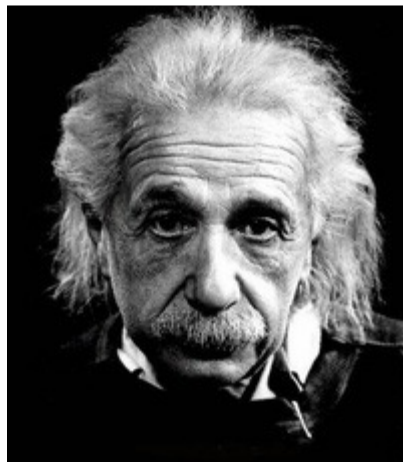

S.O.S.tainability

Written by Istvan Szabo

(Extracted by author)

The world will not be destroyed by those who do evil,
but by those who watch them without doing anything.



Albert Einstein

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Foreword

It is always difficult to say anything about the future and relevant topics to be realistic, not to be too pessimistic and all together to be scientific enough. I try all these bear in my mind. It may be true that is easy to be too negative mindset when we speak about foreseen future vision. My intention is not more and not less than highlight the biggest sustainability issues of our world, to open eyes, to open hearts, open minds for new approaches and through these to change mindsets of billions.

Fortunately, awareness of mean citizens of the states is gaining concerning Climate Change and other threatening issues of our common Globe. But do we really know what happens around us?

The question and answer becomes even more important if we consider our responsibility. Yes, Dear Reader, we all responsible what happens around us and how these sustainability challenges are controlled, directed, how these issues will be solved.

The solution is still not ready. Paris Climate Summit provided amendments. COP21 is a perfect kick-start of mutual discussions in scientific and civil communities and it gave good fertilization of new thinking as bringing together people on the same platform all over the World.

All world citizens and Global Thinkers are invited to be the part of the *global awareness community* as we must very fast find out our biosphere's survival plan and develop thousands of new technologies and *organizational innovations* to be real contributors of the overall *future-proofing project*. Huge tasks and few time...

This book summarizes issues avoiding *intentional, international irrational catastrophe* and amends solutions how to start this unique and unrepeatable remedy program.

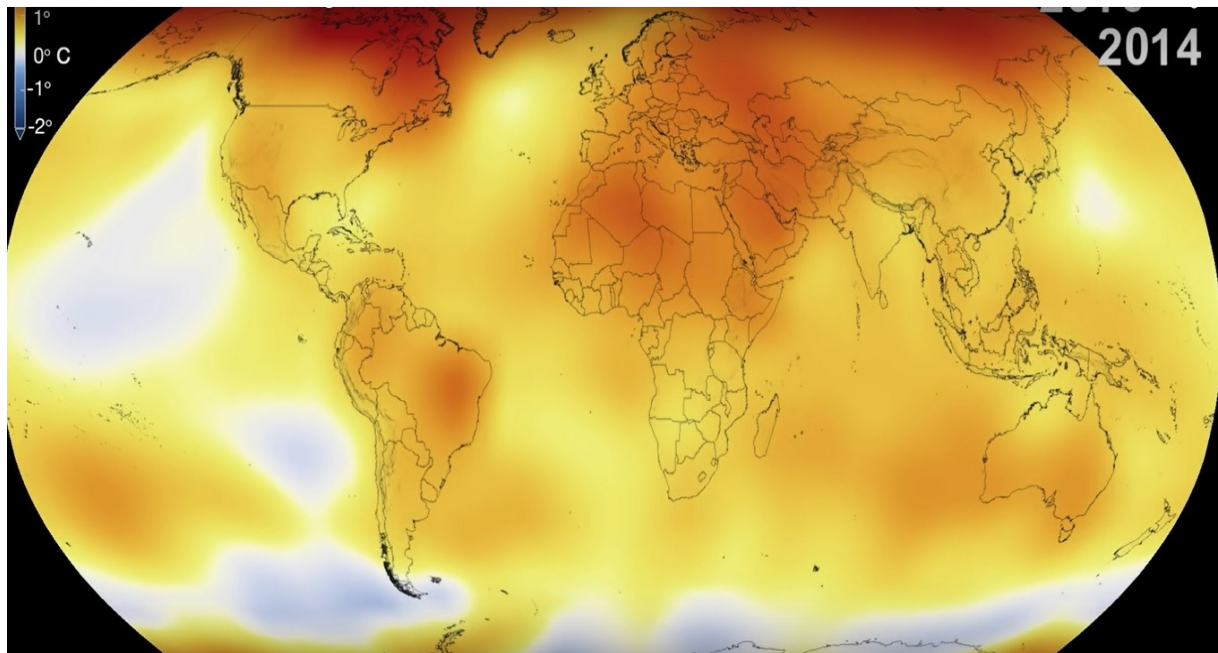
Huh, that's not an easy run! Please join to this adventure. Let's go!

