten billion people while managing full regeneration of the model (soil, water, carbon emissions). We see great opportunities to reach efficiency gains, so we take the challenge with a maximum of a 10 billion people population at sight. We recommend a threefolded approach to our strategic food production policy – more to come as discoveries uncover new opportunities:

- *Stimulate the selection and production of crops that use less water and have a lighter carbon footprint*. We will stimulate the use of crops that interfere less with their surroundings. For example, rice cultivation consumes an enormous amount of water and should be centralized in zones that are the wettest. As an example, cultivating rice in dry climates just for the sake of delighting local people with local rice is an ecological madness. Also, we support to carefully evaluate genetically modified seeds, focusing on crops more frugal in water consumption and carbon footprint, insisting on agricultural species better adapted to arid climates. To limit popular fear about genetic transformation and guarantee safety, public research and control will be very active with testing and official certification before mass utilization.
- *Launch a governmental incentive for regenerative agriculture, to protect and revitalize the soil over the long-term*. We will offer incentives to farmers when they reinforce the cyclical rotation of crops. It is essential to allow the soils to regenerate themselves rather than exhausting already weakened ones. Chemical fertilizers will be gradually replaced by proven organic technologies like bio-chip. In an approach similar to the one we have recommended for fossil

fuels, we are looking at ways to pass the full cost of agricultural products to the consumer, including their ecological impact. The ones causing the greatest carbon/methane/water footprint will be price-equalized, to promote products less damaging to the environment.

- *Encourage the deployment of new technologies of drip irrigation and plowing-free sowing.* There is a full array of emerging water and soil management technologies, some of which have already been proven effective, but not yet widely used outside of the Americas. They allow for accurate water and soil management. Water useage is optimized through drop-by-drop distribution. The soil is better protected without plowing, is not turned over by huge tractors that are also consumers of fossil fuels. It allows to better conserve moisture and to keep more carbon in the the humus layer.

### **3. Influence consumers to learn and enjoy vegetarian diets:**

Meat and fish consumptions are extremely demanding to the ecosystem. We can learn to eat better and to gradually become more vegetarians. This will happen by spreading information and educating consumers' taste, raising awareness about environmental issues related to beef production (in particular red meat) and overfishing (in particular carnivorous fish).

We appreciate that this is not our most popular chapter. Most of you love red meat and wild fish. Our role is to be transparent with what we know. In all likelihood, the demand for beef will double in the coming forty years due to higher standards of living and population growth. We should together try to find ways to avoid to force supply to match such a growth in demand. Ideally, demand should only grow marginally, in hope that consumers learn better.

Most people enjoy the taste of red meat, but ignore at which cost it comes to their mouth. The beef industry has a major impact on greenhouse gases and on freshwater consumption. Industrial beef production misses the boat in alimentary efficiency; poultry production has a footprint much less negative. Al Gore explains that to produce 1 pound of red meat, it takes nearly 5,000 gallons of water and 15 pounds of vegetable protein, in addition to the diesel used at the farm. Another study asserts that this same pound of red meat exhausts the equivalent of 15 to 30 pounds of CO<sub>2</sub> depending on its mode of breeding. Industrial cattle production represents a huge ecological waste. We should be careful not to let it grow even further. According to the 2006 UN climate report, *meat production is responsible for 18 percent of total greenhouse gases emissions*, with the majority coming from beef.

Many in the meat industry are frightened with such hidden realities and fear that beef production quotas could be implemented one day. Proactively, they have made proposals for alternative ways to produce beef, in particular to return to more natural pasturing systems in which cattle is rotated around larger grassy fields, allowing the soil to regenerate with the upkeep of larger grassy areas. This alternative doesn't make sense either. It imposes the use of even more land and additional de-forestation. If we have to trade between grass and forest, it would be ecologically more advantageous to replant trees or to keep existing trees than to open new immense pastures, given trees CO<sub>2</sub> absorbtion.

The entrenched Western beef culture is an acquired taste that gets copied all over the world – the big fat juicy steak, hamburger or barbecue. Millions of cows are sacrificed every year to finish in our plate. We can learn better from other cultures. We are getting fatter with a higher cholesterol and an exponential growth in cardiovascular diseases. Our health will only benefit if we learn to enjoy a healthier diet and reduce our modern appetite for red steaks and their derivatives. We advise you all to move toward a healthier diet. Try less beef, more chicken, farmed fish and vegetables. We will start with education on healthy and sustainable food diets at school. Taste is mostly acquired. Most Asians – Indians in particular – are showing the way with their delicious vegetarian cuisine.

#### **4. Prohibit industrial fishing:**

Already overfished, the oceans must also deal with a growing acidification due to higher levels of CO<sub>2</sub>, with an anticipated increase of up to 170 percent by 2100. Oceans have swallowed so much of the CO<sub>2</sub> rejected since the industrial revolution – hiding its full climatic effects – that acidity impacts plankton in a major way. The rarefaction of plankton will further endanger the entire marine food chain. Biodiversity of the seas has been reduced by 30 percent already, only due to the increase in acidity.

The holistic way to address the problem in the long-term is to reduce CO<sub>2</sub> in the atmosphere. We know that. But there is also another low hanging fruit - stop mass fishing. The current scale of industrial fishing is outrageous. Since the world government will be for the first time in History empowered to manage the free zone of the oceans, we can finally ensure that fishing quotas are taken seriously, respected and even enforced.

Industrial fishing must be greatly reduced as we transition to more domesticated fish production. Fish farming is not a panacea either for the environment. Far from being truly “clean,” it leaves a heavy pollution footprint and the majority of fish species do not fare well in the overcrowded lakes or sea-cages required for production while those that survive transmit diseases that must be treated with more and more chemicals or antibiotics.

Because it only took off about thirty years ago as an industry, fish farming techniques are still in infancy and not even approaching the scale and expertise of our multi-millennium on-land farming techniques. We should give it more time to mature and help to foster innovation. There are possibilities for optimization with new hybrid species at the horizon. The farming of algae is another promising opportunity to pursue.

All in all, the seas are a great area for sustainable food supply, assuming that we take a cohesive approach. We will launch a program of global investment to reposition our management of the marine ecosystem. We will drive for the amelioration of fish farming techniques, the acceleration of the re-population of wild fish and minimize drastically our overall wild fishing – all intending to reduce our impact on the marine fauna.

#### **5. Sponsor nutritional innovation – including synthetic food technology:**

Artificial meat is the artificial clone to ocean or terrestrial animal muscle tissue. Although currently futuristic and at an early experimental phase, its proponents anticipate a more efficient ecological yield than natural meat, as technology matures. The yield is measured by the capacity to feed divided by its carbon footprint. For whoever cares – some of us do – it also presents the philosophical advantage of not having to kill an advanced and feeling animal to feed ourselves.

To be honest, there is a long way to go. The world's first hamburger-like steak prototype - lab-grown from beef stem cells - was offered for tasting to two food journalists at a news conference in London in August 2013, with great hype. Both said that it tasted pretty good. Yet, the steak "prototype" cost was... 300,000 dollars. These technologies will not translate into economical solutions before a decade or so. Their gustatory difference will take time to get used to. Nevertheless, their development offers a serious future response to the impact of a changing climate and to its most pessimistic pressures on Humanity. Even if the original flavor is not perfectly there, we could someday depend on this form of nutrition – temporarily, regionally or *even in space*. We think that strategically such research should be stimulated.

Indeed, we so have many tools at our disposal to feed our human planet: let's run this show as we have run computer technology – make it rewarding and fast-paced. Within the range of our possible future scenarios, we must take a forceful, strategic and global approach. The actions will not always be popular, and some will challenge entrenched culinary taboos. But they will prepare us to feed Humanity in a durable way. This is such a critical issue. Its resolution will define our capability to survive and to rebound even if the higher end of our environmental risk materializes.

*The capacity of the agricultural chain to transform in face of this challenge will dictate the number of people that the Earth can continue to support.* If we are to survive as billions even in the most extreme climate scenarios, the number of survivors will directly depend on the speed at which we can adapt our agriculture.

We must start today to embrace our second agricultural revolution. It will help us to avoid the potential risk of what could be the great famine of the twenty-first century.

Earth our country.

## Chapter Twelve:

### Priority Five: Natality, Migrations, Identities and Healthcare

These are foundational topics, currently not addressed in our fragmented world other than nationally. They are the basic elements that define the type of society that we want to build. Policies and rights for natality, migrations, identities and healthcare will be sensitive issues in our new world since they relate to the core moral values of a globalizing civilization.

- What is the maximum number of humans that Earth can sustain and the implications?
- What is a manageable level of migration Freedom and a better way to handle mass movements?
- What is a successfully blend of universal values and local identities, in a universal society that remains attached to its roots?
- What is a desired model for minimum healthcare for everyone, that deals proactively with diseases and epidemics - more wispreard across a warming planet with a denser population?

#### 1. Natality:

Since the nineteenth century, our model around the world has been based on a constant increase in population and in standard of living, *more consumers consuming individually more*. This formula has promoted economic growth as the principal engine of our society.

We were 1 billion people on Earth in 1800, 1.6 billion in 1900, 3.5 billion in 1960, more than 6.5 billion in 2010 and *we expect approximately 10 billion people in 2050* - maybe 11 billion by the end of the century. There has never been such a rapid expansion of our species. Such a growth, fueled with the multiplying effect of our consumerist appetite, is the direct cause of the climate situation that confronts us now. The GIEC has reconfirmed that we are the direct source of climate warming, with a 95 percent probability.

We can also demonstrate the direct relationship between the human population growth here above and climate change, putting in parallel similar numbers representing CO2 emitted into the atmosphere measured in tons/year: CO2 emissions were 150 times higher in 2011 that they were in 1850. Here is the suite of numbers: we emitted a marginally low number in 1800, 2 billion tons in 1900, 9 billion in 1960, 25 billion in 2000, 30 billion in 2010, over 35 billion in 2017 and the prediction for the second half of the century is anyone's best guess. As we compare these two sets of numbers – human headcount *versus* CO2 generated – we can clearly see the intimate correlation and the proof of our responsibility.

If we assume that population will reach a plateau at around ten billion (plus or minus one), the increase in CO<sub>2</sub> will continue much further. First it has its own inertia and its mechanism is hard to stop. Once emitted, CO<sub>2</sub> stands still in the atmosphere for 100 years. Second, if not the population at least standards of living per capita will continue to increase. This will translate into higher consumption of products and higher overall emissions as well. Notwithstanding the opportunity for carbon sequestration (still to be proven at scale) or a long-standing impact of the Coronavirus recession (which is only a pause), the quantity of CO<sub>2</sub> in the atmosphere will continue to grow even when/if human population growth stabilizes. Each human will produce more CO<sub>2</sub> in the emerging/developing world *and* we will have to cope with the legacy of the “old” CO<sub>2</sub> still laying in the air.

The geographic origin of the current increase in human population further darkens the picture. Population grows almost entirely in the poorest countries – typically where nature is more sterile in tropical areas. In regions that are already fragile, this will intensify environmental pressure on natural resources, especially with freshwater.

All in all, we think that the number of human beings on Earth is now becoming a real stretch for the environment, with all aspiring to an American way of life. We cannot continue to multiply our population in a sustainable manner as we have done it over the last two centuries. Innovations could reduce the ecological stress and make it possible for more people to come – or not. What would be the right sustainable number of humans, between 1 and 10 billion?

If we let History drive us at its current population growth pace, we will be 11 billion by the end of this century, 15 billion by the end of next century, 20 billion by 2300 and 50 or 100 billion by the end of the millennium - can the planet host 100 billion of us? Of course not. Unless we manage a miracle turnaround, it seems pretty obvious that we are building our grave in overpopulating our golden cage. “Something” – peaceful or not – has to stop this trend. If we don’t put a brake to natality, a disaster is ahead of us.

It is hard or impossible to anticipate how many people Earth can support in harmony and for how long, because it will depend on so many variables: the evolution of the climate (ongoing), the adaptability of our agriculture (potential) and our collective human intelligence to manage ourselves in a changing and growingly hostile environment (question mark). We only have one statistical evidence: *since our population exceeded its first billion and became consumerist, we have started to impact the climate of our planet.* This was the nineteenth century which came together with the fossil fuel revolution. One billion was the historic red line, this is when our modern ecologic derailment started to take place. Since then, we have completely lost our way. The whole human machine has gotten itself into a frenzy of population and material “growth syndrome”. Growth of the economy, of the people, of the standard of living – everything has grown and keeps growing. We are even getting physically taller and fatter too! Growth *is* the panacea, the recipe for any betterment of our future. “Grow” has insidiously replaced “Survive” on the human agenda. Is the planet growing too? No, it is not...

Facing similar circumstances at the national level, the Chinese long ago implemented forcefully their unpopular “one-child policy.” One has to say that the method was morally unacceptable but strategically justified. China put a brutal stop to one dimension of “growth” –

population – so that they could focus on fighting poverty first. It was not a stupid move at all. As democratic Founding Fathers, we have morale reservations. We are not going that far just yet, if softer ways can achieve a similar result. Preventing parents to have children is an extreme limitation to individual Freedom. We are also recommending a global strategy that will aim at reversing our current birthrate trends, but we want to find a way to make it voluntary. The new government will stimulate a *global natality policy, with objective to decrease birthrates*. It does not have to be forceful; it may just happen partly naturally as we have observed that local increases in standard of living lead to a plateau in population size. In any case, we need to find an ethical way to self-limit our population growth and then to reduce it. We are certainly reaching a maximum in the size of Humanity. It's hard to see with confidence how we can get above that and offer to each of us a chance to succeed, while also ensuring our common sustainability.

Our world government will scope a cohesive plan and implement morally acceptable mechanisms that could get us to an objective of less than 8 billion people by 2050 and maybe 5 billion by 2100. It would be so much easier to be 5 billion of well-fed humans (or less), who can function in harmony with their planet, even if it comes at the cost of an aging population. Why to force twice or five times as many people, who struggle in a precarious state of conflict for their survival, with insufficient resources and an ecological collapse around them?

There is no “bonus” for mankind to continue to grow. It is totally the other way around. We need to get our headcount back into control. Countries themselves can only drive to the opposite, in order to individually compete better, with more people. More people mean more power. A global federation has no need for that. It will only care about global harmony, not local dominance. The fewer people we will be to go through this transition, the easier global solutions will be to switch to a sustainable society. Local policies that promote high birthrates – stimulated by nationalistic or religiously beliefs – must be stopped and considered harmful to Humanity as a whole, because they make the overall problem much worse.

Hopefully, we are starting to observe some historical decreases in birthrates. The global natality curve shows a slowdown, not only in industrialized nations but also lately in developing countries. When families become more affluent, they want to be smaller. The turning point took a century in industrialized countries. It is now happening in less than three decades (one single generation) in developing countries. *The Economist* anticipates that between 2020 and 2050 the rate of global fertility will fall below the rate of replacement of the species: 2.1 children per family. Such an inflexion would stabilize the population or even reduce it for the first time in centuries, after a peak that is anticipated to be reached in 2050. Still, an african woman has five children in average...

For the first time in History, there is access to conscious birth control to empower the majority of women to decide how many children they want rather than systematically producing babies under male and family pressure, with their biology as the only capacity limit. Pervasiveness of female workers, broader acceptance of contraception and gay culture further magnifie this trend. This is all good news and is moving us in the right direction – but *not quickly enough*.

If we do nothing, a stabilization or decrease in global population curve is not expected before 2050 as a best case scenario, we risk to have over 9 billion people and a warmer climate during this century. It poses a great risk for everyone with significant implications for our ecosystem. To



make it worse, most recent analysis deny “optimistic” forecasts and project a continued growth in population with over 10 billion by the middle of the century and 11 billion by 2100. We really need to act instead of waiting to see what happens with a natural pace.

We defend Freedom as much as we intend to promote aggressive ways to accelerate a slowdown in natality. We will focus on geographic areas where birthrates are the highest – because *90 percent of infants today are born in poor countries*. We will articulate policies of birth control driven by humanism and not a systematic one-child policy. Here are some of the low-hanging fruits that we want to look at:

- Strengthen education of all women – focusing in the poorest and most remote villages. They must learn about sexuality, protection, contraception, economic opportunities if they work;
- Establish a global system which totally supports protection and contraception. We anticipate tensions with the anti-contraception and anti-abortion lobbies, but we see no way out;
- Offer a health system that reassures women that their (fewer) children will definitely survive, alleviate the need for multiple children to guarantee that at least a few attain adulthood;
- Create fiscal incentives for fewer children – tax a high number of children per family as opposed to granting family credits for a higher quantity of children;
- Support gay rights globally. Gradually shift the post-historic society to a mind-set in which homosexual or heterosexual love-and-life loyalty does not require to build a large family with many children. It’s about enabling successful children, not many of them.

The aim of these initiatives is to try to avoid an edicted one-child policy, while reaching a similar result. However, if our efforts to fight global warming prove insufficient and we need to accelerate the reduction of our global population to cope with growingly adverse circumstances, we will have to be pragmatically prepared to impose a more radical solution. Only time will tell, all efforts of this plan will be inter-related.

## **2. Migrations and climate refugees:**

Having established a policy for natality, the next subject is a way to address the current chaos of universal migrations. There is no global policy or regulation that takes care of migrations today. By definition, it’s about leaving one country for another, therefore each host country decides who to accept or not and each migrant takes a bet. With the recent increase in economically motivated migrations, over 200 million people have left their home country to work elsewhere. What was an exception – leaving home – has turned into a new norm. Looking forward, numbers will get higher and will be further amplified with more climate refugees.

We are getting used to see desperate African people drowning every day, trying their luck crossing the Mediterranean on minuscule boats, packed in the hundreds with a bag and their children. Some others try to cross the wall between Mexico and the US. There are no rules or regulations to deal with such people; they have abandoned their own country – so they have lost any right. Until another country eventually provides them with an official asylum, they are nobody, and nobody’s problem or solution. They do not exist anymore, only a given country’s citizenship offers a seal of existence.

Migrations can have a virtuous effect. In theory, they relieve the country of origin from the pain of its excessive natality and provides hands and brains to the host country. It gives the immigrant a chance for a future that he or she deems better. Societies enrich themselves with diversity and Humanity becomes more universal. Immigration at the right pace, when well positioned and accompanied by an efficient policy of integration can be a bonus, both economically and socially. This has been demonstrated over the course of History and why it remains a dream for millions of people.