Introduction

We are sitting in the same boat. We are traveling on the same board. Mentioning “board” the current vehicle may be a ship, or an airplane or it might be a spaceship or a flying saucer or - reflecting to current state of our Globe - a “flying cooking bin” as well. As we are just running into our destiny... Please, fasten your seatbelt and pray. And meanwhile please, read further.

Unfortunately, we are in a cooking bin. Let’s find out together what could be done. And what is the best to do and what is a MUST to do. I do believe it will be a fruitful journey anyhow.

This picture below shows the actual status of the global warming. It show +1..+2 °C temperature rise and now it seems common all over the world.



source:Youtube

It is quite clear the yellow-dark-brown hotter areas are in majority related to white (unchanged)-blue (colder) parts. This is the cooking bin issue we have now and it is confirmed from scientist working on many different scientific areas, the trouble is still growing.

COP21 or in most known name, the Paris Climate Summit is a key moment in that sense some leaders in the world recognized and no taking serious the warming process as challenge in front of Humanity. This event has been designated to shake up all global leaders to take actions against climate change just right now. I hope the message will break through the walls and will give enough emotional munition to shake up all habitants of the Globe, all “spacemen” on the “spaceship”.

.....

New paradigm appears

We must create absolutely new and fully original future strategy. In other word, we have to change paradigm. This activity must start right now, involving all human individuals as cooperating partner and considering resources for the biggest task we've ever faced in the history. Big words, even bigger tasks and the biggest challenge.

This future strategy must conclude future-proof solutions for the Mankind's survival. Human world's future is about environment-remedy activities. Humans can survive together with Earth's ecosystem, only. Biosphere is the highest order system, we and our created world with society and economy are lower ordered subsystems of the biosphere that is why it must be taken always in priority and must be considered at every human activities. Human being is not able to rule biosphere, it has own natural scientific rules as physics and biology and chemistry. And these rules cannot be hacked, these are always work as it was created by "Higher Powers".

There is no other way. The alignment of operation in all aspect is the nature's law. This is sustainability in scientific language. The humility exercise is to heal the world.

To heal the world is a historical decision of the Mankind. It is a decision for creating future strategy now and a decision to create future-proof solutions based on the strategy. These solutions will change the overall life standards and overall society of the World. But at the end of the road we may succeed.

With a new paradigm a new life must tart on the Earth. As sooner as better. And it is very-very much important circumstance to be aware: There is no choice. There is no plan B. The only good decision is to start the goal-oriented strategic planning as soon as possible. Since the sustainability conditions will unfortunately be worse by the time, planning and execution must be launched immediately.

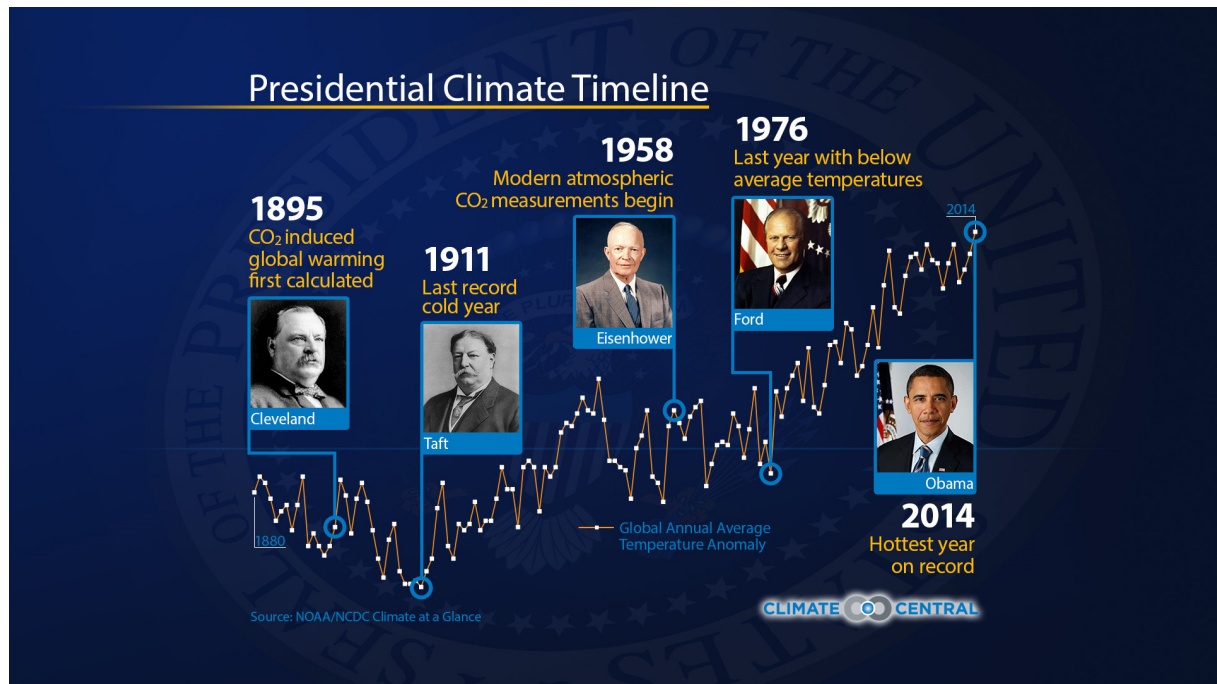
Statement 11. **Any delay in future planning is a crime against human race.** It is allowed to discuss the content but not allowed to discuss whether we should discuss, or not. Delay causes damages and losses which will occur later. Time must be spent efficiently for best solutions' and best scenarios' creation along the sustainable strategy principles of the Mankind. I do really hope we already have some scratches of it.