However, recent scale of immigration, primarily focused from two continents toward a handful of target countries, has created the opposite effect: saturation and rejection, particularly in Europe and to a lesser degree in the US. Numbers have started to exceed the capacity of reception at destination. The willingness to integrate newcomers has disappeared. We see two intertwined root causes:

- *The endless stream of migrants toward very few destinations surpasses the capacity of integration* of host countries. The receiving country does not have the time or the economic means any more to manage the additional infrastructure needed. It lacks the employment capacity to satisfy the increased demand from the newcomers. The importation of a very different culture at such a pace and scale destabilizes the one in place. Frustration and anger explode on both sides – immigrants and hosts – creating a source of social and civic tension.

The pressure exacerbates a xenophobic attitude from the host country and makes integration more and more difficult. Once a minority, paranoid and nationalistic parties suddenly win adherence with the mainstream society. The nationalist extremists of the host country find a golden case to justify their traditional xenophobia and win political obedience, forcing even tolerant parties to implement more xenophobic policies to counter them.

- *The attitude of new migrants is often incompatible with the traditional logic of their integration.* They migrate but remain intentionally closed to the society and culture of the welcoming country. There is enough of them at destination to insulate themselves from the host culture. They join “the ghetto” of their fellow citizens who arrived just before them. Insiduously, they recreate a reduction of their original country in the new one – challenging the host society’s secular integrity as a whole. It relieves immigrants from making the needed effort to integrate. Why to even learn the language if the daily life can take place as before? They have no intention of becoming “another one of us”, they just do not care any longer. Instead, they bring with them a cultural and religious baggage that they still cherish above all, as a proud flag that differentiates themselves even more from the host country traditions and customs. They intentionally marginalize themselves – or worse, they create fear.

An encompassing migration policy must equally address these two dimensions. They go together and one single side of the equation does not solve it alone. We are recommending a much more strategic approach to migrations. The federal government will be equipped to assist member states and migrants - on both ends. We recommend to establish a long overdue *Universal Charter of Migrations*. We have been thinking about strategic and pivotal changes:

- i. **Map migrations according to a *Population Density Map*.**

Our first change: we want to influence the destination. We must be able to help candidates for departure to be channeled to places where there is a need and room for them, so that they can be positively integrated. Right now, migrants are just moving to the closest border, which happened to be swamped. Moving from Mexico to the US or from Africa to Europe is all that people left to themselves can do. They are in bare survival mode and can only take the easiest and cheapest way. Geography alone dictates the destination. It does not mean that it is the right door for them, rather the contrary. The same cause that is pushing them to attempt this migration has pushed millions before them on the very same road. So, there is saturation. If they had a chance of a choice, there are so many other places where they could go, but they don't have this luxury.

Understanding and rationalizing the real integration capacity of each potential host country/state will be the critical element of this new policy. We should limit immigration to saturated destinations. Reciprocally, we should prepare virgin destinations with increased potential for immigration, investing in infrastructure and economic triggers. We want to re-organize the current chaos. Candidates to emigration deserve a decent opportunity for success. We must guide them to a place that needs them, where they will have a positive and virtuous impact. We want to prevent them from landing in a country/state that doesn't want them in the first place, where they will fail to find a better life and fail integration. In simple terms: we need a strategy to channel the flux of migrants. There is none today, only walls...

We will take into consideration the concentration of people in an area, its economic capabilities and environmental capacity. The objective is to gradually tune an optimal balance between population density, local infrastructure and resources that a given place can offer. This will totally minimize the stress on people and on the natural environment. It will help to distribute mankind's density in the less harmful way for the economic and ecologic capacities of the world.

We plan to design a new tool: the "*Population Density Map*". In conjunction with member states, we will assess the current population densities and their logical capabilities for further growth or reduction. It sounds simplistic? We think that it can resolve the whole issue. It will allow to move people where they are needed, use immigration as a virtuous valve. Why hasn't it been done before? We can only achieve such a model with an overarching global governance, as it is by definition alien to a country-based system.

Let's look at the theoretical example of Northern Canada and Siberia. They each can receive up to 100 million additional migrants over the next ten years. Western Europe is already saturated. The US is quasi-saturated but with potential in some states. On the other side of the equation, China, India and the Maldives for instance would probably be better if they were reducing their population – with Chinese people moving to Eastern Siberia? Clearly Africa is the burning challenge. The continent must be handled with a threefolded approach: management of natality, development of local infrastructures and strategic channeling of migrations.

We want the map to be reviewed and agreed between the states and the federation annually. It will enable the states to predict and to organize their flow of migrants as a virtuous cycle for their positive development - inbound and outbound. The federation's role will be to oversee and to

coordinate the process. More importantly, the Union will help to finance infrastructures for those states planning to receive the greatest volume of immigrants.

The next issue is about the migrants themselves. We would like candidates to immigration to follow a formal and proactive process that will be organized globally. They should not jump in secret at night in a tiny boat, or run across wired fences in a life-threatening experience as if they were criminals. Instead, they will legally apply with the federal immigration office for a list of preferred destinations, according to availabilities on the Population Density Map. Based on their individual wishes, skills and cultural affinities, they will be offered a few choices. The process will be a coordinated in a rational, safe, legitimate and drama-free way.

In parallel, we will assist member states to reach a dynamic balance between available jobs, resources, infrastructures and population densities. This will reduce the tensions during the integration phase. An emigrant will go to a place where he or she is needed and will be truly welcomed. A host state will have the means and the infrastructure to welcome the candidate and to invest in the appropriate integration effort.

Fiscal advantages will be proposed to migrants and to enterprises that invest in zones of programmed immigration. Federal financial contributions will help local authorities in zones targeted for heavy immigration to cover social welfare and infrastructure costs associated with immigration and to proactively equip them to put state public services and housing on par with the level of expected influx.

**ii. Reduce the need for economic migrations.**

We also want to attack the root cause of mass immigration, acknowledging that this will be a longer pole in the tent. If the country of origin – typically among the poorest states – can offer a decent living at home, its people do not have to leave in mass to survive. There are parts of the planet where the only way for a young person to have a motivating future is to leave. The fundamental problem is the scale of the economic differences between the host countries and the countries of origin. *GNP per capita diffences between countries is over one hundred times.* It makes the temptation to migrate enormous – richer countries act as a magnet. This is what we need to address over time.

An Ethiopian arriving in Italy at the risk of his life in Lampedusa or Turkey will have a reasonable chance to live there with hundred times more money in his pocket, although cost of living will be higher as well. Where situations are so miserable and lacking any hope for a better future, entire national populations share the dream of leaving, projecting their country into the expatriation business and money repatriation from abroad. This is the root cause that we must combat. The current scale is unbearable. They are hundreds of millions of people who can only think of surviving if they migrate. Some dare to try and others do not – the ones who “make it safely” turn into local heroes. It shouldn’t be that way, emigration should be an option and a choice. If the process is structured and organized early enough, crisis and chaos will disappear and the whole event will turn into a well-managed sustainable “normal” process.

Attacking the root cause implies to be able to offer jobs, health services and food wherever people live. If the region is condemned to permanent misery due to a deserts natural environment, then natality must be controlled and the migration of the inhabitants organized logically and decently. Everyone must have the chance for a fair future, or they are better not to be born in the first place. People must have the right to live well where they are or to get help to leave and to relocate humanely.

The federation will help the poorest states to get in a better economic shape and to converge over time with the richest. A decent life at home kills the case for emigration for most. It is a wise investment for the richer states to make. Also, the insertion of these countries in the federation will equip them with a more solid political system. A democratic state of law will eradicate corruption and tribal genocides. The federation will fight corruption, inject external support when needed and pave the way for all people to join an equal road of development, all citizens sharing the same federation.

We should focus on Middle East and Africa first, Latin America second. Projects of infrastructure sponsored by the federal government will create jobs. Enhanced communications will unlock these economies and their products and open up the access to global markets. Connecting remote places with mainstream activities will accelerate their integration. As disclosed earlier, we will fund this program with up to 500 billion dollars annually, coming from the transfer of the public fossil fuel subsidies.

The reduction of economic migrations from the South will provide another advantage. As they get a pause on their immigration toll, the most saturated countries (Europe and US) will have the chance to catch their breath. After a few decades with much less new entrants, they will do a better job of integrating their recent waves of immigrants and limit the current and future risks of rejection.

### iii. **Establish a *Universal Charter of Migrations*.**

Additionally, we want to define a universal Charter. We will clarify the current vacuum of international rules and regulations for these millions of cross-national people currently living in an unchartered territory in terms of rights, laws and duties. We have to define the *rights* of immigrants and also *their duties* in the *Universal Charter of Migration*. It will guide the behavior of migrants, align their individual desire to move to another place with the understanding that they have the duty to become a general benefit for the receiving community. The Charter will define well-understood actions to be taken against abuse on either side. It will guide proper behavior and draw for the first time a definition of the true meaning of worldwide supra-nationality, which will be super-imposed to our existing national citizenship.

The Charter will regulate the rights and obligations of both individuals and host states. It will create a framework of mutual understanding, a *modus operandi* and a way to manage conflicts. Conflictual issues unresolved at the state level will be escalated to the federal jurisdiction.

For mass immigration to be successful, it all starts from *the migrants' willingness to integrate*. The charter will require that candidates pass an "exam" that assesses their commitment to a formal

civic engagement and confirmss their engagement to accomplish their integration duties. We have in mind a lighter version of what is done today in most places to acquire citizenship: immigration is pre-citizenship and should be treated accordingly.

The pre-immigration test will be the same for every candidate anywhere, defined and calibrated globally. It will assess the emigrant's proficiency in the language of the host country, or at least a commitment to learn and to be re-tested a year later. English proficiency will be considered as a transition path. The test is more to validate the commitment of the candidate than an exam by itself. We want the migrant to symbolically confirm his will and acceptance of the duties listed in the charter. They are not only bringing their old traditions in a different place, they also make a formal will to learn and adopt a behavior that is compatible with the culture of the welcoming state.

Such a commitment aims at eliminating irreconcilable differences, whether culturally or religiously aggressive: "*Are you committed to integrate to the culture at destination?*" This is really the question to be asked. We think that this is the price to pay for a seamless integration. A clear mindset change is needed from migrants to facilitate further successful mass migrations. Only the people committed to adapt themselves should go. Beyond a right, migrating has to become a will to learn and to integrate.

As it relates to host member states, we think that *they do not have the primary responsibility of integrating the habits, customs and beliefs of newcomers*. It is the other way around: they must show extreme tolerance but the primary duty to adapt comes from the migrant. The countries/states will be formally obliged to *tolerate and to respect those differences* as long as they do not oppose to federal laws and regulations. Processes will be put in place in which states can appeal to the federation and the migrant can find an escalation path as well, if he or she feels mistreated. After review, abusers of the Charter may eventually be sent back home.

We have acquired enough experience already on issues created by mass migration to understand associated risks and dangers. A small minority of migrants in disregard with the laws and customs of their destination can create enough tension to endanger the entire process of integration for their majority. Societies stressed and fragilized by the speed and volume of immigration on their soil will too easily confuse the bad and good apples. The problem has become most vivid in Europe, with small groups of Muslim extremists who have placed a radicalized form of religion above the laws of the host country. They display "Islamic" behavior and dress codes that challenge openly the secular society that they have decided to join.

We need to reflect on these challenges and make sure that the Charter turns into a clear antidote against divisive manners, on both fronts. In a world where migrating will be a vital part of our survival and future, positive attitudes and proactive tolerance must become the rule.

#### iv. **Prepare proactively for climate refugees.**

As we learn to deal better with mass migrations, we need to anticipate future waves and prepare for a new breed: climate refugees. The Charter will address policies that specifically prepare the world to deal with this specific human flow, which will be different in nature and maybe in

dimension and form as well: an entire country may become uninhabitable and have to find a new nest for its people and culture.

We need to anticipate and be creative, as we have no experience of such a form of migration. The objective is to minimize emotions and to avoid fear, surprise and panic mode, typical in such situations. With the transparency and predictability of annual forecasts of migration capacity by area, the target map for population density will be a determinant planning tool. It will gradually adjust to flows with the infrastructures to be built up. It will prepare local populations for a move if it cannot be avoided.

The closest situation - for a very different cause - has been the re-creation of Israel. We have learned a lesson: migrating all people from the same origin to a single destination as an implant in the middle of other cultures is not a path of least resistance. We will have to deal with the extreme but possible case that an entire nation state – the geographic sanctuary of ethnic or cultural group – gets condemned to disappear. For example, if populations of sea-level areas like the Maldives, Bangladesh or the Bahamas have to leave their homeland, we will not be able to re-create their country/state elsewhere. We want to avoid to perpetuate elsewhere former “ethnic states” through displacements of entire national populations to another single destination. To the contrary, we will be consistent with our vision of tolerant diversity. We will plan for the most adequate destination(s) to welcome climate refugees, with a thorough preparation. With anticipation, transparency and dialogue, everything will be easier.

The exodus of climate refugees may only number in the tens of million under the most positive scenarios, or over a billion if half of the geography of the planet becomes uninhabitable for the next century. We do not know, it is all about risk management and planning. The process should continue to be based on pragmatic anticipation, with a global view and organization, all-encompassing and peaceful. Only a system of responsible global governance can deal with the situation ahead of us.

We are entering a world where people are on the move. Mass migrations will continue and even accelerate as people learn to cross borders and become growingly flexible and compatible with a culture that becomes more convergent, universal and tolerant. In parallel, a much warmer climate will turn entire areas hostile and others will become inhabitable. It is an irremediable happening at this point. We cannot let the floodgate opened without any overarching control.

### **3. Respect of all identities and religions.**

In a world where migrations are accelerating and in which economies and cultures continue to globalize, we ask the question: how to respect and eventually protect identities and religions? Are we at risk to lose our soul and be all crushed into a global magma? What sort of cultural blend do we want?

- Should one universal size fit all and even-out cultures, customs and religions into one?  
or...
- Should we continue to respect our plurality under the harmony of a common roof?

Our vote is for the latter. We want a universal foundation, a common ground of tolerance and Freedom for all. We also want a society in which the wealth of all our cultures, inherited from our extraordinary diversity, continues to cohabitate and to enrich each other. Our roots and traditions will not go away. It's a balancing act led by tolerance and solidarity.

We come from a pure identity-based History, which is now rapidly universalizing. However, globalization also faces resistance, despite all its benefits. We continue to be profoundly attached to the wonderful diversity of our numerous legacy cultures. They remain our safe heaven after all. It doesn't have to change, we need to give time to time. Time is of the essence.

The project that we recommend leverages three pillars: the past, the present and the future. *The civilization that we want to build will integrate and respect the positive weight of the past, accelerate the convergence of the present and sponsor a multi-cultural future based on our universal melting pot. We are universal mutants in the making, with "glo-cal" roots.*

The future of Humanity is both multi-cultural and universal. Altogether, we are - with our differences and our similarities. We will not turn away from our diversity. We will not turn into identical clones - not at all. Instead, we want to stimulate tolerance, respect and harmony within the wealth of our disparity. We fully respect that our cultural mix is made profoundly richer by its diversity.

Above all, we want to build a free, stable, peaceful and sustainable society – with a disclaimer: “Rome was not built in one day”. We understand that our society will be in constant mutation – from the historic domination of identities toward a more universalistic long-term convergence. The common denominator will be the shared destiny of the entire human race, finally unified under a common political system which will protect us all, one race made of a multitude of different people. “We, the people” want a society in which:

- Identities, religions and minorities are respected and tolerated – protected when needed;
- Domination by an ethnic, political or religious majority over any minority is prevented by democratic Freedom – or positive discrimination when needed.
- We will fight against intransigence in all its forms, including the dominance of national majorities or the terrorism of extremists and fundamentalists;
- Universalism is not another dogmatic “globalist religion”. The federation will never be the toolkit of a despot. Freedom, tolerance and solidarity will be our compass. We will enforce all needed constitutional checks and balances.
- All people will be allowed to live with their traditions and beliefs, as long as they do not harm their neighbors or conflict with the common denominator of federal law, agreed and supported by all member states of *the United Democratic States*.

#### **4. Universal Health.**

In some parts of the world, talking about healthcare is like firing up a religious debate. We know that in the US, Medicare remains highly controversial. In a global perspective, the issue is made even more complex, given the gigantic inequities between people and nations around the world. It's like an immense taboo, leading to extreme inequalities, in which some people pay 5,000



dollars for a consultation of a few minutes for a minor thing and others die for not affording a basic vaccination. Let's put a stick in the ground: we want to reach minimal medical support for the weakest everywhere. Current discrimination in access to basic medicine around the world is immense. At the same time, we do recognize the extreme economic imbalances that we have to deal with. There is no immediate fix. "Global Medicare" cannot turn overnight into a single set of rights for all, effective immediately. It has to be a policy of long-term convergence, step-by-step, toward the objective of a minimum level of medical care for all and everywhere. Basic healthcare has to be a fundamental human right, everywhere in the new federation. Implementation levels will differ state by state and evolve, as local economic capabilities improve.

The federal government will help to reinforce the admirable actions already taken by the UN, development banks, individuals, government donations and charitable organizations at an international level. Here is our clear philosophical and moral line.

*We reluctantly think that it is morally acceptable to control birth in order to reduce the size of our global population. There are already too many of us to remain sustainable as a species. However, we consider that letting people already born die from lack of food or basic healthcare is a crime that we are prepared to prevent, everywhere.*

The sooner we can improve health systems in the poorest countries, the less temptation there will be to have multiple children or to emigrate. There is a profound and shocking inequality in the world on the healthcare front. Despite the financing of global health programs and the initiatives of a multitude of public and private intervention groups, diseases and epidemics continue to spread and create a profound divide between human beings. Only a global federation can eradicate the problem and set up a global healthcare system that shares a global medical infrastructure and resources.

We also have societal debates about contraception. Should we allow it or not? Some believe that killing embryos is an unacceptable act. For us, the genuine horror is to kill millions of innocents because we cannot feed or care for them after they are born. Despite the international injection of 25 billion dollars annually to complement the poorest states' budgets via various channels and organizations, *more than 10 million children die every year before the age of five, from malnutrition or illnesses that could have been avoided with access to basic modern medical care.*

Should this not give us the answer and cut the debate short? If these children were not born, they would not have died. Once they are alive, it is our duty as human beings to take care of them as best as we can.

The policy of universal health will bring together the global efforts and resources of the entire medical and pharmaceutical system, to offer minimal but decent care to everyone everywhere. We will invest in infrastructures and hospitals, increase general access to medicines and vaccines through the training and rotation of qualified personnel.

The first objective will be to eradicate the endemic global illnesses – epidemics such as AIDS, tuberculosis, malaria and lately Coronavirus – with widespread vaccination campaigns. We will

also deal with the new health challenges related to climate transformation, such as the proliferation of viruses. We will push forward intensive research on tropical and endemic diseases, with a proactive approach.