PEST analysis – Are the stakeholders ready for a paradigm change?

This part shows an analysis path from “Who is who” game till BEH project¹.

1. Political aspect

I do believe from now onwards Paris Climate Summit² becomes breakthrough political event among climate events and affairs in the history. It was said many times in former climate summits and by experts in conferences: As we are the first generation in the history facing with climate issue, as well as we are the last generation can do anything to prevent climate catastrophe. What a fortune! We are here still standing and we are able to do something!



And as I said, changes come sooner we have ever expected. It may happen still in this Century, in 2099 or even sooner. Visible distance... We already feel some signs and measurements support the trends scientists visionize.

Statement 12. I am quite sure **the climate issue will be the first comprehensive sustainability issue we have to deal with globally and act as one united global coalition.**

We are living on the same planet, in the same biosphere. We are traveling in space on board of a spaceship. We use the same air, same water and same raw materials, renewable and non-renewable ones. We have to consider all issues together, we have to face with all challenges together and we have to contribute all effort to maintain our planet and biological environment. As we cannot live without biosphere, but life can continue without Humanity, thus Biosphere is the main system and

¹ Biggest Enterprise of the History – BEH project

² Climate Summit will be organized in Paris between 30th November and 11th December, 2015.

human society is one of many other subsystems of the biosphere. Human race is not the ruling force in Universe. Only a subordinated entity. This must be kept in mind, forever, for all Humans. Practicing humility is not the sign of weakness but mental power.

These sentences above are easy to write down. But how to organize symbiotic life order, cooperating society, how to fill up with working principles, sustainable strategies, international contracts and real working cooperation programs between countries, between nations, between religions and between social classes, human races and at the end, between cooperating individuals? It looks unbelievably difficult at the moment. A common Mindset has to be formed, common talk of the people all around the World must be started and maintained in order to be able to succeed.

As I earlier said, the responsibility for each individuals is the same, even the individual was George W. Bush the former US President or the individual was an African authentic nation's member, so called a bushman (from the movie: *The Gods Must Be Crazy*, 1981). We all have the same responsibility to save the chance for our children and forthcoming successors. Nobody can have legitimate excuses and explanations why it is not his/her job to do something, why not to cooperate on biggest enterprise of the World ever, or just simply he/she doesn't care... as everything, every effort and helplessness will be valued and sentenced by "Higher Powers" and next generations (if there will anybody be alive still then).

There are ruling physical and holistic principles guiding our life in the Universe. The natural sciences' laws are the part of this system. But there must be something more ruling power.. . Principle which directs the life and destiny of our lives and overall history. I name this principal ruling force as a general term so called "Higher Powers". It is not really a scientific term but I do believe our existence is driven by an untouchable, invisible holistic guidance. This is the maximum accuracy of definition to this and I guess this must be enough for us and better to focus on guidance much-much more than definitions.

Probably everybody has the memories about famous movie, *Armageddon* (directed by Michael Bay, Warner Bros, 1998.) starred by Bruce Willis and Liv Tyler. Astro-physicians discovered a huge comet or a small planet targeting the Earth and in spite doing anything it will surely hit Earth and destroy large spectrum of biosphere and surely kill Mankind, as following the collision catastrophe a new ice-age starts. Then at the end Bruce and His team did the job and Earth has been saved successfully. From philosophical point what is more interesting conclusion, the Mankind was sitting in front of the TV boxes and people were watching the news and, in parallel, prayed. I hope you got this recall from the movie.

There was absolutely nothing any people could do against the collision catastrophe. They were just sitting and waiting. What else could be bigger drama in history, doing nothing (or even everything) and waiting for the dead-end? I am sure after being aware of the potential catastrophe every people would have been motivated to do something useful if they could do anything for survival.