As we put together this plan we do not know the sequel of the Coronavirus outbreak but we can already draw a few lessons.

- The richest countries, supposedly with the best healthcare system, have been hit the hardest in the first wave because they were totally unprepared and didn't share data between each other.
- A pandemic issue alone – even with marginal deaths - was able to derail totally the holy grail of the local and global economies. The effect has been more devastating than anything before.
- There has been zero solidarity among countries. Worse: countries have openly and shamefully competed to steal rescue packs from each other. Global supply chains have been disrupted. Multinationals lost control over their own products as local authorities “stole” them.
- Totalitarian approaches have won. Immediate forceful lockdowns have prevailed over softer balanced steps. China, while totally opaque and blindsiding the rest of the world, seems to be coming out with a minor impact while unintentionally hammering everybody else.
- Poor countries have not yet gone through the circle. We fear so much for Africa, but too early to tell if the pandemic becomes devastating or avoids the continent.

The punchline is twofolds:

- First, there is something much more important than the economy: the survival of human beings. When put under immediate stress, everything falls back into place. The society prevails over business – even if for a short while.
- Second, we leave in an anarchic world. Everything else is fake. It is only when survival is at stake that the masks come down... There was no solidarity, no joint course of action, no concerted plan. Just a bare hand fight against windmills, demonstrating the intrinsic weakness and inadaptation of the whole system to the emergency of a global issue. That impacted everyone locally.

The world got on its knees within a month. What happened afterwards? We don't know as we write these lines. You do as you read them. But it's not hard to anticipate...

We want to be prepared for such pandemics at the global level. As soon as there will be an outbreak somewhere, a contingency plan will be activated everywhere. Care supplies will be already disseminated in critical locations and additional global production allocated surgically to whoever need them. We have all seen the current mess. Don't we all know how easy the answers could have been?

The capacity of a world government to orchestrate the size of populations, their movements, their cohabitation and their medical care will make a massive difference to our sustainability and to the improvement of our lives in the future. Our over-population is already overwhelming our

environment. Global policies open the prospect of a peaceful progress for our species that would otherwise be unattainable in our fragmented political system with a growing population density and accelerating climate change.

In particular, cohesive global policies for natality and migrations advance the possibility to approach climate change scenarios with maximum adaptability. They authorize radical moves that transcend yesterday's sovereign national borders.

Borders alone are otherwise preventing us from adopting the solutions that we need, as they eliminate the case for global consistency. We want to empower the *Homo sapiens Universalis* to live on *the planet of free and happy people, not the planet of the powerful growing nations*.

Earth our country.

## Chapter Thirteen:

### Priority Six: Green Economy

The economy is the core engine of our society. Intentionally, we did not position this chapter as priority one as you might have expected. We first wanted to prioritize the sustainable destination of our society, so that the economy can come next and serve it – not the other way around. This is the shift in mindset needed to move from a growth-based materialistic society to a durable humanistic and ecologic society. Society must come first. We do not discount the significance of the economy by any means, what we are saying is that the economy has won too much prominence and rules everything else. It has become priority number one factor ten for all “successful” countries. *Our collective obsession for economic growth has created the ecologic Great Wall.*

The importance of a flourishing and stable economy remains paramount. We totally understand that the economy – businesses of all kinds large and small – are a vital function of any developed society. It provides employment and creates wealth. We support our liberal economic model as our core engine. We are pro-business and opened to free-trade and fair liberal economics. However, first comes first: we privilege sustainability over short-term profits. We believe that the economy needs “help” from the government from time to time to pass an inflexion point and better serve the society in a broader long-term context – such as turning green and achieving systemic global stability. Current circumstances represent one of these rare occasions where “help” is needed.

The extraordinary global economic success of the last three decades has led us to a paradox without precedent. The economy completely governs the world. It has become our singular pillar but an unstable and shaky one, as the crisis of 2008 demonstrated. The economy drives us with no counter-balancing force and no direction other than “more growth, more jobs thus more taxes” (for the nations), “more growth, more profits thus a higher stock price” (for companies and their investors), “a promotion thus a higher reward” (for employees) and “help me find a job” (for the unemployed).

Beyond growth, employment and profits, nothing channels the indisputable force of the free-market toward a positive and desirable outcome for Humanity. The three metrics of economic success – growth/profits/employment – are an end destination by themselves, and are assumed to naturally materialize any kind of general and higher-level benefit for the society as a whole. Ultra-liberals argue: “never challenge the Freedom of the enterprise. The economy has got to be totally free. Government regulations kill Capitalism. Business growth makes people deliver their best to achieve maximum profits which in return fuel the society.”

Fundamentally, we agree with this assertion, but only bring a material caveat. *Someone's Freedom limit is someone's else. There is always a limit to anything. We promote liberalism when it assists a strategy of sustainability and stability for the society. Some would call this "progressive and fair liberalism."* Somebody's infinite Freedom for everything in a finite world hits all others. We want a direction and long-term consistency for the liberal framework of global free-trade. Freedom of making profit for one group cannot hurt everybody else. The "land of the free" does not mean anarchy. Sustainable Freedom comes together with strategic cohesiveness.

Our economic strategy is centered on *progressive global liberalism*. It intends to achieve two primary objectives:

- First, we must find mechanisms of global governance to *improve economic stability* and cushion the near-chaos of the rein-free global financial system. It takes a global governance.
- Second, we must ensure that growth, jobs and profits match an overarching goal for our society – its *sustainability*. It takes a huge green stimulation.

Our current lack of governance is racked with cycles that lead us from bubble to bubble and from growth to recession. It amplifies imbalances between countries – those with record debt and those who are their guarantors. Finally, the main economic actors – multinational corporations – are by definition spread out globally but still centrally governed nationally (in case of crisis), although they sometimes barely contribute to their homeland taxation.

Given our political fragmentation, no one is able to define or to monitor any form of global direction. As the whole system heats up, some imbalances have become so wide that the risk they constantly vehicle challenges the very foundation of our global economic "miracle" - commonly called "globalization" (standing for economic-only globalization, not full globalization). Free exchange and economic-globalization are under threat from their own making. In other words, we see a growing risk that *economic globalization could go backward*, not because it has not succeeded – it has delivered and shared more wealth faster than any other model in History – but *because of its own lack of global policing, which has turned it into a roller coaster*.

Following the 2008 shockwave and its latest effects – on unemployment, tax evasion, transfer of wealth from continent to continent, currencies speculation, national debt – most national governments are fragilized by a global imbalance. They are attempting to take control again of their local economic assets and to try to find ways to re-channel their economic forces to their national benefit. If they succeed, they will rebuild a fragmented economic world. Their efforts will take us back to the future.

The global government is the insurance of a more integrated and stable economic globalization. The economic initiative of the new government will re-center the power of the global liberal economy as a positive force for the overall society – on top and above the pure growth of wealth generation alone. Today only the economy is globalized. To succeed in stabilizing the economy and turn it into the agent of our sustainability, *we must globalize the entire society*.

#### **A) The great imbalances of *economic globalization in a national society*:**

A grand economic initiative will be designed to resolve the four endemic imbalances of our current “semi-globalized” model:

- **Imbalance number one:**  
**Overall sustainability should guide the society instead of economic growth alone.**

Given our ecological challenges, we think that sustainability must become our number one political priority. The economy is the tool to serve our goal, not an end goal; it has to assist our vision for mankind. Currently, the economy is the number one priority for most governments. The necessary national quest for economic success has become excessive. Economic growth (success) has become a stand-alone objective. It is primarily a mind-set issue. It drives everything in the pursuit of constant growth. *We want an economic model that fully aligns with our metamorphosis into a green society.* We want an economy that serves the greatest cause that Humanity has ever combated: to re-build the symbiosis with our environment and make our footprint durable. We want a stable and green economy that can play a pivotal role and turn this crisis into the opportunity to propel us toward a new phase of human civilization. We can seize the chance to construct a new long-term economic momentum, one that is stable and based on sustainability.

- **Imbalance number two:**  
**The economy is now global, but the economic authorities are still national.**

Maintaining a stable economic balance has become more and more difficult due to the national fragmentation of our economic authorities, leaving the overall system in a random navigation mode and clearly without a pilot. No country alone is powerful enough to police the system any longer. The US used to be, but is now turning protectionist and isolationist.

First things first, let’s take a look at some key numbers to appreciate the full effects of the 2008 crisis, which was largely self-inflicted by the financial system itself. It will help us understand why we think that such an event should be considered as an exemplary failure of the model and its root causes corrected. Between 2007 and the end of 2009, we accumulated 1.5 trillion dollars of new public debt – one hundred times more than the Marshall Plan. Sixty million people became jobless. One hundred thousand companies filed for bankruptcy in the industrialized nations and eighty countries plunged into recession in 2009. Five years after the crisis (by the end of 2013), debt levels were still at a record high: the US had the largest debt at 17 trillion dollars which was roughly its annual economic output, Japan followed with 11 trillion dollars which was the double of its economic output, Italy, the UK, France and Canada also had debt levels that exceeded their annual GDP. Even Germany hit a 80 percent debt/GDP ratio. These numbers were already completely mind-blowing, but they kept increasing: the US alone had a net debt of 24 trillion dollars before the Coronavirus outbreak. Post-Coronavirus, it is hard to predict by which order of magnitude these debts will further expand, as governments are all into a spree on healthcare, testing and aid to households and businesses.

According to the Congressional Budget Office, the US federal budget deficit will nearly quadruple in 2020, skyrocketing at 3.7 billion dollars. Servicing debt interest is turning into an endless handicap in many countries and will act as a constant destabilization factor. The US said on May 4<sup>th</sup>, 2020 that it wants to borrow a record three trillion dollars in the second quarter 2020

as Coronavirus rescue packages blow up the budget. The sum is more than five times the previous quarterly record set at the height of the 2008 crisis. Discussions are under way for further debt raising (assistance to the economy). Alan Binder, professor of economics at Princeton University told the BBC one month before the event: “so far, the answer has been everything is fine, as to how much borrowing the US government can do before investors start to feel satiated with US debt. But there is a legitimate question.”

This enormous debt burden could be explained if it was the result of the third world war with everyone having to borrow to build weapons or to compensate for bombarded factories – it is not. Until Coronavirus, it just came up naturally as a result of twenty years of global free-trade. There was no extraordinary cause to justify the result before Coronavirus. To put everything into perspective: the additional US spending for Coronavirus will be 2 trillion dollars, only 8 percent of its total debt pile.

Are most countries going to default? They would probably fail to bailout their major banks again as they did in 2008. *The risk of this true “double dip” is to destroy the system of global free-trade* (more countries retrenching and stopping to pay their debts). We have entered into an era of financial instability and uncertainty that challenges the whole economic eco-system, with no-one being able to regulate anything centrally any longer – there is no more “center” as the US itself is behaving as an indebted island.

How was such a turn of events even possible in a globalized economy that seemed so peacefully sophisticated, powerful and methodically polished by our biggest brains? What are the fundamental causes that we need to eradicate?

1. **The fragmentation of the world’s national central banks** is the first challenge to global economic governance. Central banks are independent, sovereign and have no ties between each other. They serve the interest of the country to which they belong.

The central banks are the primary actors that define the parameters that influence their overall national economy, the interest rates, monetary policy, stimulation of growth and the control of inflation. Their individual positions provoke reactions on their local economy but now also affects the other economies regionally and globally if their country is sizeable. Any action from the Fed’ in the US impacts the world stock exchanges. The sum of local economic policies, considered with their respective influence and weight, becomes the economic “policy” (or lack of a unified one) for the world. Each country’s policy is designed for its direct benefit and the sum of the all these policies becomes policy for all. Unfortunately, the sum of individual policies doesn’t usually end up to the best generic outcome. We are living through the consequences right now and no one has the means nor the political willpower to resolve this anarchy.

Each country runs its independent monetary policy, with the exception of the Eurozone, where a group of brave countries decided to unify their economic currency, led by a central European bank. Deep in their heart though, Europeans know that this is temporary and that regional currency unification can only be sustained through a political unification.

2. **With a weakening US, international organizations struggle to be our pacemaker.**

International organizations are not empowered or equipped to fulfill their role of central governance and the national agendas of which they depend are incompatible. The G20 definitely offered the potential of a sufficiently representative group – its members represent 85 percent of the world’s GDP – but never reached a unanimous decision on anything.

*We are experiencing a crisis of global economic leadership. After thirty years of stellar expansion, free-trade and globalization have started to take the toll of the dual impact of the 2008 and 2020 recessions. Countries or clusters of countries are and will, at various paces, start to find excuses to retrench behind more traditional national economic policies.*

Western economies first discovered that they were part of a finite entity during the crisis of 1929. They had become an interdependent ecosystem linked to one another directly, making their individual actions inseparable. Since then, this ecosystem has more or less progressed due to the leadership of the United States and expanded geographically to most of the world in the 1990’s when the USSR vanished. Almost a century later, the US is still the number one power economically, geopolitically and militarily, but its leadership and the power of its currency have eroded. China is now a strong counter power, aiming at world influence while the US denies its own. More than ever, the world needs someone to truly lead the multi-lateral economy and trade. Without it, the lack of global leadership will lead to protectionism. The model of free exchange that is truly universal and that we had known since the fall of the Berlin Wall is under immediate threat. The new federation will definitely take over this most-needed leadership role and deploy a unified global economic policy.

### **3. The conflicting American and Chinese policies have destabilized our relative world balance and impacted the fragile-by-design European construction.**

US-China together represent half of the world economy. Their discordant policies have caused constant economic anxiety for over a decade. Initially, cheap imports from China boosted the US economy, freeing up US consumer spending for real estate and financial products leverage (building a bubble), while the trade imbalance created in parallel a record level debt for the US side and cash on the China side. The US deficit peaked at its highest level since 1946 as a result – the same for other Western powers.

1946 was a different situation though. The US deficit was the direct result of the exceptional spending of the Second World War. After the war, the country got itself out of it by growing its economy faster than its debt. It reduced its debt ratio through post-war reconstruction growth, also engaging itself in the control of state deficits and accepting tax increases. The post-war period created a strong economic momentum with US exports fueling the liberated world, boosted by the Marshall Plan. This time the US deficit is not coming from a war, it’s a systemic one. The US has only spent a trillion dollars on the wars in Iraq and Afghanistan, no more than 4 percent of its debt.

China on the other hand has accumulated 4 trillion dollars of monetary reserves – one sixth of the American debt and by far the largest pile of money anywhere – as it became the factory of the world. It exported 100 billion dollars per month. China’s expansionist monetary policy was partly based on a delusion. The yuan was inconvertible, in fact fluctuated within narrow boundaries at an



arbitrary rate set by the Communist Party. The US and Europe implored China for years without any real success to put their rate of exchange at a level less damaging to their economy and to the rest of the world. Only recently did China finally start to engage into relative re-evaluations. The Chinese monetary policy has been a one-way street that benefited greatly from global free exchange. During its ramp-up, China used an artificially low monetary value, unilaterally calculated and non-convertible. The “war of the yuan” exacerbated the US-China antagonism and was fought with aggressive quantitative easing from the Fed.

In the middle of this collusion which led to the 2008 crisis, indebted Europe turned into a big unsettled castle of cards, as illustrated with the Greek rescue. The impact of 2008 on Europe was huge because its monetary union was still so fragile. It put into question the new edifice of the euro which was “work-in-progress”, awaiting to slowly evolve into a more complete construction. The public indebtedness of 2009 proved its Achilles’s heel – a currency without the basic economic and political tools of regulation, shared by sovereign countries with very different levels of intrinsic competitiveness. China and America are now both stakeholders in a possible solution. They are not responsible for the rickety construction of the euro but their awkward relationship has involuntarily led to the crisis that has weakened the construction around the euro. A failure of Europe would directly impact them since integrated Europe is still the number one world economy.

#### **4. The lack of global governance and leadership provokes systemic cyclical bubbles.**

These cycles are due to an inherent characteristic of the model, which is built on a permanent disequilibrium. The global economy behaves like a grand economic sinusoid, a yo-yo which repeatedly follows the same path – up and down and up and down...

- Phase one: the US overheats and goes into a crisis that spreads to Europe (its most direct economic extension), then to Asia where everything is produced.
- Phase two: after two or three years, the US moves out of the crisis, then Asia and then Europe.
- Phase three: the world economy comes out better than before; everything is suddenly forgotten and growth is back everywhere, until the US starts to overheat again...

This game of dominos reproduced itself regularly as a systemic cycle since modern times economics. The only question posed after each crisis was the timing and predictability of the next unannounced earthquake rather than the overall risk of another big one happening again. The emergence of China changes the game, with the entry of a dominant yet totalitarian economic power that uses directive tools to maintain its own growth, regardless of the ups and downs experienced by the free-trading West. Specifically, we have seen against all odds China didn’t blow up in 2008. The free-market “crash” was politically incorrect and authoritatively prevented. It is hard to read yet the mid-term impact of the Coronavirus on the Chinese economy and politics.

- **Imbalance number three:**  
**Multinationals operate globally with no parallel governance or taxation system.**

Multinational companies – including banks – serve directly the interests of their shareholders and indirectly the one of their government of origin (their HQ). Their global playground offers an almost total geographic Freedom. They approach the world with their own internal regulations.

They define internal transfer prices, have the flexibility of where to surface profits, where to pay or to avoid taxes, where to produce or to import goods from, where to create or eliminate jobs, where to sell and at which price. The politically fragmented world grants them a magic sandbox – every other actor in the society is national or local.

This agility has enhanced their global wealth creation. Many have turned into giants. By virtue of their financial power and independence, they have become not only economic actors but also political agents because of their capacity to impact the political fate of the countries where they operate. From “micro-economic” actors they have turned into “macro-economic” influencers. Some of them are individually big enough compared with local public authorities that they can turn into a competing actor, acting as a “global country” of their own. They have the power to decide where to invest, where to shutdown local operations, where to employ, where to pay taxes... It puts them in the position of being courted by multiple countries that will compete to benefit from their presence. Often, the global market capitalization of these enterprises is greater than the total GNP of some of the individual countries where they operate.

Countries depend on the great economic power of multinationals. They operate inside of their borders but are guided by a foreign leadership. It's a really tricky relationship on both ends. Although they operate locally, these giant players are taking orders from somewhere else, directing their business to achieve a global goal. While they are legally inclusive of the social constraints of the host country and play a tremendous economic and social role wherever they do business, their objective remains to produce the most efficient global end-to-end financial outcome for the shareholders back home. Evidently such an incoherent situation can create tensions and imbalances. It is not always easy to see who is the master or the slave, if the relationship is just a “fair” exchange between the parties or a master-slave trade.