This spectacular example shows the guideline how the climate issue should be handled and how should people be involved into the solution. Now – fortunately - we have an issue where every habitants of the planet could do something for a better outcome of current catastrophe threat.

1.1. Communication of the climate issue

As now most of the people is still not aware the deepness of threat, the *Biggest Enterprise of the History* (BEH) project optimally should start with a correct, well-designed communication campaign. It must tell the people what is the threat essence, why is this process so threatening against human race and against each individual as well, what are the most important key factors and physical parameters can control the processes and what can every individual do effectively against the worse scenarios of threat happening?

Situation is different, as we - who are living now on Earth - all have common responsibility (each individual has equal, irrevocable responsibility, jointly and severally liable way, as we already explained). As we have liability, responsibility and with well-designed communication we have motivation and involvement, then each individual can be set for active participation and positive contribution for turning back the climate change processes and realizing other related sustainability solutions. There are many other sustainability issues, but the climate change is the first one we are facing and threatening Humanity. This is a fact confirmed by scientists (and denied by other scientists). Based on my own scientific researches and evaluation of official and independent studies and measurements it is clearly visible and we must consider these facts we are in the accelerating period of global warming. So worst case scenarios should be watched more intense.

Scientists who are denying global warming (from now on: global warming skeptics or Climate Skeptics or simply skeptics) have no evidence about unchanged stable physical conditions. Temperature change rise is explained as “local maximum” of temporary deviation. The only argument is that there is no evidence of global warming. But creating the reverse statement - which indirect demonstrandum is an applied method in mathematics – could point the essential conclusion: There is no evidence on stability of global temperature, which must be true as well. Also the biosphere processes’ modeling and calculations have no proven results, neither for climate change, nor for climate stability. The awareness and high attention on projections are well considerable.

One thing is absolutely true: The skeptics are on a wrong communication approach when they maintain and strengthen this “*doing nothing*” strategy. Carefulness and responsibility towards future generations don’t allow us this thinking, and furthermore, this may lead to lose-lose strategy at the end. The accelerated world we are living in have exponentially increased instability and turbulence in future processes, the predictions accuracy are very much limited. Summarized this effect, we have no clearly defined future processes, thus careful and open-minded approaches and enhanced sensitivity for future-proof solutions are indispensable. Every statement must be crosschecked and re-questioned time by time. As strategies must be revised frequently.

But as earlier we clearly set up the Statement 13: **The only honest, future-proof and sustainable way of thinking is able to realize a new deal and new future order for Mankind.** This strategy must be followed till science can absolutely securely prove or deny global warming and root-cause. **This careful and future-proof approach is the only winning strategy,** either we have now unknown outcome of global warming processes or haven’t.

As the above introduced “only winning strategy” communication must be driven by political consensus between 193 countries (UN members) and hi-potential economic and political organizations of the World, it should be treated and mutually agreed by current operating political forces, governments and

other decision makers. There should be a guiding and leading force organization which directs and controls agreement processes, and it is highly probable to agree on United Nations leading and debate mediator role.

Also it is indispensable to have prior agreement and consensus of big political and economic players like G7, G8, G19/G20 groups with WEF³, UN, United States, European Union, Eurasian Union, African Union, ASEAN community nations and every political and economics platforms can have synergic role and influence in World economy and political life.

Consensus and prior agreement between stakeholder organizations and all national governments have key function. Without these agreed conditions hardly can be successful any communication program, hardly can be successful any future-oriented project. Each countries, including each individuals' involvement and contribution is indispensable for effective actions and final results.

The Biggest Enterprise of the History (BEH) project is not a *zero-sum game*. Either winning for all 7.5 Billion habitants or partly losing the game. As I can see now, there is no third solution. Either all players (each country, each company and each father and mother and child) will gain on this game or each individual will lose together, at the end, similar way.



It is extreme difficult writing down but I have to. I guess "Higher Powers" have ultimate humor sense when created the above described conditions for this "game". This "equalization" in social dimension will be realized by "force major", and no-one can escape from this "equality" game. Survival will be the only guiding goal and it will overwrite all rules, it will be the only guiding rule, norm, order and law in short and middle long term. And these rules, norms, laws and conditions will probably never change back to life conditions and norms we know nowadays in our current life. Personally I hope we may keep some habits and moods of our current life conditions and habits we like now.

There may be serious consequences on economics, as survival principle overwrites all rules and all guiding principles in economy as well. We are going to return to this issue on economic part of PEST analysis.

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³ World Economic Forum, <http://www.weforum.org/>

1.3. Political games behind the climate issues

Returning back to original problem circle: Why is this climate issue so crucial for governments all over the World? Why is this pain for a reigning power at every countries? What should be changed to be able to talk honestly to the people about issues we are facing with? What should be changed by governments to be able to talk honestly to other governments concerning climate issues? Do we have realistic option to change hi-level political, economic and ideological habits, rules, standards and norms for starting unselfish and really open cooperation between countries?

As it was mentioned, climate change is not a zero sum game. Even worse, lose-lose game and we don't know yet the level of the World GDP fall or temperature rise where the average level of life quality will stop any further degradation i.e. when it reaches the sustainable level.

...

Something similar happens with climate issues and hidden games played by countries and governments. Every country is fighting for better positions in global competition game in order to get more "cookies", meanwhile Humanity slowly destroys all cookies (resources, life essentials in the biosphere). Today still can be stated by several people, there is no danger, everything is under control, there is no climate issue, even there is no danger at all, resources are still available for decades or for centuries, etc. If it was clearly admitted and confirmed by governments that global climate change would be on a critical level, the game rules would immediately be changed dramatically. Among the other consequences, this would be the biggest and just now upcoming sustainability threat. Unfortunately, there are governments still have interest keeping on debates around climate change fact as well as according to their thinking sustainable development maintained as a "fashionable" journalist topic instead of explaining openly and responsibly reality for people.

This change would be the biggest "rule" or "norm" or paradigm as well as society change in the history. Probably, that fact is the only barrier which keeps back decision makers from this kind of statements, announcements. But as we already know, time for the action is running out (if it was not already passed) and the only way is to face with challenges as soon as possible.

Statement 14. **The responsibility for each country, government, decision maker is equal, irrevocable, joint and severally liable.** The same way as every individuals are responsible. Action delay, problem-covering, self-responsibility hiding and other tricks should not be taken and maintained anymore. Badly understood or not taken responsibility against society/Humanity/Earth is wrong strategy. Delay is wrong strategy. Taking action is the only way. I do believe it and I suggest it to everyone who wants to ensure "cookies" for grandkids and future generations.

And in our modern digital world there is no way to change the information/files/opinions/statements as it happened in last centuries, as winners always rewrote the history and modified facts according to their interests and actual power statuses. Now, this information exchange is impossible. Everyone, each individual in the World will know who was told when and what. What was his/her statement, opinion, supported the changes in order to prepare human race for BEH project or similar, or just simply neglected issues, facts and delayed with clear actions and thus jeopardized the Mankind existence. Tough words... I admit. I have to point out these scenarios and options. And I cannot write

anything else, we cannot miss this message. This is the only good thing we can do with honest heart and highest internal conviction.

...

I call the attention of each decision makers according to my best knowledge *there is no clearest and holiest goal in CSR topics* nowadays than climate issue combat and sustainability questions. And these commitments could be valuable considerable asset. So CSR should be focused on (C)SR. Let's introduce a new term for climate related CSR commitments and statements: (C)SR. We may use (C) for "Climate" word instead of "Company" Then Climate Social Responsibility (C)SR is exactly the right wording and right content we want from leaders to take now on. If we don't consider this requirement as strictly as in definition it was set up in business era then we may consider the climate and environmental activities of politicians as (C)SR.

This is a certain political responsibility against voters. Who will be the first and who will be the last in this "*ultimate special coming out*" game, a kind of "*Who is who*" game which forms ad-hoc entry stage of the hypothetical BEH project. Based on history the first coming leaders will be the winners and the latecomers will be the less successful players in this project. But anyhow, all people should/will take the responsibility and should/will take the project results as consequences.

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3. Ecological aspects

We have 7.5 billion habitants in our planet. Number of people is still increasing which shouldn't at all. Then we need to feed, supply these citizens in a fair and sustainable way. Tough task. We have an ill planet with polluted biosphere, overloaded agricultural production fields, overfished seas, besides increasing average temperature in global range and extreme weather conditions which last 2 conditions are worsening. This task is huge and nearly impossible. Without global integration and common direction hardly can be solved in future-proof way.

How to stop and turn back the worsening ecological processes? Do we have plans and technologies currently ready for introduction? Are we so enthusiastic and persistent human resources to complete these plans and improve sustainable regeneration and production capabilities of biosphere? As we have no choice, we have to do it and we must improve life forces and regenerating capabilities and loading levels of our Earth. We have technologies, we have to have common political intention and management capabilities as well as we must reach common sense for common society (common mutual mindset) to be able to realize the plan, complete BEH project or similar.

Statement 19. For realization of planned changes world citizens must have common platform, common mindset and common goal to be able to realize necessary changes for global survival.

3.1. Strengthening food production capacities and efficiencies

Year by year agricultural production land area decreasing, average yields are declining caused by land mold degradation. Situation is not easy. There are revitalization technologies, as well as special bacteria cultures and mineral materials. Extreme efficient artificial and organic manures can improve

vitality and biological performance of the land. The only missing element is the legal political decision to improve administratively agricultural area for food production as well as introduction of crop rotation (i.e. -> *programmed plant-culture production*) and organic agricultural technologies.