Taxation is probably the most peculiar hole in the system. Countries only live from taxes paid by their citizens and enterprises. Multinationals are not necessarily taxed in the country where their wealth is generated. Enterprises have learned that a normal business practice is to legally optimize their taxes internationally. They leverage – in good faith – the lack of international jurisdiction as they would leverage any other component of their activity. They optimize. Their internal transfer prices easily blur international regulations to minimize local taxes and maximize overall profits. Their objective is to concentrate their earnings where the local taxes are the lowest. The art has turned into a science. American Congress estimates that the US annual corporate tax revenue loss due to offshore tax “evasion” is around 100 billion dollars a year. Given that *sixty percent of the total international trade occur through internal revenue transfer within these multinational groups*, the potential for tax evaporation is both enormous, totally legal and remains very difficult to measure – even more to challenge. According to a study by *Le Monde* in 2010, *global corporate tax evasion represents up to 80 percent of countries' consolidated tax collection gap*.

Countries struggle to implement remedies. They compete globally themselves. If one country imposes a regulation on multinationals, it just makes neighboring countries more enticing to such corporations. The “tax cop” loses business immediately. The need for a global solution is evident. Local bravado only can only act as a multinational business repellent.

Multinationals excel in leveraging political fragmentation to their own benefit. Since they are the only empowered global actors, they have turned into world experts to benefit from political anarchy. As a result, *while the global economic machine steers the world, no one can steer the machine and we miss the opportunity to capture more value for the benefit of the society as well.* The enormous wealth generated by global enterprises doesn't match in proportion the taxes of the countries in which they generate their income. Western countries with a traditionally high taxation model - financing high-end infrastructures and welfare - are at a loss to recover their spending from multinationals on their soil and generate more deficit and debt.

This perfectly legal corporate tax evasion system makes the political fragmentation problem even bigger. It impacts local country/state budgets and wealth redistribution in a massive way. It is a growing factor of international economic fragility and resulting political imbalance. In the "semi-global" economic game, fiscal optimization by multinationals has been made easy by the fragmentation of the countries. "Tax optimization" is just part of the multinational modus operandi. It's not their fault, their business is to optimize the global ecosystem they have access to. When a game lacks rules and rulers, you cannot accuse the players of not playing by them, if they are missing in the first place. Semi-globalization has turned the fragmentation of local tax regulations that fund the countries obsolete. The countries are incapable of taxing the value that is being generated on their soil. Multinationals are the first to leverage our political anachronism.

Notwithstanding their tax ingenuity, multinationals are a critical asset for our universal future. They are the global pioneers, they are the first to get all our people to work together, as one team. They create wealth and jobs in places where the local market would not justify them. They stimulate and develop smart people wherever they are. They are the glue and the engine of the global economy and act as the operational link which is otherwise missing between countries. They embody global trade. They train millions of employees to the universal market and to global technology sharing. They make their employees global citizens. It makes them more powerful, innovative, faster and extremely adaptable.

- **Imbalance number four:**  
**Pure market forces will resist to the emergence of a carbon zero society.**

Fossil fuel will continue to lead without the true financial inclusion of its environmental impact. Its direct cost is and will remain cheaper for a long time. Only a global political alteration of the model can drive the preference for clean energies. The fossil fuel economy cannot be transformed into a clean one by the sole effect of market forces. The full cost of fossil fuel – including its ecological footprint – has to be reflected in its price, instead of its sole direct cost of extraction, transformation and distribution.

Our industries, services, lifestyles and society as a whole are based on the consumption of fossil fuel energy. All the forces behind free exchange involuntarily support fossil fuel energy because of their propensity to constantly move toward the easiest possible path. Fossil fuel is the path of least resistance when considered independently of its pollution, in the pure economic sense. Immediate profits favor fossil fuels. In facts, there is just no cost-effective alternative just yet if cost is the only factor. It's a vicious circle though, fuel is mainstream so investments keep going there and it makes it harder for alternatives to catch up. The entire economy depends on fossil fuel

and for an enterprise or an individual to decide to use an alternative source requires a start-up investment and the expectation of a higher running cost.

Some countries have been trying to alleviate this bare reality. They have established a “carbon tax” that reflects the total price of fossil fuel including its total cost of pollution cost to the society. But the fragmented political powers that (fail to) oversee the global economy make such individual national initiatives rather risky – they have to be globally competitive. In our current framework, with full Freedom of economic agents, the transformation to the green economy will be slow. Too slow because there is still little economic motivation and no decisive global public stimulation to “coin-operate” enterprises and consumers to make “better” decisions.

The mass-transition phase cannot be only voluntary and led by free-market logics. We are advocating for a clear public stimulus. We will lead and ignite the global green economy explosion. The time has come to start to shift gear in a big way. Much of the technology has already reached industrial credibility, if not yet economic maturity. The take-off needs an irrevocable global public boost and commitment. The program of replacing fossil fuel with green infrastructures will fill the gap of pure economic competitiveness between the currently unmatched fossil price and the developing clean alternatives. During the transition phase, the federation will find vehicles to compensate the cost differential with interventionist taxation or stimulation – stick or carrot, both can work.

We think that the fantastic progress enabled by the globalization of the economy over the last thirty years has hit a ceiling. Protectionism is back, justified by the current fragility, endemic crisis and intrinsic imbalances of economic semi-globalization. Economic globalization must be governed globally - politically. What’s missing is the *full globalization of the society*, with the insertion of a full end-to-end consistency, stability and sustainability that it currently lacks. Global institutions and regulations must be put in place to reduce dangerous imbalances. The new federal government will lead this initiative. The principal objective will be to stabilize the overheating economic machine for the long-term and to turn it into a tool that serves our greater political purpose – make it the engine of our green revolution.

### **B) The Grand Economic Initiative – *a fully globalized economic model:***

The federal government will jump start a Grand Economic Initiative. Our ambition is to form a new economic governance model to serve the fair and sustainable universal society that we want to build. We will turn instability into stability and unsustainability into sustainability. We support a fair liberal capitalist model, equipped with parallel international sovereign economic authorities, to serve the global society as a whole.

We want to elevate our ultimate economic governance from countries to the global federation. Financial and monetary organizations will be empowered at the federal level and replace the member-states (countries) economic sovereignty. The federation will align economic rules and regulations globally, with a model similar to the one of the US but expanded to the perimeter of *the United Democratic States*.

Beyond the installation of global governance and its stabilizing effects, we also have the ambition to take us out of recession and to stimulate the carbon zero economy. It means that we will support the development of clean technologies and lift up the infrastructures of the poorest countries to a minimum acceptable level that will allow them to participate to the new global prosperity with a reasonable carbon footprint. All will act as an economic recovery engine.

The plan that we are preparing is articulated around five main levers:

### **1. Design a global economic governance:**

The concept is simple. We will lift up the economic institutions that are today national to the federal level; thus permitting a harmonized policy and the regulation of the economy at the planetary level – in a concerted, stable and sustainable way. We think that it can be achieved with four critical moves:

#### **i. Elevate the economic and monetary levers at the federal level.**

The federal government will set guidelines for the general economic policy and assign the budgets for its implementation. Federalism implies two-dimensional sharing of decision-making power, between federal level and member states. Overall taxation will be reduced substantially. A new federal tax system will be defined, to come on top of the member states tax system. State taxes will finance local affairs and federal taxes will cover federal expenses, with a separation of duties similar to the US federal model.

We anticipate major cost synergies through a much more efficient centralization of public duties at the federal level, streamlining of the public workforce and global digitization of core administrative processes. Globally, there will be a major saving in the cost of public administration, a lot of duplications can be avoided. According to the World Bank, current public spending worldwide (general government final consumption expenditure) totals 14 trillion dollars or 17% of global GDP - pre-Coronavirus. This number represents the current addition of all country budgets. With increased scale and efficiency, we anticipate to be able to drive significant rebalancings and savings altogether.

A federal carbon tax will counter-balance the cost of pollution of fossil energy and be reinvested to accelerate the ramp up of clean energies.

A key benefit of the federal tax system will be to allow for re-distribution of funds across states and ensure enhanced fiscal solidarity at a planetary level. It will help to anticipate and avert the failure of the most fragile member states by organizing and supervising their policies and expenditures – ultimately being their warrant.

While regulating migrations that coincide with targeted population density zones, the federation will finance a major wave of financial aid to Africa first and later Latin America, through large projects – managed at the federal level - that will create employment and stimulate developing economies. We want these future member states to reach quickly a modern level of infrastructure in communication, transportation, medicine, education and housing.

Finally, the federation will support two strategic programs: the creation of ecological sanctuaries – federal parks – and space colonization – our very long-term safety net.

**ii. Create of a global currency.**

Once political, tax, monetary systems and policies are unified, it's an all new situation. We then have the conditions required to enable a single global currency. What Europe struggles to do successfully because it maintained its separate political systems, we can achieve globally owing to the political umbrella of *the United Democratic States*. We are proposing to baptize our currency “*Core*”, standing for “*Currency Of Republic Earth*”. The “*Core*” will replace all other currencies within the federation. Though not sufficient as we saw in Europe, a single currency is indispensable to the solidification of a homogenous economic entity. It allows for a unified monetary policy including the amount of money issued, the interest rates and the control of debt and inflation.

A single currency is endorsed by a unified monetary policy. It prevents the massive issues imposed by currency fluctuations as well as the problems of inconvertibility, like the yo-yo game we have seen between the dollar, the euro and the yuan. The “*Core*” will avoid the battle that occurs when economic blocks artificially value their money as a competitive tool. It will eliminate unproductive speculation between currencies. The currency fluctuation game, a big cause of our economic instability, will suddenly turn obsolete.

A single currency will offer an extraordinary tool to establish transparency and ongoing convergence of economies across the world. It will enable global alignment of prices and costs. We will all use the same calculator with the same unit of measurement.

Finally, the “*Core*” will act as the stabilization factor of the global economy that we have been missing. With fiscal laws that are the same for everyone, a global interest rate, central public debt management and rules that are the same for everyone, bubbles and cycles will disappear, by lack of opportunistic speculation, artificial exchange rates or disconnected interest rates.

**iii. Empower a global federal bank to manage the single currency.**

A global central bank will be created to articulate the world's monetary policy and to manage the global currency. Its main objective will be to harmonize the economies in the federation. The federal bank will manage the “*Core*” (money supply and reserve) and the global interest rate, in autonomy from the political power, to ensure proper check and balances.

This sovereign global institution will be empowered as the equivalent of a “Global Fed” – the “*G-Fed*” – and be the driver of a responsible monetary policy aiming at overall stability of the economy. The *G-Fed* will support a concerted development of local economies as there will be only one.

**iv. Globalize stock exchanges.**

With a single currency and monetary policy, the equity ownership of multinational companies will continue to globalize and ultimately mirror the spread of their business activities around the world. Multinationals will align the globality of their operations with their pool of shareholders and with their governance. Instead of having to rely mostly on the influence of their home-based shareholders and jurisdiction, they will be integrated at all levels with the regulatory governance of the federation and member states. They will pay fair taxes wherever they operate.

Any individual will be able to buy goods and services anywhere with the single currency. The same will happen with investments, there will no longer be a risk of dissuasive exchange rates for an investor. Shares of all public firms of the world will be traded on a global stock market and valued in *Core*. Stock exchange institutions – like the NYSE, NASDAQ, Euronext, Shanghai, Tokyo or London stock exchanges – will globalize as well. The access to the global stock market will be opened to companies of any origin. The regulation of the market will be ensured by a global agency equivalent to a “G-SEC” (Global Securities and Exchange Commission).

## **2. Develop a *fair* liberal economic model:**

With its capacity to stimulate and bring together the creative, ambitious and competitive characteristics of human nature, the free liberal economic model has proven that it is capable to cultivate and combine the forces of imagination, work and wealth creation. Freedom of the enterprise and of the money market stimulate performance and success with the reward of profit. While it was thought to be historically more of an Anglo-Saxon cultural trait, it has become the engine of globalization and during the last decades has been endorsed and even mastered by almost all our economies. This is officially true, although at face value, countries have turned into experts for influencing or buffering the impact of the bare natural outcomes on their economy. In reality, it is hard to know how “free” the market is in some places, but at least a common official principle prevails.

The federal government will continue to support a fair liberal economic model and will endorse global economic Freedom. To ensure stability and sustainability, we will add the missing global governance and regulations browsed earlier. Free trade and free enterprise will be an inalienable rights in our constitution.

Capitalism can be criticized for its propensity to create inequality. However, it stimulates individual motivation to exceed expectations and to aspire to economic progress, rather than the apathy of overly egalitarian and enclosed systems in which initiative and human drive remain pointless because they are not recognized or compensated.

It lacks boundaries when totally rein-free though. Global governance is our missing rein. We do not see any better alternative to Capitalism, but want to make it “fair”. We want to inject its missing ingredient: global economic and political governance.

Capitalism and governance are not antinomic. We will enable a *virtuous balance between Freedom and fairness*. Fairness for the sustainability of the society overall and fairness for the weakest individuals or states or minorities must be carefully injected into the governance of the

free-trade model. We want to be very precise and repeat that both Freedom and fairness will be protected. We are not socialists. We are liberals who want a free economy *that is also fair*.

### **3. Launch an aggressive economic recovery policy:**

Our aggressive strategy is to stabilize the economic landscape (debt management), take the economy out of recession while shifting away from fossil (green stimulation) and to help the weakest geographies to get out of poverty and isolation (solidarity).

#### **i. Stabilize the cyclical economic growth/depression curves – deal with the debt.**

We want a global economy that is more balanced globally and regionally, much less indebted and immune to cyclical overheating. We have to eliminate the magnitude and extent of the “bubbles” caused by cyclical growth and recessions. Such cyclical “yo-yo’s” impact billions of workers and burn so many investors. We prefer global consistency and stability to excessive expansions and depressions. The global monetary policy will be totally aligned with this objective. Instead of big up and down swings, we will pilot for a moderate but sustainable level of economic growth.

Anyone looking at stability starts with debt. Current global debt burden creates an immense risk – of not being able to be repaid back, principal and even interests when the cost of repaying gets exorbitant against the capabilities of an economy in recession. Systemic national default – now possible if not probable - will create a financial crisis like never seen before. Debt has become our critical issue – its out of anyone’s control. We have created a time bomb for ourselves. The individual indebtedness level of all countries is now well beyond reason, above a year of GNP for most. It hard to see how it will be repayed. Nobody can afford to. National budgets can’t even out any longer with the added interest burden – those who still can will be caught by the ones who can’t in a global economy. Austerity measures to sustain the interest payment would prevent a recovery from recession.

We have to make an exceptionally bold move. We have to eradicate the debt issue once for all – a big reset. Is there a way that all states of the federation can re-start on a healthy footing? We have been thinking about that.

We intend to free up member states from their public debt when they join the federation. We will take the debt at the central federal level. States will be debt free to start with. The federation will deal with the consolidated debt owing to its single currency and become its own creditor. This is such a big move. It is only made possible through the one-country consolidation. Countries in debt become one together with the countries owning the debt – it’s the same account. Isn’t it magic?

It comes with two effects: first, it reinvigorates the agility of the economies of new member states which suddenly have a fair chance of becoming competitive again; second, it acts as a huge motivator for them to join the federation. The historic deficits of the first wave of member states will be absorbed centrally on day one. So, all the member states will start on a robust and equal playing field. It will also act as a debt-free magnet for hesitant members – if they join, they will become debt free.



This can be seen as a federal “Chapter 11” process for indebted states. It represents quite an overwhelming carrot for the first wave of member states (existing democracies) as most of them fall in the highly indebted category. How does it work? Federal write-off is the answer. The debt coming from a public debtor to a public creditor within the federation will be written off by the federation itself. If the debt is from outside of the federation when temporarily some countries have not joined and are creditors, there will be a negotiation – which acts as a stimulus for this country to join.

**ii. Take the economy out of recession - ramp-up the Green Economy.**

Green technologies are nearing their mass adoption phase. It represents the largest almost untapped opportunity for the economy, not only the society. It takes a loud and clear global political signal for a long-term irrevocable commitment. We will ignite and enable the creation of a formidable green leverage of growth for the global economy. “Clean-tech” – both for the industry and agriculture - will be the centerpiece that forces old fossil-fuel sectors to transform rapidly.

We will leverage two kind of stimulation tools – carrots and sticks.

- Carrots: we will drive direct public investments on new green technologies as well as tax relief on new clean products;
- Sticks: we will tax the total cost of fossil-powered products and associated services to include the full cost of their carbon footprint to the society.

The potential number of jobs that could be created by the green economy in the US alone is between 16 and 37 million (*L’Expansion*, 2012). *Green jobs could make for an overall total headcount that can replace or even exceed the total number of jobs eliminated by the Coronavirus recession.* It is a totally new paradigm, a new frontier of economic innovation that can carry the transition between the old and the new without an economic trauma, provided a proper political focus is applied to the project.

To accelerate the “green wave,” the government will prepare a pool of initiatives which will welcome private funding and endeavor to find ways for the oil and gas industry to recycle itself. These funds will come from the almost complete transfer of military budgets, representing two points of the world’s GDP – one trillion dollars per year (plus 500 million to reconvert the military personnel). This will create an economic stimulus over many years of a magnitude never equaled before in History. We believe that this will constitute the long-awaited economic electroshock, which can finally initiate the carbon zero revolution the our society needs to survive.

**iii. Develop a global program of infrastructure build focusing on poorest states – namely solidarity with Middle-East and Africa (and later on Latin America).**

Do we remember the “New Deal” of the thirties? Let’s now take it at a global scale. We need global solidarity, and to get more of us to be able to access our global market. We want to solve for the challenge of eliminating “poverty” by the middle of the century.

First, we will look at *a massive investment in infrastructure for the poorest countries*, designed with them a plan to allow them to get closer to mainstream, based on what they are missing the most. We must even out over time the world's wealth across geographies, through the convergence of financial and social strategies. It is our long-term goal, that comes with an overarching ambition for planetary solidarity. We want to take a path that is no longer just philanthropic (by NGOs and wealthy individuals such as Bill Gates) or voluntary (by richer states). We will be systemic. We will institutionalize the economic process of solidarity at the level of the federation.

With solidarity, we envision a second wave of investments: a central design of “brotherhood” for the universal society. One that leverages the following strategies:

**a) Solidarity for employment and benefits:**

It is not realistic to try to equalize our social benefits system at the global level – not for at least another few decades. The economic variances in standards of living are enormous. Also cultural differences and perceptions about the role of the government – between a generic protector and a necessary evil – are all too disparate. It's impossible to merge all systems into one single model for the foreseeable future. In practical terms a one-size cannot fit all for now. Equal social benefits are not financially feasible or politically desired either. Disparities are not ready to disappear, because these issues are directly linked to the hard-core reality of local economies and the evolution of their cultures. It will take time.

We are looking for mid-term convergence. The harmonization of workers' rights will happen, but it doesn't imply that a global social benefit system will be edicted in the short-term. It's unrealistic. We are planning for a common destination where all social models can be inserted into a single framework and become more cohesive over time. We will begin with some low hanging fruits, such as the overall prohibition of child labor; the establishment of a maximum number of working hours per week; the affirmation of equal opportunity employment regardless of gender, ethnicity, or religion; the right to a safe working environment; the access to basic preventive medicine and finally a system to help the decent living of the unemployed – although we know and anticipate that this latest topics will be a controversial one.

Our objective is to make the various national systems compatible, well before they manage to be financially comparable. The value of individual social benefits will continue to be very diverse from state to state for a long time. We have to acknowledge that the construction of a truly homogeneous world will take another one or two generations. But it must be at sight. In the meantime, we target a common minimum level – the universally acceptable.

**b) Solidarity for healthcare:**

The federal government will support basic welfare programs in the poorest member states, with three priorities: first, the dissemination of basic medicine for everyone; second, the global preemptive management of epidemics.

Regarding basic medicine for all, the focus will be on children. We want to systematically combat extreme misery, hunger and the illnesses that today affect more than a billion children.

Half of the children of the globe is not well. This is totally unacceptable, they would better not be born. We consider ourselves responsible for any human being: he or she must be allowed to have a decent life, or better not to be born.

We know that local corruption has been a critical issue to channel humanitarian funds to the most disadvantaged places. Our effort will concentrate on the poorest member states where there is new evidence of a transparent democratic political structure (less corruption) following their integration into the federation. As a side benefit, our financial support to poor federated states will act as another magnet for populations of third-world countries outside of the federation, to push their rulers to join the federation. *If we play this right, the dream of emigrating may be replaced by the dream of joining the federation.*

Finally, we want to create a *Federal Taskforce of Medical and Humanitarian Intervention*, funded directly by the federal budget. The taskforce will dispense directly – or indirectly when leveraging existing NGOs – the most needed humanitarian assistance anywhere in the federation. It will act in situation of epidemic crisis, emergency or endemic misery so that everyone in the federation can get basic access to food and specific medical care – above and beyond the means or selfish goals of individual states. Epidemics that require systematic testing and vaccinations will also be centrally monitored, to ensure proper preventive control, limit spreading of the disease and ensure buffer stocks and further supply availability of needed apparatus (masks, ventilators, vaccines...).

#### **4. Ensure consistent governance for global enterprises:**

Anywhere in the federation, companies will be governed by the same pool of rules and regulations, using the IFRS (International Financing Reporting Standards) as the common global language for business. All companies will compete on equal global footing: shareholders base, financial regulations, tax contributions, market and employee pool. Cross-country corporate tax evasion will be made obsolete through the generalization of a generic federal taxation system. Tax heavens will not be a viable business model any longer (corporate or individual).

Unification of enterprise governance will have a direct implication on companies' leadership, strategies, behaviors and culture. Multinationals will fully integrate the societal dimension as society becomes multinational itself. With the universe of business leaders and employees globalizing faster than the rest of the society, multinationals will continue to spearhead the universal cultural laboratory. International careers for managers or engineers will become the norm and a preferred passage to have a successful career. Few companies of substantial size will remain contained to the borders of their original member state: all will have access to the world's market, it will be much easier than today. The opening of borders inside the federation will further reinforce the reality of free exchange of goods and talents. These migrations will be integrated into the single political and social ecosystem which have been missing so far.

Federal authorities will evaluate positive discrimination mechanisms for leadership staffing, so that management and directors of an enterprise better reflect the diversity of their markets. For example, if a global firm has a third of its business in America, a third in Asia and a third in Europe, logics would be that the composition of its management team mirrors this diversity. Let's be careful

with heavy dogmas though - these are only directional statements and companies will manage their own business and governance.

We want enterprises to operate in complete Freedom and to be motivated by their market-led objectives. However, as we proposed earlier we will ensure as well that the “market” channels the strategic causes of the society. We need some strategic mechanism that helps to align the two dimensions. We will work on such an alignment through corporate fiscal simulation and proper encouragement, for the businesses to take leadership in the grand design of our sustainable society.

Practically, companies will be fiscally motivated to contribute to the key strategies prioritized earlier:

- Construction of a sustainable society, with tax-free investments in sustainable technologies (carrots) and carbon taxes on fossil utilization (sticks) to accelerate the green transformation of commercial businesses;
- Participation to the construction of infrastructures for the poorer member states to favor the generation of local employment and added value (carrot);
- The development of zones of future population growth as of the *Population Density Map* to stimulate job creation where mostly needed and attract immigrants where the density maps deems it most virtuous (carrot).

In summary, we want a strong economic engine for the global society. One that is unified in its governance and offers more stability, to eliminate the case for cyclical downturns. We will continue to ensure that the economy generates wealth for a growing number of people and helps to eradicate misery. In parallel, the economy will assist the heavy transformation of our industrial, agricultural and consumerist model for long-term sustainability.

We want to give clarity to the market. The free-market has demonstrated its strength during wars and crises and has won over all other economic models. Strategically regulated and stimulated, it constitutes the most powerful engine for the transition to come. The federation embodies the long-term clarity needed. We want to guide the government with a simple mind-set too: we are opened for business. We are business friendly and fully supportive of all the economic actors. We know that people and businesses are the fiber of society.

The key to our future is to forge a sentiment of renewed clarity and confidence for Humanity. We want to re-establish faith in the future, to communicate a missing vision for the society to which the markets can rally. The new global actors – future leaders of our federation – will have to gain respect and support from the business world. They will have to win their stripes through the frightening short-term transformation ahead. Confidence in the global project will be the key to its success and to our durable prosperity.

Business people are the friends of globalization. They have carried it so far. They have understood long ago that the biggest opportunities lie across and beyond our legacy borders. These borders have become irrelevant to them other than for the fragmented rules imposed by local governments. The business community knows - yet unconsciously - that we must unify to create a grand solution and avoid the return to protectionism. Business leaders can see already the limits

and risks of our semi-globalization. With clear and trustful messages, these critical actors are easy to re-engage. Above everything else, they need to see the future so that they can anticipate. With a positive attitude and a global government seen as a determined supporter of business, the private-public partnership will drive an all-new economic momentum: “*Stable, Green and South*”.

Big transformations always end up to be beneficial to business as they create disruptions, which lead to new growth opportunities. They surface new generations of entrepreneurs and fuel a reinvigorated sense of creativity and energy. Building the global Green Economy is a superb chance – both societal and for the economy. It will not only anchor our society in a sustainable future, but also stimulate a wave of re-development and fair growth.

Earth our country.

## **Chapter Fourteen:**

### **Priority Seven:**

### **Universal Education and Communication**

**D**uring our life, our human brain acts as a sponge. It accumulates information that shape our understanding and guide our actions. The first few years are critical as we receive the most profound influence from our family and direct environment. Education at school during childhood and for young adults provides the framework of a lifetime. Following this foundation, life continues through a constant communication experience at work and socially – with friends, colleagues and with a broad access to the information that connects us all as a society.

We believe that access to universal education and communication of information is an inalterable right. We will protect the chance to learn and to be transparently informed for every citizen of the federation. In a democracy, the level of popular understanding of the issues at hand is directly proportional to the health of its political system and more importantly to the level of enlightened engagement of citizens. Uneducated people make room for populism or totalitarianism. Ignorants elect politicians who manipulate them or let despots take control.

For democracy to be able to operate properly, citizens must be able to have a point of view on the key challenges their society has to deal with. Citizens who do not know or do not care at all kill the essence of democracy and put its own existence at risk. It does not matter if an elite “gets it” and comes with all the “right” answers. It is essential to have a majority of people with an educated point of view to support them. One can argue that it is impossible for the masses to be capable of grabbing the complexity necessary to govern and it is preferable for the elite to guide them, because the hyper-educated and informed elite knows better. We all know the consistent excesses across History of such an “enlightened despotic” approach. It may work very well for China today, but such a system totally lacks checks and balances. The elite ends up working for the elite and creates a class of its own – aristocracy or single-party membership – who rejects any alternative thinking that could threaten its dominance.

We, the founding fathers of *the United Democratic States*, believe in democracy. It is far from perfect but there is nothing stronger than empowering the people. To make it durable and strong, the people who vote must know why they vote for whom. For our democracy to function well, education and information have to be wide and deep, so that most citizens are enlightened themselves. We need intensive universal and local education for every child. We need broad access to communication of transparent and diverse information for everyone.

What is already hard enough for a democracy at a minuscule scale – be it antique Athens or a Swiss canton – becomes a much greater difficulty for a large nation state (we can see the current rise of populism) and a challenge never tested before for a world democratic federation of 10 billion people. In a democracy that reaches a planetary dimension, there is an even greater necessity for citizens to keep pace with the diversity and quantity of information available. It takes more curiosity and self-motivation to make the effort to be educated and to understand a world that is so multi-faceted and where global issues now dominate. Getting education and communication tools to everyone becomes critically important for a vibrant modern democracy.

At the same time, the planetary level brings an extraordinary democratic benefit: *global simplicity and clarity*. The elevation of the key issues at the global level provides more readability than the fragmentation of uncomplete and competing solutions. The global level is where the problems that Humanity face belong to, where they must be understood and resolved. Climate change is global, migrations are global, epidemics are global, the economy is global...

- *Global:*

Some of the greatest obstacles to the current engagement of citizens in our national democracies are nationalistic parasites and insolvable ethnic separations. In many places, all local political energies are spent to fight for ethnic-level issues. They will be removed from the system. Everyone will be brought to the same page to face our common planetary challenge and will use the same political tools to resolve that problem. Diversity will be the norm and minorities will be protected without the need for machine guns.

- *Simplicity and clarity:*

The planetary dimension will bring clarity and simplification compared with national agendas. The issues on the global table are vivid problems that everyone's good sense can identify. Their resolution will benefit the general interest, rather than problems relative to one small group over another or the immense complexity resulting from the impossible convergence of hundreds of national agendas in collusion with their indigenous dimensions.

People get lost with the complexity of multiple currencies going up and down, economic crisis coming out of nowhere, debt levels created to save banks which they thought protected everyone's money, their nation winning or losing battles or mass of immigrants arriving to supposedly take their jobs while their border could "just" be closed. Lack of understanding create fears of the unknown, fear of the other and fear of politics and of politicians. If instead we – the politicians - succeed in educating more people with the issues that we raise and try to resolve in this programme, we create a fascinating new paradigm for democracy. We can make a quantum leap improvement in simplicity and clarity of the message and engagement of the people. Politicians can deserve to be trusted again and democracy will win.

It will take some time to watch how this all plays out. We can see a scenario where global democracy will engender a phenomenal interest and engagement from most, bring an exciting change in the political game everywhere and *reenergize the "res publica"* (the public cause). The case for a global agenda has the potential to offset the passivity and disinterest that pervades our

most solid democracies lately. Free citizens unfortunately take their Freedom and democracy for granted. They forgot that *they* are the democracy. They see with disappointment politicians stuck into issues bigger than their sphere of influence, incapable of taking the big decisions needed to resolve the challenges that really matter and pushing the fault on the outside world: the fault of the Chinese, the fault of the EU, the fault of Americans, the fault of immigrants... It's easier to find a scape goat than taking ownership: citizens in democracies own the outcome. To see it, they must be re-engaged. The *United Democratic States* is the most engaging re-boot.

The first task for global leaders is to re-energize citizens around a vibrant global agenda. We – the Founding Fathers – want to lead this effort personally. We want to help to simplify the global complexity, make it palatable and motivational to all of you. It will take a while for national prejudices to disappear. It will be essential that both the media and the educational system help understand the reality of the true challenges that transcend the identities of the global community, until most can see beyond the filters of their own prejudices. We need to build leadership trust beyond national levels. The first global leaders must be irreproachable role models. Trust for great leadership can transcend the borders of their national origin. Building trust will take time. A new generation of global leaders will emerge. We need leaders with a diverse background, who lived in several places, who can lead for the good of all, not only for their national fellow citizen.

Barack Obama himself, if ultimately candidate and elected to prepare and to lead the United Democratic States, will have a compelling and emblematic task. It takes enormous courage and faith in mankind. He will have to surround himself with exceptional men and women whose impartiality embodies the message of the new civilization that we want to create. We want integrity and transparency. We want great educators and communicators. We also want courageous leaders who drive forcefully for the right decisions and make our strategic agenda successful. For the government to successfully manage the radical transformation of that the federation will bring, we must win enlightened popular support. Our people's lowest denominator – knowledge or ignorance – will impact the general success of everyone else.

Universal education and communication will be the foundation of our new planetary civilization. They will be the link between our cultures and generations. A shared knowledge will bring us closer together and will open us up to the many new realities that we will confront and resolve as a global team in the future.

## **1. Right to access transparent information.**

Media have become digitalized, allowing information to be seamlessly transmitted and shared from one platform to another. Contents from a multitude of sources cross the old boundaries and have turned into the *multimedia* era. News are exchanged everywhere in an instant and converged into multimedia streams. Digital books can be downloaded without ever touching paper, a publisher or a bookstore. High definition images can be shared from a smartphone. Video no longer needs a movie theater or the television. Contents can be transported through uploads and downloads anytime anywhere on a multitude of devices. The Internet has become the ubiquitous universal multimedia and the multi-device transport highway. Twenty-two billion devices were connected to the Internet by the end of 2018. Video traffic accounted for eighty percent globally by 2019 – over 90 percent in the US – and probably more since the Coronavirus outbreak.



The future is now. It all went at light's speed. Digital technologies have ignited a true total revolution of information and communication. And it is universal. We have even become overly informed due to the quantity of data that assail us – from our newspaper to our radio or television, from our telephone to our tablet. We probably are not far from having a chip implanted under our ear's skin as the ultimate portable electronic device. The speed of change is absolutely extraordinary. New applications pop up every day and suddenly become the norm for millions of people around the world. After humans, objects are now connecting as well with the Internet of Things (IOT).

The Internet is now so evident and irremediable that we take it for granted – like democracy. In reality, it remains a fragile edifice that nobody quite manages, in which Freedom challenges national boundaries and independence. The Internet relies on a long chain of willing players to exist. It has emerged as an unequaled universal soft power – the only one – and the strength of its Freedom is its Achilles's heel. Nations are trying to control it, rogue users to pollute it and GAFA's to manage it. Nobody should “govern” the Internet, as long as it can continue to flourish without formal governance. It is a difficult thing to do in our fragmented world though. Big cracks are challenging the model. We will step up to make the Internet free of censorship or influences and universally accessible.

#### **A. Freedom of the Internet.**

The roles of ICANN (The International Corporation for Assigned Names and Numbers) and ISOC (The Internet Society) should be reinforced as official representative bodies of the Internet. We want them to work together in defining a global “*Charter of the Internet*” which will help to police it internationally. Behind their specialized coordination, the global government will act as the overarching protector of the Freedom of the Internet – the most strategic intellectual utility for the federation. The *Charter of the Internet* will aim at globally clarifying four critical principles:

##### **i. Freedom of access:**

The extraordinary capabilities of the Internet and its role as our universal communication link make access inequalities much harder to tolerate. We want its access to become a right – the right to information – everywhere for everyone. The Internet is the great facilitator of a new universal and egalitarian society. It is not only the vehicle but also the symbol of our emerging culture. It transports everything everywhere, is interactive, constant, immediate, global, egalitarian, educational and democratic. It facilitates cooperation and satisfies almost every curiosity. The example of Wikipedia, the encyclopedia constructed and maintained by its users, is absolutely wonderful. Search engines open an infinite library to any of us. “On-line” we can learn, study, be informed, check our mail, shop around and make new acquaintances – even intimate ones. We work, play, cultivate networks, find old friends, pay taxes, vote and participate to virtual encounters through video conferences. This pervasive vehicle of our modern civilization has become the forum of our global village. It has turned into a major economic actor as well and now into a global political vehicle...

With Internet as the porthole of our universal knowledge, it is quickly becoming impossible to live a modern and engaged life without being on-line at almost every hour and in every location. The Internet has become a need and its access should therefore be viewed as a right for all individuals. The federal government will ensure the functionality and universal access to the Internet with the same operational guarantee that is accorded to other basic utilities and public services. We should recognize the right to access the Internet as a fundamental universal right - “The Internet is for Everyone” (2013-2015 vision of The Internet Society).

The implications are multiple in terms of ensuring that the Internet “works” for all. It includes ensuring the creation of infrastructures – underwater cables, satellites and basic connections to homes or wireless spots everywhere – to make sure that the service is easily accessible from everywhere. Poor countries on the other are greatly under-privileged in this domain with only 10 percent of African households having access to a connection despite a recent doubling. There are two classes in our world when viewed through the filter of Internet access: the connected and the unconnected. It is called the digital divide. We must close this gap. The government will commit to support the infrastructure and will encourage private funding.

## **ii. Freedom of contents:**

It is not a coincidence if the Arab Spring in the Middle-East or the Yellow Jackets in France or the Hong Kong protests have been galvanized and even made possible with the international emergence of social networks. Internet blogs have replaced – and re-enabled – street protests. Internet spies have replaced – and re-empowered – intelligence agents. Two million Chinese spies are dedicated to censoring the usage of the Internet in China so that the government there can “protect” itself. The Internet is a threat for totalitarian governments and at the same time their privileged source of intelligence.

Control and censorship of information in non-democratic regimes cannot handle a borderless communication vehicle that is so universal and pervasive. Instead of banning the Internet, China, Iran and Russia among others are successfully controlling it by blocking thousands of sites and organizing a policing system. They even pay fake Internet users to influence debates taking place online. Despite its censorship, the Internet is a force of liberation for citizens of autocratic regimes. These rumblings further demonstrate the importance of the Internet as a universal democratic tool.

## **iii. Taxation and copyrights:**

For a long time, global e-business players have been allowed – as a tolerance or an afterthought – to “surf” above local taxations, not only like other multinational firms with corporate tax but even avoiding local VAT. They have gained an unfair competitive advantage against local brick-and-mortar competitors and avoided their local tax contributions. Also, most e-players have historically failed to fairly compensate authors and publishers for their rights, impacting the capability of authors to make a living. As the Internet becomes the main business and distribution actor, we must resolve this problem. The federation will ensure that proper mechanisms of self-policing are being taken care of on a global basis as it is clearly nobody’s role right now to arbitrate these issues internationally.