These organic and programmed agricultures are originally designed to be future-proof technologies as these were established several hundred years ago and these are proven sustainable solutions in almost every traditional agricultural country.

The production areas' production quality and average yield levels can be improved by watering systems. These require distribution system (tubes, pumps, valves, etc.) and water, water sources. Water quality shouldn't be really drinking water quality, the filtered rainwater quality can be far enough suitable for this production. The water mustn't contain poison ingredients and other biologically infective organisms which could be dangerous for the food produced. The production methods and technologies are defined, the sustainable operation must be necessarily introduced as new added value for current operation.

Global warming causes desertification of production areas, especially in some affected areas like in North-Africa, South-America, Middle-East and in certain half-desert areas of Asia, and this desertification and drying effect can be general with further temperature increasing in South America as well as in Australia, and in some European countries and in Mid- and North America (Mexico, USA) currently live agricultural production areas may be deserted. This process must be stopped somehow. With watering and with special *dry-standing plants cultures* introduction. These kind of plants are available now in many gene-banks in the World for e.g. Center for Plant Diversity in Taposzele, Hungary. These are 100% GMO-free plants, created by cross-breeding from certain original plant races with improved biological performance and dry-standing feature. Solutions are given, only question of decision and action to have more food plants and higher yields all over the World.

Watering has two main issues. Either sourcing of water is an issue or, in other hand, global warming and extreme weather conditions cause restructuring of soil physical and biological state and in underground water systems. The level of ground water sinking, the availability of water lowering. Also there is a negative effect of underground water level lowering, the trees' roots cannot reach the water level if this level is under 6 meters or even lower and it may cause the trees' mass dying. Trees have special biosphere function in recycling CO₂. Trees as significant part of green mass are indispensable part of our ecosystem. Described drying effect is degrading the upper layer of soil and trees as well, which represent Earth' natural recycling infrastructure and overall life force of the planet. Trees can compensate deforestation and block partly desertification, slightly able to modify local climate, so the watering aspects are crucial in these senses, too.

Statement 20. Forestation and tree planting play key role in our planet's revitalization. All aspects and all effect of trees' operation put trees into highlighted position in any Earth-saving projects and plans.

3.2. Fostering regeneration capabilities of biosphere's ecosystem

There are two considerations with nature regeneration improvement.

One side the contamination of nature (water, ground) and pollution of air must be eliminated as soon and as much as possible. First of all we should ensure waste water generation technologies and we

should reconsider these as not to produce waste. Then we may consider the recycling when sanitary waste generation is inevitable.

This sanitary recycling task is complex, some new technologies and several nature-friendly technics can solve these issues. Among the others the perfect waste recycling technologies, which consider waste material as valuable raw input material, must be general and recycling rates should be close to 100% (- > *circular economy* with restorative and regenerative raw material components). Then waste material doesn't load environment at all. Furthermore, the material circle is closed, there is no need for new raw material production, as in this closed circular economy system the available amount of material is almost constant.

On the other side human activities generated huge cumulated pollution which was created in last decades and centuries. These materials and contaminations must be captured by either organic or artificial technologies. The most spectacular contamination is the CO₂ which was produced and "deposited" into atmosphere in the last 200 years, mostly in the last 50 years, can be captured and eliminated from the air with traditional and by new technologies. The most common way of CO₂ recycling is the photosynthesis performed by trees and other organic plants. These CO₂ recycler trees have synergic benefits for biosphere as cleaning the air from flying dust contamination, and in parallel, stabilizing the microclimate close to the ground levels air barrier. And also the land drying effect of the sunbeams in the ground and shadowing effect against ultra violet radiation can be mentioned as positive contribution to biosphere revitalization and regeneration efforts. Increasing the green mass by planting tree cultures has only positive effect to biosphere operation.

There are CO₂ capture technologies collecting and storing the unwanted gas into the underground and undersea storage tectonic systems. Researches are still ongoing but theoretically these solutions work and give feasible perspectives.

...

5. Technological aspects

It is quite proven fact the global warming and related consequences were caused by human activity started at industrial revolution in 18th Century. As everything which caused current issues in Biosphere was made by industrial activities or - being more specific - by technologies, it looks quite obvious to make total technology audit from climate, sustainability and environmental protection points in all working technologies of our current production potential. The most polluting economics areas are energy generation (and use) and transportation. If we consider energy use within energy generation issue as comprehensive term then transportation belongs massively to energy generation issue. That's why we are going to focus on energy related technologies very much when we are discussing sustainability threats and concerns.

5.1. New technologies availability

Technology is the fastest developing component of our world. Each 2-2.5 years IT doubles the computer speeds and capacities in line with the stored digital information increasing speed. After 4-5 years a certain software and hardware seems to be rather old-fashioned or out of date. IT, bio- and nanotechnology and life sciences have the highest number of patents each year. We have the feeling that everything can be realized by technology, even the sci-fi movies amazing technical gadgets and

effects we had in the last 2-3 decades as conceptual examples. The only question is the supporting money and human resource availability to realize any forecasted or visionized technical device or object, like flying humans, laser weapons, space shuttles, moon-bases and bionic bodies or just body parts. And list may be extended day-by-day as new ideas and new fictions are popping up.

Related to the advanced technologies, human characteristics and mental performance of human race (EQ and IQ) is not as much developed as technology. Human brain and intelligence, the physical operation of human memory and nerves and its higher order rearrangement (-> intelligence) principles are still grey or black areas for science. Even the behavior explanation, analysis and modeling is difficult and less general and less comprehensive. We humans feel the best this contradiction between fast development technologies vs. human stone age thinking...

Let me recall Albert Szent-gyorgyi's quote about this topic: "Our world is dominated by policy makers, whose brains were frozen before the atomic age."

We may have good examples every moment in communication, everyday unexplainable behavior of our travel-mates and colleagues in our workplace. Social and management science as well as human behavior has no similar development pace as technology. Human operational efficiency improvement is not really measured in objective way. But we feel the efficiency and operational perfection don't improve by 30-35% every year as IT runs ahead.

These improvement scissors blade opening shows and reflects more and more contradictions and conflicts between society interests and technologies.

The same phenomenon can be revealed in technology application in everyday life at food industry in raw material replacement/mixing. *Technology hacking* about the emerging cheap technologies is causing emergency in the environment. We use environment-killer technologies which are not pre-designed by sustainability points and even not controlled by law and limited by any threshold values or contamination limits or self-limitations in CSR activity of any company. This behavior's root-cause is capitalistic competition and all is about money. As cheap and polluting technologies are mostly cheaper than other available environmental-friendly technologies.

Statement 22. Mankind is able to develop any kind of technology or solution within realistic timeframe for any technical or physical problem. The knowledge and technology itself is not limitation in problem-solving.

Not only sci-fi ideas and gadgets can be realized with available technologies, I believe all technologies available for Mankind to realize anything. If there was a new problem to be solved, researchers and engineers are able to solve the issues, will be able to develop required technologies within a limited time. We assume the problem and the goal of the technology application must be always real and realistic.

Statement 23. Climate change is a physical process and it can be controlled by technology.

Summarized this part, we can safely state here: Technology availability is given or it will be ensured within limited time. Technology is available on-demand and it is available now, or if not available immediately then Mankind is able to develop it within acceptable timeline. This is a very important knowledge. The missing technology or missing other material or immaterial resource (like money,

human resource, expertise, knowledge, etc.) is not an explanation why not to do a certain development and it cannot be used as an excuse in combat against climate change, in environmental technologies or in current technologies transformation to sustainable ones, or at BEH project later on.

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What Stakeholders can do in the next?

It is clear, the issues we took account in the previous chapters are global issues. Then these should be solved by global activity. The issues were created by human activity. Then these should be solved by human efforts. As we have no clear status report where we are now and how big the issues are, the immediate and limitless activity is reasonable. The responsibility at the moment at leaders and decision makers. But all of us are responsible to plan and execute good programs and to cooperate on worldwide solutions. We 7.5 Billion people all are spacemen on a spaceship called Earth and at the moment we are just running out of fuel and we have to somehow continue the road.

How to do it well? Amendments for people

Obviously, the future outlook is not as bright as we expected it 20-30 years ago. What Club of Rome scientists said almost half Century ago have becoming reality and our daily life will be affected by these concerns in all aspects in the upcoming years and decades.

Democracy is not the only way of political governing in all countries of the World. There are countries working together very well in many aspects but their authority and their power are limited. World is more complex and much more diverse in theological, moral and cultural anthropological aspects than ever. Classical democracy and fair trading between countries are hacked in many ways daily which are against any cooperation-fostering. Understanding and tolerance among each religions and nations - even between political parties in a given country - are weakening. World is getting more-and-more global and unified in one side and getting more fragmented in cultural, economic and future-perspectives side, at the same time. And we, who are living in this scrambled world, should be set up individual and community level future strategies in line with global trends, requirements, rules and decisions. That will be a significant Achievement!

First what we can do is to be open to learn the physical facts and absolutely political-neutral opinions, amendments, scientifically induced “best practices” for the future living standards. To list some good hints, here to be mentioned selective waste collection, energy and material savings activities, moving our private buyer habits from *consumer-type instant buyer* to *responsible-type buyer*, using sustainable services and recyclable materials and keeping relentless future orientation thinking and behavior to family and to outside partners.