#### **iv. Illegal use:**

We will clean-up the Internet as we want it to be our universal communication tool. Any strength comes with its weakness and its anonymous Freedom has its downside: anybody can do anything with it anywhere. It gives ground to spam and perverse or dishonest practices – some that touch children, who can see everything on line. Child e-abuse and e-pornography can hardly be fought across borders because the source and the receiver are often in different countries. There is a vacuum of global governance on these issues, made even more critical with the time children are spending online. Cleaning the Internet against valid rules and policies defined globally is currently unachievable with our fragmented political framework. The extended jurisdiction of the Union will enable us to govern the needed ethics internationally and to enforce cross-border surveillance.

As it becomes the most strategic ubiquitous utility and certainly an integral agent of the global society, the Internet needs clearer policies and strategies to continue to grow and to protect its Freedom and universal access – a Charter. While we think that its genetic self-policing mode should be protected as much as possible, there is now so much at stake that the federal government commits to step up as the ultimate overarching warrant of its Freedom, ethics and access.

#### **B. Global mass media:**

Mass media are going through their own revolution due to the multitude of new technologies available and the insatiable appetite of their audiences. “Old” media are finally leveraging the benefits of the Internet, after a period of destabilization and trauma. The Internet has now learned to turn on-line experience into a distribution and revenue growth engine for television, music/radio, books and less so for the press which competes more and more with “free” blogs. Total volumes of content consumption continue to increase exponentially. Television and radio channels are specializing around thematic or identity-based specificity, transmitted through satellite, cable or on line (“over-the-top”). Channels have multiplied throughout industrialized countries and are also exploding in emerging countries where new waves of consumers are hungry for contents that they can now access too. Tens of thousands of channels are now available throughout the world. People spend more time watching digital media in the US – five hours a day – than in front of their TV screen. Even in developing areas where cables are still absent and the few local state-sponsored channels lack in quality and non-propaganda programming, balconies and rooftops are covered with thousands of little white dishes. Television operators are transcending borders - CNN, BBC, Al-Jazeera, Telemundo, CGTN, TV5... They contribute to universal expression and help people to build new perspectives, beyond their immediate horizon. Also, from the unique big screen in the living room, access is multi-device and available on the go. Digital technology enables the media industry to offer new models of distribution that make information available everywhere. People are getting used to this new capability of *managing the access to their favorite information*, instead of passively sitting in front of a screen as before.

The information society is growingly universal, accessible and affordable, with a lot of contents being shared around the world. Access to such a diversity of information cultivates curiosity and new horizons for those in the more remote locations. It’s a profound cultural change. This explosion of shared knowledge and contents will help us. Over time, with our support, it will

take billions of people away from the relative obscurity of their traditional horizon and make them more educated citizens.

### **C. From paper to digital:**

Newspapers and books have transported our knowledge from generation to generation. They have been the traditional vehicles of our recorded information for over half a millennium. Their legacy model is now shifting toward digital sources. Nostalgia aside, we are leaving at the speed of light the Gutenberg civilization to join the digital civilization. Although difficult for most of us emotionally, we think that it is a good thing.

The carbon footprint of the printing industry is hard to accept in a sustainable society. Paper manufacturing generates 700 pounds of CO<sub>2</sub> per ton of paper. The paper industry has vast environmental repercussions impacting a wide spectrum of natural resources. Its fiber requires trees, its manufacturing requires oil and its recycling after use emits a multitude of greenhouse gases, including methane. Subak and Graighill estimate that the emissions linked to paper production taken as a whole from all over the world are higher than the total emissions – industrial, agricultural, transportation – of the entire country of Australia, which is the number one emitter of polluting gases per inhabitant. Even if it was possible to stabilize paper manufacturing emissions to their current level, it would require a 2.5 percent increase in reforestation, just to compensate for their climatic effect. This represents an immense and unnecessary waste, now that we can use digital publishing. A world that uses almost no paper is conceivable, but the intellectual protection of journalists and writers should be greatly reinforced.

The new government should act as a role model and operate paper free – *a federal administration that is entirely paperless* – and encourage the private sector to follow the same path. New personal devices and related technologies now make this possible. An entire library can be made available on a tiny personal device that weighs just a few ounces, not to mention the possibilities made available by the “cloud.” Everything can already be done paperless on a technology viewpoint; all of these services already exist and are fully ready for widespread use. We just need the new federal government to move to a phase of systematic use.

## **2. Right to universal education.**

Education will be a universal right and duty within the federation. If at all possible, everyone should at least graduate from high-school. We want to inject a core of universal contents to the national curriculum, so that everyone receives a common coherent base of global integrative knowledge, on top of the traditional identity-related materials.

With the increase in living standards, education has become mandatory in most parts of the world. Societies view education as a tool for the future progress of their country as a whole. In the richer countries, university-level studies are now the norm for a majority. In developing geographies, providing a basic education to most children remains a huge challenge and commitment. Education can represent up to one-third of the national budget of a poor country.

We think that providing schooling and education should remain under the authority of the member states. However, we encourage the federal government to support and enhance their overall effort. The federation will provide a global framework and help to finance the poorest states. We recommend five initiatives to improve the education of our global citizens:

**i. Education for everyone:**

Despite commendable efforts of the UN and the UNESCO with their EFA (Education for All) program, trying to provide access to education for everyone continues to be an overwhelming task. We need to leverage the new capabilities of the federation to ensure that education is provided to all children everywhere, in particular to girls, traditionally more challenged in certain cultures. There are still a billion illiterate adults, made up mostly of women. It a huge number. Half of the world's population is adult, so almost one adult out of four is illiterate – worse for women.

We cannot let this happen any longer, we know that women's exclusion from knowledge remains endemic in some places. There is a lot of progress already made throughout the world, with many countries understanding the importance of educating their citizens in a more complex society and in which technology has become a greater force. But we cannot claim victory. It's a huge issue that we want to attack forcefully with the power of our new global governance. Africa has the youngest population. Nearly half of sub-Saharan Africans are under the age of fifteen. Despite an exponential increase in scholarly instruction over the past few years, the barriers remain high, both for girls and for the poorest ethnic minorities. In many places, the culture surrounding girls is a roadblock in their long-term education and secular traditions confine them at home – literally in their house. In particular there is a taboo around menstruation and a lack of sanitary products, with a cultural desire to keep girls hidden away to protect their virginity, until they are of marrying age. There is also an economical dimension. Children – boys and girls – are indispensable workers and a source of income for parents who have not been educated themselves. Keeping them away from school ensures the survival of the family.

We will be all over this. The federal government will ensure that state education systems support the generations of illiterate young and older adults. Families will be supported economically, girls will be protected outside of their house. It is a systemic issue that must be handled in the context of local cultures and indigeneous constraints. However, it is a global problem for each state to address specifically. We will accept various local solutions that cope with the particular barriers that identitarian ideologies have created. However, the target of universal education will remain in force.

To access democracy in confidence, we need a common footprint of global knowledge. It goes across genders, minorities and cultures. Independent voters must be elevated to the level of effective independent thinkers. This is our biggest short-term challenge as a global democracy. We clearly have a long way to go. We are conscious of the issue and intend to address it head-on.

**ii. Global and modern education:**

It would not be realistic to impose a common curriculum to all the children of the world. The current dispersion of the starting points between the various countries makes it unrealistic. There

are profound differences between the educational models, the attendance levels and the teaching materials in the various systems. One global size clearly does not fit all yet. It is a long and passionate journey to allow more and more people to share similar learnings and perspectives.

Reciprocally, the cultivation of extreme differences does not make sense any longer. We should find ways to leave behind us the rigidity of traditional educational models that are exclusive, ancestral and often xenophobic. Most of them rely on the idealization of a nationalistic or religious past that the conventional teachers judge indispensable to a solid identity-based education.

The truth is probably in the middle. We have to play along a fine line with our transition from a purely identitarian History toward a blend of universal diversity. It is about convergence and timing.

The objective of universal education is to open up the mind-set of our children to the unity of the world. On one hand, we want to help them to discover and to understand the “rest of the world” with its differences and similarities. On the other hand, it is all about building the intellectual bridges that we need to understand our joint destiny. The core curriculum of global education will focus on what brings us together as humans, rather than what divides us.

Our children are better served to learn the History of mankind as a whole. Today, they are exclusively taught about the glorification of the identity of their nation. They learn about ancient national writers and study the one-sided History of their nationalism – as a winner or martyr against the rest of the world. These parochial views distort one’s judgement for a lifetime. They perpetuate the idea that a country is the world by itself.

What we want is to inspire the realization that *the “world is our country”*, instead of *“our country is our world standing against the rest of it.”* Right now we teach with an insidious national bias, perpetuated by all educational systems around the world, which slows down the common realization of our unity, because it weighs so profoundly on how we look at the world as adults.

The federation must change this. Language, History, geography, authors are all great local subjects. We need to inject a multi-faceted universal dimension as well. History and geography of the world should prevail, with a more intertwined picture. Lectures should be about how local cultures have influenced each other, everything being positioned within a more holistic and evolutionary context, instead of primarily celebrating the remembrance of wars, battles and victories against the archrival neighbor. “We won this war that day and we lost this city to these awful invaders”. This is most of what we learn, how and why we are the nations that we are. Teaching History is assumed to be national History pretty much everywhere. Outside of scientific or higher-level education, everything is about the national culture and its indigenous authors. Local education is “primary”, foreign cultures are like a distant add-on. We just need to change the paradigm. It should be the other way around: make “global” the mainstream education and state-level or local the “secondary” level. Today we “learn local” before we eventually learn “global” if we manage to go to University. Most people only learn “local” because they don’t get to the next level. Therefore, the next level is reserved to the elite which succeeds to get to this level. The challenge ahead of us is to mix a truly “glo-cal” experience for all of our children, so that they

have an intellectual appetite for both dimensions and learn to facet their mindset with a balanced perception of the world, even if they don't manage to go beyond high school.

The first change will come from the way we study language(s). Today we almost exclusively study our maternal language, with its grammatical structures that are infinitely complex in nature. We must balance our expertise in one language with a bi-lingual education, starting at a very young age. Every child should at least communicate and *think* in two languages – one of them being English. *We should not learn “English” – we should learn “in” English.*

A basic global curriculum should prepare children to become engaged actors in our global transformation, not just defenders “by design” of the myths of their national or ethnic History. We want to put emphasis on the understanding and value of tolerance, solidarity and curiosity of all histories and cultures. We want our children to think about how they will add to each other – not how they will fight the ancient enemy. *Such a new approach to education will offer the key to navigate between identities, rather than be the one that locks the doors that insulate them.*

Modern education will have to be attached to the old and new realities together. It will feed itself with the ambivalence of the past, the present and the future, to move our species along its voyage to become the *Homo sapiens Universalis* – from where we are coming from to where we are all going:

- *Homo*: modern Humanity we are...
- *Sapiens*: modern global education will teach students to be change agents, to understand the future trends with curiosity and flexibility.
- *Universalis*: modern global education will share a common core, rather than imposing a curriculum that is tribalistic. It will stimulate curiosity and inclusiveness, key values for an international community.

Our educational system is our foundation. It is the ferment our community's behavior. It should be valued more strategically and considered as our privileged tool of global integration.

### **iii. The importance of teaching:**

We want to elevate the greatest number of children and young adults to the highest possible level of preparedness for a successful life in the federation. Notwithstanding where they grew up, they should develop as well-informed global citizens. To reach such an ambitious goal, we need teachers which are engaged and committed to see their students succeed in a society undergoing an accelerated metamorphosis. Our great ambition for global education goes together with teachers who feel respected and rewarded for the importance of their role. Teaching will be noble again and valued as an essential social mission. Each time the society takes a quantum leap in its development, teachers take the front seat – like sciences and techniques during the industrial revolution. Together, the federal government and the states will support a widespread program for hiring, training and compensating well qualified teachers with a diverse and international set of origins. Teachers will be encouraged to pursue their career across borders, to embody the grooming global village for their students.

#### **iv. English as our universal language:**

The federation and its public actors will use a single language. To become a brotherhood, we need to pick one language among all. It can only be English because English has won a clear international edge against any other language.

The basic mastery of English will be indispensable to those who want to travel or live outside of their home state or to develop regional or global responsibilities. English is the principal universal language in all domains, from culture to politics and from business to education. We will make English the official language of the federation and the mandatory second language.

All schools will be at least bilingual. For English-speaking states, children will be required to also learn a second language – like Spanish in the US, French in Canada, Chinese in Australia or Hindi in the UK. The systematic understanding of at least two languages – of which one must be English – will open up all individuals to our multi-cultural environment.

Teaching of languages should be profoundly transformed. Each school will offer its entire curriculum in at least two languages, as opposed to teaching a new language as another course: English will be inserted as one of the communication vehicles from a young age. Courses will be taught “in English” *versus* “English” being a course by itself. There is nothing new here. This is a powerful approach used by international schools today. They make the language a tool as opposed to a “subject” by itself. Suddenly English will turn into a true language of communication in the children’s daily routines – not a separate discipline.

Multi-linguism will be omni-present not only at school. From movies to traffic signs, public notices and official documentation – all will be spoken and/or written in the local language and in English.

With such a transformation, we believe that within only one generation, we can all become multi-lingual. By the second half of the century, everyone should be able to read an article, write an e-mail or text a message, understand a speech and have a basic telephone conversation – in English. We appreciate and respect that this “English for everyone” objective appears as insurmountable to someone who speaks only one language today. It should not block our vision of what is truly possible. It will take another generation and we will get there. Our children will succeed if we haven’t yet. As any bi-national parent will tell you: children are like linguistic sponges. When fully immersed, they can learn another language in just a few months as opposed to the years needed by an adult. After a few weeks of passive silence that might seem like an emotional blockage, the new language suddenly comes out, as if something had just clicked. Then the child just speaks the new language almost fluently after having appeared to be paralyzed for a while. This ingestion period is much longer for adults than for young children. This is why we need a generation to transition. But only one generation is enough if we apply the adequate approach. There is nothing impossible here.

In reality, the long-lasting linguistic barrier that we face is driven by conscious politics and unconscious protection of identity at school. The majority of local governments encourage the education in their own language and support the inertia of their whole educational system that is



built around that language. Consciously or not, they make the learning of English much harder than it should be. It will take centuries to cross the chasm in the current educational model, because it is designed that way. The world government will remove this resistance from the moment that a member state joins the federation. The only variable will be the speed with which the required number of “teachers in English” that can be deployed.

**v. International mobility for students and teachers:**

Young people are at the forefront of society. Half of mankind is not even an adult yet. They must be the ones pioneering the discovery of universalism, together with their teachers and professors. The accelerated mobility of our young brains across states and geographies will vivify our global village. Students will be first to assimilate the communities that they join.

University level studies form the leadership minds, they make the biggest difference. A conjunction of public and private initiatives will encourage and fund out-of-state studies. We will make it easy and more affordable for students to join universities in several member states, help them with diploma equivalences that will be standardized across the union.

Scholarships and grants will incentivate out-of-state curriculums and help to maximize the number of students who have the opportunity to study elsewhere. Geographic mobility for advanced students will become the rule instead of the exception, much like it is between states in the US today. The objective is for future elites to leave home at least once and discover an alternative culture. Experiencing what it is to be a minority will help them understand how it feels to be a migrant. Teachers will also be financially motivated to pursue an out-of-state career.

Hopefully, as we continue to develop each of the priorities that we see for our new world, we are starting to make sense with a cohesive vision for a universal society: a common language, access to universal information and media, a modernized and globalized education system... Women and men are born with such innate capabilities. We are the smartest of all animals and currently the ultimate evolution of life on Earth. Our widespread access to unfiltered information, made almost infinite with the Internet and powered by an education liberated from traditional legacies, will further stimulate the progress of our natural intelligence. The permanent motto along History was: “*good fences make good neighbors*”. We will turn it into: “*brothers don't need fences.*”

United and strengthened politically, educated men and women will aspire to become the engaged actors and engineers of the sustainable society that we all hope for. The long-term salvation of our species depends on our ability to spread the word and to educate the multitude. A permanent investment and commitment to transparent information and modern education will win the battle against the legacies of obscurantism and extremism – our sole enemies and the systemic causes of our divisions, which bear the risk of our entire destruction.

Earth our country.

## Chapter Fifteen:

### Priority Eight: Space Exploration and Science

#### 1. Space exploration.

Space exploration is a priority which carries a totally different dimension. It is far-reaching and could appear to be disconnected from the others at first sight. Indeed, it addresses another horizon – further in the future. It does not bring an immediate resolution to our crisis. But we may lack a future without it. It is a risk contingency that takes a long preparation. It envisions our logical evolution and our next destination as a species. *After the Homo sapiens Universalis will come the Homo sapiens Galacticus...*

Once upon a time, we had a big dream for a space odyssey and went to the Moon. Then the dominance of our economic constraints took us back to Earth. Nothing really happened on the front of space exploration for the last forty years, else than a space station in orbit. There was no material short-term business at sight. Competition was on Earth and the cost of space exploration beyond the reach of a single country. *We intent to re-launch an ambitious space exploration program.* It will leverage the decupled economic power of the federation.

The strategy is primarily one of risk management: we must have an option for the long-term sustainability of the human species out in space. We think that the possibility of colonizing space is a long-term lifeline for Humanity given the now proven sensitivity of the Earth's ecosystem. Humans can only live on Earth – it's a huge risk. As a result, we only have one bullet in our gun. What if we can't control an extreme climate change after all? When will a large meteorite hit us again - can we be smarter than the dinosaurs and anticipate?

There is another dimension that plays for the selection of this priority. Human beings have a genetic desire for discovery and adventure. We don't want our fragile and diminished planet with a stable and wise governance to become too boring, with no new territory left to conquer, no new mountain to climb, no new ocean to cross, no new alien to meet with. Can the human species survive endlessly in harmony, for several more centuries or millenia, with the ecological stress that billions of humans will continue to inflict to our planet and to our governance, even if we do well with the grand plan that we are developing here? It's just a profound thought. We have always been on the go, with a conquest at sight. How well will we cope with our "retirement and wisdom" on a well governed tiny planet? We don't know, but it's an interesting consideration.

So, there are two reasons for this priority. Natural conditions that enable life on Earth are not eternal. On the other hand, we need expansion – at least this is what made us who we are. The consequence is that there are time boundaries to how long we want to remain in existence solely on Earth, even if colonization of the outer space at scale is for the distant future.

Recent studies show that the Sun is heating up. It is estimated that life in its entirety will totally disappear from Earth in around 2.5 billion years and that in less than a billion years already, conditions on Earth will not support human life any longer. Stephen Hawkins, the immense British physicist made famous with *A Brief History of Time*, was much more dramatic. Including our own impact to the ecosystem, he thought that “*humans will not survive another thousand years without escaping beyond our fragile planet.*” He urged the continuation of space exploration for Humanity’s sake. “If man is to ultimately survive, it will be due to the colonization of space – at which point the sky literally becomes his only limit” (*Huffpost Science*, April 11, 2013).

Most recent scientific hypothesis claim that life did not originate from Earth, but from Mars. Professor Steven Benner proposed that 3 billion years ago, when life was supposed to have started its first evolution, conditions on Earth did not match the equation for the seeds of life to erupt out of the chemical world. The first ingredient needed in the chain of life is RNA (ribonucleic acid). RNA is created in a chemical reaction in which it is “coaxed” with certain minerals that “template” their atoms at their crystalline surface. The research argues that such minerals would have dissolved in the oceans that completely covered our early Earth, while at the same time Earth did not have enough oxygen. Mars was much drier at the time, with more oxygen and had minerals such as boron and molybdenum in abundance. The Red Planet presented much better conditions for prebiotic life to happen. Benner’s thesis is that life was eventually created on Mars and then transported to Earth via a meteorite. “The evidence seems to be building that we are actually all Martians; that life started on Mars and came to Earth on a rock,” commented Professor Benner (Goldschmidt meeting, Florence, Italy, August 2013). While landing on Earth, life found great conditions over time to evolve to where we are today, while on Mars after billions of years life has disappeared due to worsening natural conditions.

True or not, we are bringing this theory because it illustrates the idea that life can potentially migrate from a planet to another. Earth doesn’t have to be our golden cage forever, there is so much that we don’t know about the universe and the source and the future of life. If we originated from Mars, then flourished on Earth, should we not already start to seed the irremediable long-term need for our next move? Notwithstanding our existential risk on Earth, should we forever be condemned to only live here? Or, on the contrary, should we search for a passage, like the pioneers of the Renaissance aboard the *Nina*, toward another flourishing land - but this time above and beyond our Blue Planet?

First things first. As per our earlier priorities, we need to recalibrate our human civilization so that we become compatible again with our setting for the foreseeable future as a responsible species – Peace, zero carbon and sustainability clearly top up our human calendar. However, our compatibility with Earth is a necessary condition - not a sufficient one for the very long-term survival of mankind. We also want to begin to prepare for our extra-terrestrial option and to envision a bolder next step for Humanity.

The evolution of our planet is largely beyond our control, now that we have created the post-industrial conditions that derailed it from its normal path. Maybe Earth will marvelously realign itself again, once we reach our goal of zero carbon goal. It is also possible that we are already too late, that the damages of the enormous machine of human natality and consumption have already initiated some irreparable consequences. For example, the permafrost melt could release an unknown amount of methane in the atmosphere and start an out-of-control spiral much too difficult to anticipate and to model.

If there is such a risk ahead, we need an option for life elsewhere; we need to invest in a plan for space colonization that will ensure the future of man beyond planet Earth.

We are positioning this objective at the end of the priority list though. Its outcome will not make a meaningful difference for generations to come. But it represents the next big step of our quest for sustainability – the horizon behind the one we are just starting to engage. It can ensure the universal and eventually eternal vocation of Humanity. *Sooner or later, Earth will be our limit and someone could make the case that it already is.*

We must prepare for a parallel path with space to the one of trying to fix Earth. We need a proactive space exploration strategy. Eventually, we will move to colonize an area outside of our atmosphere one day to ensure our ongoing evolution and survival. Or simply, we will excite our pioneering spirit for the unknown: from “go West young man” to “go Space young woman”. Man has always been curious and adventurous, always looking for a new frontier. Now that Earth is dominated, we will find our next frontier in the infinity of space and maybe in the discovery of other forms of life. What an excitement ahead of us...

If we successfully overcome our immediate ecological “sound wall” on Earth, the risks weighing on the stability of our planet over time will still remain. We are tiny mosquito-like beings living on the thin terrestrial crust of a lonely planet among billions of others. We are still ignorant of most of the dynamics happening behind her crust – inside of Earth. Outside of Earth, we are only protected from space by a finite and fragile atmosphere – thin air – already damaged by our human proliferation. How can we ignore the space that surrounds us and forms the totality of our universe? Space is not something outside of our grand planetary universe – space is everything around us of which we are only an extremely tiny piece.

Our ecosystem is a dynamic and unpredictable chemical magma of universal processes and laws of nature: the composition of the planet’s atmosphere, the biological evolution of life, the time dimension, chance or God... These factors do not ensure that mankind can wisely anticipate to remain comfortably ensconced into the cocoon of its planet for eternity – even if we finally learn how to cherish and protect our tiny Earth.

Statistically, we can bet on the inevitability that some external event will disrupt our comfy nest, sooner or later. The evolution of life on Earth is marked by numerous catastrophes, whether comets or asteroids and these random occurrences have permitted new life-forms to develop while they dictated the extinction of others – it can be us. Every 200 to 300 hundred million years, a natural cataclysm has occurred and perturbed the slow and patiently fashioned evolution of life. 65 million years ago, a meteorite measuring about 60 miles wide accidentally bumped into Earth in

Mexico. It provoked the extinction of the dinosaurs and gave an opportunity to our mammalian ancestors to prosper and succeed. Here we are, as an indirect consequence. Next time, it could be the other way around – insects could be the next winners... Catastrophes will happen again as a statistical truth. Our species, if only terrestrial, is condemned to only exist for a miniscule duration in the overall timescale of the universe. As Stephen Hawking anticipated: “*the future of Humanity lies in space, if Humanity wants to have a long-term future*”. It is an irremediable evidence.

Our space discovery is in infancy. The enormous cost of space exploration has no economic outcome, except satellites rolling in a near orbit which we have now mastered for several decades. Beyond that, what is the point really other than pure discovery for scientists or national ego? There is no reward at short sight, except through media coverage and to prove the technological superiority of a country.

Commercial space technology puts satellites in orbit and is indispensable to our communications and GPS. It is treated as an end instead of a means to something greater. The last colossal US program is at its end of life and an official successor to the International Space Station has been lagging. To date, the station has cost near 200 billion dollars. But what has been its benefit if the space program is going to be cut short, without a vision for a more ambitious destination point supported by political continuity?

The great political stimulus behind space exploration has disappeared since the end of the nationalistic struggle between Americans and Russians. The Chinese are attempting to reactivate the game but their program remains very much at the inception stage. They will possibly get someone on the Moon soon and Americans are thinking about eventually going to Mars. At the eve of the twenty-first century, after the excitement of walking on the Moon sixty years ago, the space programs are quietly vegetating with their meager allowance, barely in some sort of minimal cruise speed. Astronauts’ greatest problem to solve these days is their own unemployment.

International or regional pools like the European Space Agency (ESA) also exist on top of individual national financing. Even private entrepreneurs are planning to take commercial flights to space. NASA is desperately waiting for an American president that fantasizes about a manned spacecraft to Mars and pays for it. They agitate the idea that within ten years China will use space as a superb communication tool and build up technological superiority over the rest of the world.

These days of national competition over such a global project will hopefully be gone soon with our *United Democratic States* pooling everyone’s effort. We will make sure that the new federal government unifies and converges all public space and science agencies under one single banner and finally articulates the ambitious global space plan that mankind deserves. NASA and ESA and others will merge into the “*GSA*” - *the Global Space Agency*. Given the enormous amounts of funds that could be burned with no return in such intangible adventures, we propose a pragmatic step-by-step approach, with three clear objectives:

#### **A. Colonize the Moon:**

Despite its deserts terrain, extreme temperatures, the absence of atmosphere and of life, the Moon presents an immense advantage for space colonization: its proximity to Earth. It stands a

second light away from us – just a few days of travel with our current technology. It permits almost live communication. Moon ice, which could be transformed into water, was recently discovered under a dusty layer in the Cabeus crater near the South Pole. It could represent the basic resource necessary to a permanent future station on the Moon.

The Moon is not as sexy as Mars for scientists or governments because we have already been there and anyone with a hefty wallet could do it again. We know that it does not carry indigenous life and we still dream that Mars might do. The Moon is now a more tactical target in a scientific perspective. Mars is seen as the big next challenge. The Moon is much more important to us than what scientists in quest of the next frontier can value.

Strategically for the federation, we regard the Moon as the easiest candidate for our first extra-terrestrial colony. The Moon is our primary strategic target for the outer space conquest.

With Mars so far away given our existing technologies, the Moon appears to be the most logical destination for the second permanent implantation of the human species – unless some exceptional advantages for a settlement are being discovered on Mars in the meantime, which would have to compensate for the immensely higher technological challenges implied by its distance. It is not about “discoveries” to be made on the Moon but about important applications for the extension of Humanity on an alien soil.

From the Moon, we can learn everything that will later apply to the colonization of other planets - including Mars. The Moon is our pragmatic first step in the outer space and can act as our first inter-planetary hub. We can practice how to mine in the outer space and later duplicate on other planets. It has resources like hydrogen and oxygen that can fuel rockets. It rich with lithium and cobalt.

To make the best of our planet’s only satellite out of the gate, we should prepare to grant it a member state status in our federation, with a leadership team responsible for its future colonization and the mission of beta testing future life in space. There is a wide range of possibilities. The opportunities on the Moon are of such scale that they can keep our “*GSA – Global Space Agency*” busy for generations to come, with some extremely exciting practical projects.

For instance, we need to learn how to build a permanent settlement in outer space. It can only be on the Moon. From what we can learn from current prospective studies, the first inhabited station on the Moon should be embedded in an underground trench to protect it from meteorites, at least until we can implement an impact detection and falling objects diverting system. A suitable location on the Moon has already been identified. The station would be supplied with abundant electricity through solar energy which is available in infinite amounts. By locating the station near the underground ice deposits at a pole, the colonizers will learn to generate a micro-atmosphere within the trench. Using this humidity, they will cultivate fresh products of primary necessity, eventually recreating a mini artificial ecosystem within a giant underground bubble.

After the confirmation of the viability of the first station, others can follow and a wave of pioneer life can see its day on the Moon – as it happened on Earth when a new island or continent was being discovered. There will be migrants, then babies will be born there and experimental

stations will turn into future villages and cities. With the quite notable exception of a natural atmosphere, one can nonetheless imagine an alternative life there – ultimately as fulfilling and exciting as on Earth.

The Moon is much less fragile than Earth because it is already a desolate terrain due to its lack of atmosphere. Notwithstanding transportation cost, it can be economically valuable in the medium-term as “Earth mine and factory,” as well as a repository for excess pollution from the Blue Planet. We would be able to concentrate the majority of our polluting activities there, as an offshore location. We could do to the Moon what we did to China (factory and mine of the world) and turn Earth pristine again.

The Moon could be our landfill site, in particular for radioactive waste. This may not sound very enticing, but the logic is convincing. We can use our desolate and nearby satellite to clean up those things too degrading for our original planet. It is a practical and tangible project that could be brought to fruition within a few decades. We already possess all the necessary technology. It is all about strategic political focus and financial means dedicated to the preservation of Earth and the preparation of a next horizon for mankind’s expansion. We can imagine a “colonial” model for the Moon in which the core of indigenous worker-bees will be made up of electric robots that work on the surface and are powered by the Sun, while humans live protected from the “elements” within the bubble of their station or underground. It makes for a very realistic science fiction tale.

We can get there soon enough. We recommend that the federal government redirects the first wave of global space efforts in such a practical and economical direction. The Moon can become the factory of Earth and our galactical hub. It can be a generator of jobs for qualified engineers and curious adventurers who want to be the new (peaceful) conquistadors. Moon can turn into a nice buffer to further protect the fragility of our own original planet. We can shield Earth from the most damaging effects of our heavy industry, mining and waste. In summary, our plan is:

- First, make the Moon instrumental to our sustainability project, as a direct industrial and economic partner. We can fully integrate our satellite to our globalization model through a balanced Moon-Earth relationship.
- Secondly, develop the Moon to become a large base and hub for further space exploration, which will first include Mars. It will be a life-scale science laboratory, under true space conditions, to help prepare for more distant expeditions and facilitate further understanding of the possibilities of the universe.

In our mind, the moment to colonize the Moon has arrived and this is a perfect time for the first global government to take ownership of the project. United, we can afford such a bold strategy and justify our vision for our first outer space colony on the Moon. Please invite us, we would love to visit during our lifetime...

## **B. Find a sister planet:**

Finding and traveling to a sister planet may be a futuristic dream, but such research continues to mobilize astronomers all over the world and should as well stimulate the visionary interest of

the federation. If we could find a second Earth, wouldn't it make things much easier after what we've learned with the first one?

As of April 2020, there are 4,144 identified exoplanets (planets outside of our own solar system) and 5,000 more potential ones. They are mostly massive gas giants larger than our Earth and probably unlikely to sustain any life similar to our own, in particular because the gravity from their mass would crush us. Additionally, their temperatures are so extreme that they would be unable to support life. It will be a long and arduous task to confirm signs of theoretical compatibility with life - of which signature elements are size, temperature, the presence of water, oxygen, ozone or methane. But there is no reason to think that among the billions of planets out there, one does not exist.

Currently, scientists have listed a total catalogue of 55 potentially habitable exoplanets. All are hundreds or thousands of light-years away. The technology that it takes to visit them won't be at reach for many generations or centuries. Identifying a planet just like our own, perfectly sized and perfectly sunny so that life can emerge, is still dubious. We support the hunt though, even if with a marginal chance to find something like our sister planet. It is worth the continued effort. Our vision for Humanity is universal, not just on Earth. As time goes by, finding a path beyond Earth may become relevant.

## **2. Science and innovation:**

Science comes at the end of our programme as a final statement, because it enables our next capabilities as a society. Science is our future and innovation our differentiation from all other beings. From the infinitely small to the infinitely large, the better we understand the mechanisms of life and of the universe, the easier we can cope with our environment. We reject the demonization of science and technology. They are often accused of being the cause of our ecological derangement and consumerist society. To the contrary, we see science and its discoveries as the translation of human's curiosity, which will be nurtured and valued as the positive vehicle of the evolution of Humanity.

Mass consumerism is the outcome of the fossil industrial revolution, which was a scientific breakthrough. Now we know the price to pay for this extreme, the society went too far. Science itself shouldn't have limits in the pace of its innovation. The society channels its creations in ways that must be regulated from time to time, when a higher-level impact is at stake. With more inventions to come beyond our expectations, science will continue to be our driver of change. It will create opportunities for the society to adopt or not. Some will be awesome, others not to be pursued. Innovation is an endless process. It is up to us as a society to direct it. Censoring science is the dumbest idea. We want the renaissance, not the middle-ages.

The federation has a critical role to play to sponsor science and technology. We must ensure that the overall scientific effort focuses in directions that benefit and serve the vision of the society. We want science to master greener and cleaner technologies. Science's number one priority is to invent a sustainable replacement to the industrial fossil evolution. Fundamental public research will emulate private developments with a culture of innovation and global creativity.



We would love to spread the successful model of the Silicon Valley all over the world, with its entrepreneurial Freedom, risk taking and quest for innovative business. The twenty-first century will exceed the extraordinary scientific creativity of the twentieth, there is no doubt. Put bluntly: science should now focus on repairing the excesses of last century and lead our quest for sustainability.

It's a global effort. We want the globalization of the scientific community to continue. Scientists are already quite advanced with their own level of globalization, when they are allowed to share findings and projects across borders. Hopefully, a lot of research is shared internationally already and many programs – private and public - transcend countries. Universal research will offer scientists and researchers equal working conditions throughout the world. Engineers will have more chances to participate to the most exciting projects and it will be easier to pool the best experts, wherever they come from.

Without science we have more of the past. Science and innovation are the chance of our better future. Using the same intelligence that brought about our excesses, we can bring forth the solutions. We didn't know what we now know. Henry Ford invented mass mobility – not mass pollution. How could he know? What we need is to succeed in establishing the universal governance that will be necessary to channel and concentrate all our efforts to repair the damage that was done without the conscience of it. We can do it.

Earth our country.

## **Chapter Sixteen:**

### **Challenging the Establishment**

**H**ere ends the draft of “*The Power of Global Governance –The Eight Priorities*”. Let us rewind the movie and come back to the time when nations were still running Earth. We are back to May 2020. We still have frontiers for sure. We read puzzling national events and news as Coronavirus unfolds. We are surprised to see pollution levels reducing as we are all confined and wild animals to dare to come out of their refuges as human’s activity has temporarily paused. Coronavirus continues to spread, half of Humanity is confined trying to find a mask. We are entering into a global recession as a result of our mass confinement and our national governments are telling us to go back to work and not to worry too much. In any case they will pay. How? With more debt. How will they repay the debt? “We will manage, trust us” - tomorrow is another day.

Make no mistake. The Great Wall is ahead of us. We are still politically divided and fragmented. We have no Founding Fathers. The US election is scheduled for November 3<sup>rd</sup>. if Donald Trump doesn’t move the date to attempt re-election. Joe Biden is the only alternative candidate as of now. 2020 started as an amazing year which will let its trace on History. Will it be another 1929? Or rather a 1945? It’s already more than a 2008...

Meanwhile, we are all aboard and enjoy the ride. We are nested in the cabins of our blue cruise liner. We move steadily in the darkness of the galactic ocean, less unconscious that we don’t have a captain at the helm... We just saw with Coronavirus that we don’t have a pilot. It became more obvious than ever. Our governments (although warned by their intelligence services for quite some time) have been at loss to properly anticipate and manage a crisis of such global dimensions. We are still unconscious that there is an alternative, that Earth can be one country with one leadership to take us forward. But we saw a big symptom that nobody can ignore – we operate in global anarchy. The immediate popular temptation under panic seems to be for a return to protectionism.

Let’s take a break in the rush. Are we going to make something differently to cope with a few pretty gloomy years ahead of us? Are we getting into a Wall even earlier than we thought and yet unprepared to deal with it as a cohesive team?

The unsettling truth is that nothing challenges the established order of the nation states today. Countries are knitted as the elementary fabrics of our human political construction and that is all there is. Very little was being done to anticipate the ecological impasse that is coming and endangers the fragile ecosystem that enabled the emergence of our species. Nothing has been done to anticipate such a pandemic. Our divisions continue to blind us to any possibility of a common solution, not only for the “green society” but more generally for anything that really matters.

You are the difference. You are the seed. You made the effort to get to this page and to complete a small journey of universal enlightenment – humility set aside. Believe it or not, you are now a *Homo sapiens Universalis*. You would not have gone that far otherwise. You would have thrown this manifesto away many pages ago, had you not felt there was something here worth thinking about.

Together, we now know that an alternative solution does exist, if we want to see it. We may not agree with everything. You may have a much better idea about how to build this up. Barack Obama may not be interested but another leader might take the flame. Or it may all happen very differently. I am no soothsayer. But we have made a big step together. We have gone beyond the taboo of the utopia of full globalization. We have just detailed a vision and a scenario of execution. It has helped us to touch and feel how everything is intertwined, how true solutions unleash when escalated at the global level. It also allows us to imagine how we can detangle this great bowl of spaghetti that we have prepared over generations and millennia. It can be done. With everything that is unfolding on us right now, I only have one concern: time.

*Has the time come? Are we finally reaching the magic moment?* It is a time game. The inertia of our societies and the agents of their resistance are so strong. Countries are competitors. Countries' position in the cycle of economic emergence is different. Countries' energy independence – with or without fossil fuel – are different. Some countries have no oil at all. Some countries make a living of selling oil to others. A country-based convergence is impossible. This is the *establishment* that we have to deal with.

Coronavirus caught us totally unprepared, but given the absolute state of emergency, we saw immediate reactions everywhere, though totally panicked and chaotic. An ecological cataclysm would evidently generate a robust reaction as well, most certainly equally chaotic. But will it be too late?

*Collective irresponsibility it is.*

*We are out of control as a human group.*

*But no one seems to see it.*

*Nobody is a fool.*

*So where is the catch?*

*The countries are our Kool-Aid.*

*They are our marijuana.*

*We “smoke countries” so much and for so long that we live in a fake reality.*

*We have recreated our “second life” parallel to the reality of Nature.*

*Beware though – there is only reality,*

*Nature is the one that will ultimately prevail.*

Individually, country, company or person, everyone can comfortably try to look good and point a finger toward the other as being responsible for his own inaction. That's the convenience of a multi-country world. There are many other countries that can be blamed, that are beyond anyone else's control and that make local politicians look wise: “If only the other countries would agree with me, I could fix it but you all know that they don't.” Finding a culprit is an easy game. Blame

Israel. Blame America. Blame China. Blame Iran. Blame Russia. Blame the EU. Blame the WHO. Blame Trump - who elected him? Truthfully, we are all guilty – let's blame ourselves...

*The future is now.*

*A chapter of History – the nations – has to change now.*

*We are entering post-history – the planetary civilization.*

*The established order is no longer morally acceptable.*

*The right moral solution is to act differently and to think big.*

*Considering the accumulation of the risks facing us,*

*The time is now.*

Our incapacity to react demonstrates that *the moment has come for us to reorganize our political governance* and to manage together a positive outcome for ourselves and for our planet. We all understand that our political model is not adapted to our future but we also know that it embodies the established, untouchable, accepted and legitimate heart of our human civilization.

### **1. The solution is political.**

A society is typically driven by two sets of dynamic forces and undercurrents that cohabit, conflict or support each other. One side is social and political, the other is business and economics. They usually dislike each other. But when they go hand in hand at a given point in History, the society is well balanced and successful. When they conflict or when one dominates the other too much, there are problems.

In our semi-globalized world, the global free-trade economy dominates our civilization. It makes it a fragile and unstable construction because the economy is rein-free and the socio-political forces are locally fragmented in a catch-up mode. In some places they operate in harmony, in others they act like master and slave and there are also islands in which they reject each other – they become bipolar.

The economy and recession ahead can be dealt with. Economy is the queen of adaptation. Like freshwater, the economy always finds the easiest and fastest path to the sea (of recovery and profits) across any valley. The economy will adjust to a new global political model and strive more than ever, owing to the benefits of simplification and coherence that the new model will generate and the opportunity of the green revolution and of infrastructure spendings.

The election of a world government would give confidence to CEO's and investors to quickly change the direction of their industry and businesses towards the confirmed green popular interest. Their ability to adapt is fast and pragmatic. This is what businesses do, they smell a trend and adapt to it. Businessmen anticipate or follow "where the puck is going to be" before anyone else, if it is their interest to do so. If the demand for green and clean lifestyle shines – they will make it happen, with no second thought.

The economy is our current master for a single reason: we lack a political dimension and leadership empowered to set up a direction that it can follow. What we need to change to reach a full harmonious globalization is not the free economy, which will adapt to anything that a strong

political force helps to operationalize. It is the other way around. We need to reset the very foundation of our political establishment – the countries – so that the economy can adjust to a fully globalized model and sustainable vision. Then the economic forces will pull us to destination.

*The problem that we need to resolve is not our economic model; it our political incoherence and lack of governance.* On the political ground, inertia and muscle memory are much bigger. It is not a field for fierce innovation or reinvention. It is about conservatism and resistance that rarely lead to overflows. Political systems are so resilient that only once upon a time they take a revolution to turn an antiquated page – which are un-necessarily traumatic as they tend to destroy before they can rebuild. Most national political systems are conservative in their own way – they defend themselves and resist to the change around them. They represent the ultimate power and by definition constitutions are above the executive leaders themselves. Stability is always the primary factor for a well-built national political system. The establishment is protected by constitutions, which drive national laws, which protect the establishment.

Only a multitude of people can drive such a paradigm change; it takes massive popular support. *It is up to us: “We, the people.”*

The solution is political, because our political model right now is blocking cross-border resolutions. None of the eight priorities that we have listed earlier can be attacked efficiently with a country-by-country approach. And they are not. The solution will come with a grand plan first, then a geographical redistribution of investments, eventually sacrificing some local interests to higher-level ones.

A single country, imprisoned by its artificial borders, cannot manage this. Only a global political team, universally elected, empowered by the people, can launch the appropriate reaction to a challenge of this size. The moment has come for us to think big and to come together as a species. It is the time to build a joint destiny and vision and to manage our plan through a unified governance. Politically, *there is currently absolutely no existing institutional dimension for this solution.* There is no global policy – everything is national. All politicians are elected nationally. All laws are national.

We are not built to last.

*We are built not to last.*

By lack of collective wisdom, we will fail.

Someone in the future will look at our era and tell our great-grand children’s children the story of our age:

“This was the time when nations ruled Earth. Nothing could be done for everyone’s sake. It was all about national interests. The endless competition among nations turned into a chaos that was everybody else’s fault. Everything was decided locally for and by local powers. Not much had changed since the medieval era. Each castle ruled as far as the eye could see from the top of its dungeon. For millennia, nations had ruled the world with war and competed on the battlefield. Then military war turned into economic competition. Generals became entrepreneurs and toured the world. The Internet started to connect everyone but the castles remained. Economic growth

took over military conquest. Invasions turned into migrations. Wealth turned into debt. America and China blamed each other for everything, but ultimately everyone was going to hit the same Great Ecologic Wall.”

“Suddenly, at everyone’s surprise came a big global epidemy. It destabilized the castle of national cards as people everywhere could see with evidence and fear the insanity of the countries fragmentation. Great epidemy, great recession and great warming together changed the paradigm. Under such a common pressure, men and women decided that they were the same people after all and that their divisions would destroy them all. They turned the page of the nation-states and decided that the world should become their unified federation. They made Earth their single country.”

“It’s been several generations. We passed the Wall and have continued to flourish since then. It could all have turned very differently; this was a defining moment. We shall thank our ancestors for their courage, they saved us. We will never forget.”

United Earth is really possible. The evident need for our unification will surpass the comfort of our fragmentation. Today countries rule and there is no more reason for it other than History. This has to change. It will change one day.

*“Earth, with a unified political construct, is the only solution. Earth is our country.”*

## **2. The solution is moral.**

Our generation is first to understand the crime that we are committing against future generations. We have the moral obligation to find a solution for them if not for us. It should be driving us. Instead it is delaying us, because it does not yet impact our day to day. It is only about “tomorrow” - an altruistic and strategic move. It makes the needed decisions and anticipated sacrifices much harder and for politicians, insurmountable.

The IPCC gives a 95-percent probability for man-made climate change. At this level of probability, we morally have to act – or we are guilty of complicity. As diffuse as it may look, with the information at the fingertips of our politicians, *standing still is now a crime against Humanity*. Not ours – our children’s Humanity. With our level of understanding of the issue, ignoring it is irrational. For a politician, it is immoral because their profession is to deal with public affairs and this one endangers generations to come.

Today, unless we have decided to be biased for whatever reason or to abandon any form of intelligence, we can’t ignore the Wall ahead of us. We cannot play the ostrich and stick our head in the warming sand. All we can do is argue about the amplitude of the challenge – a 3 degrees or 5 degrees increase by the end of the century. But no one and certainly no political leader can look at his or her citizens in the eyes any longer and state that we are not the cause of the exponential acceleration of global warming that generations to come will have to address, if not our own.

Unifying humans on Earth to fight climate change and to make our society sustainable for our children is our moral duty. Earth is our country.

### **3. The solution is holistic.**

Most issues at hands are inter-related. They require a unified holistic solution. While the problems look very complex at the local level, their solutions become so much simpler when globally scoped and executed. The physical dimension of our natural space is the one of Planet Earth. Earth is the most common denominator of the problems that we share and that countries cannot resolve. Earth is the homogeneous sphere of life to which we belong. The Blue Planet is our bubble, the bubble of all lifes. We are taking the risk to let it burst.

Everything is converging toward one single solution, a political union for mankind, driving a unified vision with a cohesive plan of action which includes Peace, zero carbon, sustainability, food security, respect of identities, green economy, universal education, free communication and an extension of our realm into space all supported by scientific progress. We aim at a multi-faceted solution – one that is good for all if not always immediately for everyone; one that serves the general interest of mankind and takes care of its long-term destination.

“Utopia! It’s an impossible and unrealistic dream” resounds again and again. Maybe it could happen in a thousand years but certainly not in the near future.” Maybe... How do we dismiss the utopia and taboo that systematically surface when we propose a universal homeland? As change becomes more necessary, our system of references makes it seem unrealizable or even superfluous - given the disconnect with the way things have always worked.

*The United Democratic States* are the ultimate holistic solution. They enable the complete reset of our chain of command and fragmented decision-making. Earth is our country.

### **4. The solution is realistic.**

Let’s define our challenge in its most simplistic terms: *a global set of problems that can only be fixed with a single global solution*. Then, the unreal and the unrealizable give birth to the luminous realistic logic of an inconceivable solution. “You must carry chaos inside of yourself to give birth to a dancing star” wrote Nietzsche in Zarathustra, prefiguring the superman. Can we not feel that our current chaos prefigures the imminence of such a transformation – could we be supermen in the making if we only want to behave as such?

Edgar Morin wrote in “Homeland Earth”: “Barbarian forces of division, blindness and destruction make a planetary political system appear as utopian and threaten Humanity. They indicate on the contrary that the policy of humanization and the planetary revolution are responding to a vital need... We are facing a paradox in which realism becomes utopian and where the possible is impossible. But this paradox tells us that there is a realistic utopia and that there is an impossible possible.”

*From utopia to reality – time has managed to reverse any paradox:*

- In a few hundred years, the Neolithic revolution transformed nomadic life into flourishing sedentary civilizations and working horses appeared.

- In one voyage, Christopher Columbus reversed the destiny of two continents, proving that the world was round and invented globalization.
- In one century, utopian democracy became political normalcy.
- In a matter of years, the fossil combustion engine created our industrial civilization and working horses disappeared.
- Within a few years, a small, meager, unarmed man liberated India from the most powerful empire and made of a social mosaic the largest democracy on Earth.
- In a matter of months, Perestroika disarmed the number one army of the world without a single drop of blood and made the planet a seamless free-market.
- After thirty years of continuous world growth, Lehmann-Brothers declared for bankruptcy and in days dragged down the entire global financial system.
- One hundred fifty years after the abolition of slavery and fifty years after Martin Luther King, the United States elected a black president.
- In one year, the Arab revolution deposed three dictators and sent an uncontrolled wave of democratic destabilization to the most solid potentates of the Middle-East.
- In thirty years, the Internet connected 4 billion people and 20 billion devices with 2 billion people connecting monthly to Facebook, 1.5 to YouTube, 1.2 to Whatsapp, 900 million to Wechat, 700 to Instagram, 400 to Twitter, 300 to Snapchat...
- In ten years, Steve Jobs reinvented individual and collective communication with the iPhone and Google made information easily available to everyone with its search engine.
- In one month, a tiny wetmarket in Wuhan (China) spread the Coronavirus pandemic and forced half of mankind to home confinement, taking the world to its worse-ever recession (potential).

These were all utopias. The future is utopia. Time is chief utopia maker. How many more days, weeks, months, years, decades, centuries or millennia will it take for mankind to establish a government for itself? It could happen in five years, the time necessary to prepare for a global campaign, design a global constitution and rally a first wave of democracies. Many stars have aligned lately to make this move a reality. *The election of Joe Biden in the US and the global leadership of Barack Obama are potentially defining accelerators.*

In reality, the speed at which the utopian paradox can be reversed is unforeseeable. It can be tomorrow, or it can be after the collapse of our economic and ecological wall, after more conflicts, fascism again, genocides again, revolutions again and the quasi-destruction of our species. The solution is at our fingertips. Earth is our country.

## **5. The solution is irremediable.**

It's a matter of time. Sooner or later, it is unimaginable to see the current anarchy of nations survive. The reality of our brotherhood has caught up with us. The fragility of our lack of organization is becoming more acute.

The paradox will do nothing but reinforce its illogical nature, even though political systems will do all they can to resist the change toward universalism. They will try to reinforce cultural differences, racism, fuel local economic growth at any cost and continue to praise demographic fertility to be more populous and eventually more powerful.



It won't change the game. Every step of the way, as countries continue to develop and to enforce their individual and isolated strategies while the overall system digs a bigger hole for itself, the solution will become more and more evident. The reality is underway and irremediable. There is only one positive outcome out of this equation. *Disorder will further amplify if political change cannot anticipate a new world order that is ahead of us.*

The truth is: for many of us, Earth is already our country. However, we remain a minority. It took a while for most people to believe that Earth was circular and not flat, because every day they saw a flat horizon around themselves. How could the Earth be round? Every day most people live in the same country which is their flat horizon. It makes sense of all they know, materializes their comfort zone and represents their enlarged house (country) and family (fellow citizens). How could their country suddenly become a planet that they do not even know beyond their own neighborhood or frontier and move their horizon from country flatness to global roundness?

The dimension of the space in which we physically live has clearly exploded during our generation; it will get harder and harder to hide inside of our delightful little flat corner. Earth is our country.

## **6. The solution is now.**

*Time is of the essence.* The countdown against our impact with the Great Wall has started. The odds of globalization moving backward and the imminent risk of further isolationism and nationalism are in front of us. The universal idea bears a huge and almost unexplainable handicap against its own logical potential.

The popular realization that political unification is the solution at our fingertips is urgent. A true universal school of thought has to emerge and win the strong voice that it deserves. People should start to talk openly about the possibility of a unified elected governance. It's urgent.

Let's get the word out and act as individual seeds of consciousness. We can help our network, friends and family to open up to the realization that *one country* is the avenue that will resolve the impossible equation of our complex world. We are all responsible citizens and we care. We should not hesitate to contribute and provide even more strength and courage to those who dream of liberty and brotherhood around the world, to those who believe that all women and men on Earth are cultivating the same finite garden and are prepared to ignite a new vision for their besieged village.

We have reached a stage in our evolution where the time has come to think radically different and to push our leaders to have the necessary altitude to unite in the face of History. We need to pool our resources in a common direction that serves the cause of Humanity. We can create *the United Democratic States* of Earth with core democracies as a start, then make dominos unfold.

Anote Tong, former President of the Republic of Kiribati, sees the clock ticking. He led for three terms a state of thirty-three islands at risk of disappearing underwater in Micronesia, like the Maldives and the Marshall Islands. He has kept warning the international community that his country may become inhabitable by 2050. "It is too late for us, but we must do something drastic

to eliminate national boundaries... To plan for the day when you no longer have a country is indeed painful, but I think that we have to do that.”

There are some magic times in History when the right person comes at the right time and steals the momentum toward a completely new direction. *This is a call to Joe Biden, to win the next US elections and restore the humanistic values of a country which the free-world still needs to survive. This is an appeal to Barack Obama, to engage with democratic heads of state and seize the moment to lead us to a world governance. United we stand behind them, to make Earth our country.*

## **7. The solution is hope.**

Mikhail Gorbachev was asked a few years ago on *L'Express* how he sees the future in such a troubled world: “I do not panic. And I wish that nobody panics. What is happening is not so disturbing. It is only a difficult phase of transition, which goes together with the passage from “the old world” to the “new world,” global and interconnected. The old defensive walls are falling apart, but – in fine – it is a salutary process.”

Hope is everywhere. We believe in man, in the strength of his intelligence and in his instinct for survival. But to see five billion people survive on Earth in the future is going to call for a true effort of strategic planning for the species. It is by using our ingenuity through cooperation and the reorganization of our civilization that we will succeed. If not, our generation will carry the responsibility of having known – be the first one to know – and to have done nothing.

*We are the hope.* We are the species that Nature intentionally or randomly elected on Earth – either to destroy it or to make it our quasi-paradise. If we give ourselves the chance to collectively take on the responsibility of our planet as our finite and most precious lifeline, nothing is impossible to us. We will avoid the Big Crunch. Irresponsible, predatory and collectively suicidal animals that we have been, we will become the caring protectors of our environment, the guarantors of our own destiny. We will cherish Earth as we cherished our country.

## **8. The solution is our destiny.**

A more balanced world will then arise from this crisis, so that we can rebound and continue our journey toward our promising unified future. Humanity, enlightened by the lesson of this new victory over its destiny, will pursue the extraordinary epic tale of its constant metamorphosis. We will further evolve our civilization, lifestyle and maybe expand in the outer world, in our eternal quest for the domain of God.

You have invested your precious time to read this manifesto. Global brother or sister, let me praise your patience, openness, curiosity and tolerance. Please allow me to leave you with a closing message: *If you still believe that your country is an island, try to love the sea.*

I hope that our journey was only the grand beginning. Let this manifesto be the first seed that we just planted together.

Earth our country.



# EARTH OUR COUNTRY

[www.earthourcountry.com](http://www.earthourcountry.com)

**Alain F. Andreoli**

**Our global political fragmentation prevents the sustainability of our species with soon ten billion people competing for the rarefying resources of our finite planet. Our semi-globalized economic civilization is under pressure and hesitant on the way ahead – go back to isolationism or accelerate toward true full globalization?**

**Earth Our Country** proposes the institutional metamorphosis of planet Earth. Now is the time to build a sustainable universal society: *The United Democratic States*.

**Let's Make Earth Great again...**

The full globalization of Humanity – economic and political together – will complete our harmonious mutation into the first generation of *Homo Sapiens Universalis*.

**Joe Biden has the opportunity to offer Barack Obama to launch and lead a global taskforce, to design our missing global governance after November 3rd. 2020**

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