To show example and “best practices” to others is key success factor. It is a kind of art how to be trendy and cool with sustainability lifestyle elements among young people. This is the future generations’ interest to have adopted practices and to be learnt ways and methods how to save resources and how to develop sustainable solutions for the better sustainable societies. But the responsibility to make them learnt and in front of everything, to open eyes and to show the right

directions is ours, our common and irrevocable task. We have to make the young generations learnt how to fishing. Then they will do fishing accordingly combined with their own innovations and hints and will ensure the future along the fast-changing environment, conditions and potentials.

First of all education must be comprehensively reformed based on sustainability and environmental knowledge base elements. Young pupils must learn at early ages the new rules and all their activities should be constructed with the view of future perspectives and environmental protection.

The results will be more and more intensive when these young individuals will give small contributions to the total CO₂ savings and recycling ratio on overall global level and this **environmental-consciousness** will be more and more general along the time. And as synergic effect, these young new “*EnviCon*” generation members will have decision maker functions later, and highly probably this EnviCon generation will have absolutely different decisions, motivated future-perspectives and sustainable way of economies.

Now the first and very urgent task is to let the young people to learn the principles and future-proof technologies and solutions. After Z generation a new age and new lettering should start. Following EnviCon in short form -> **EC** generation may come, the kids were born after 2013 could be *EC generation*.

Meanwhile we should minimize our *environmental footprint* with minimizing the energy and material consumptions. We may try to leave consumer habits and replace these with new self-directed principles and own-decided behavioral patterns which may save resources for the next generations. As new-year’s wish list, we may record these and keep it on a well visible place of our residence, etc. And we must keep these rules and life-guidance principles.

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I am personally a bit skeptic about COP21 CO₂ commitments:

- The double of reductions would still be very far from real ZERO emission goal (as it is the only acceptable emission from now onwards, according to our sustainability definition).
- No authority to control countries concerning their real emissions values.
- The leaders signed the documents are more classical politicians and less really Global Thinkers and there will not be enough power to force the reductions and drive towards the healing processes and environmental projects on national levels. The agreement will not work as I explained above.
- It is impossible to maintain both following issues in parallel: One side to maintain the *killing global competition* among signing countries and other side not to cheat real emission values.

Any reduction is better than nothing. Self-committed values are good. The ethical question is who will take the responsibility let’s say in 2060 in front of next generations, who will explain to the people in 2060 whether we (in 2015) had done everything what was potentially possible? And will whether next generations accept “everything, or not?”

Definitely, COP 21 commitments are good starting bases. The climate issue is global treat. We all responsible for future, we must ensure our soul balance. And we must face to our children once in the

future when they ask us about our life, goals, achievements, overall cultural heritage we leave for them.

What acting leaders could minimum arrange is to transform education to make next generations more sensible and more environmentally conscious. Young people are flexible and very much self-starter and enthusiastic. Task is given, we should help them armored with all necessary *weapons* and *knowledge* to combat and to defeat climate change in the next 50 years. According to my predictions we have no more time to succeed against – or live together with - natural sciences' laws and its punishing consequences.

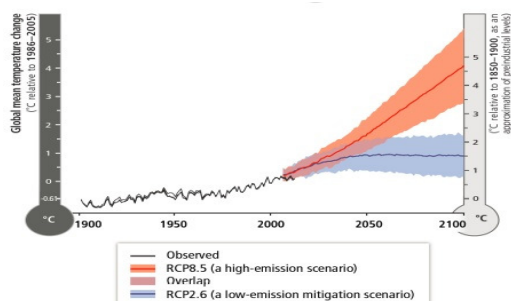
Predictions for 22nd Century

I think this may be the most exciting information to all people what will bring the future and how much the World will change in the next 50-100 years. This is a very close visible future and we have family members, relatives, friends who all are affected and we might worry about their life-expectations and state of the world.

The most focused question is how big will be the climate shift and what kind of physical characteristics will change and how much? Fortunately, many studies and reports are published in this field, every week we can update our actual predictions and our life strategies. The key questions are:

- Why the studies are reporting so much diverging data in studies?
- How the temperature rise will perform in the next decades?
- How the sea level will rise during the Century?
- What are the base data used for calculations?
- What are the change speed of these parameters?
- What are the expected values in 2050 or 2100?
- What kind of extreme weather phenomena expected and what may be the frequency and distribution of these unwanted meteorological events?

The scenarios about the temperature rise is diverging the most. The temperature rise predictions till 2100 are predicted between 2°C till 4.8°C at most of the scenarios. According to the worst data predictions more than +10°C increase is possible at some areas of the world as an average annual temperature rise.

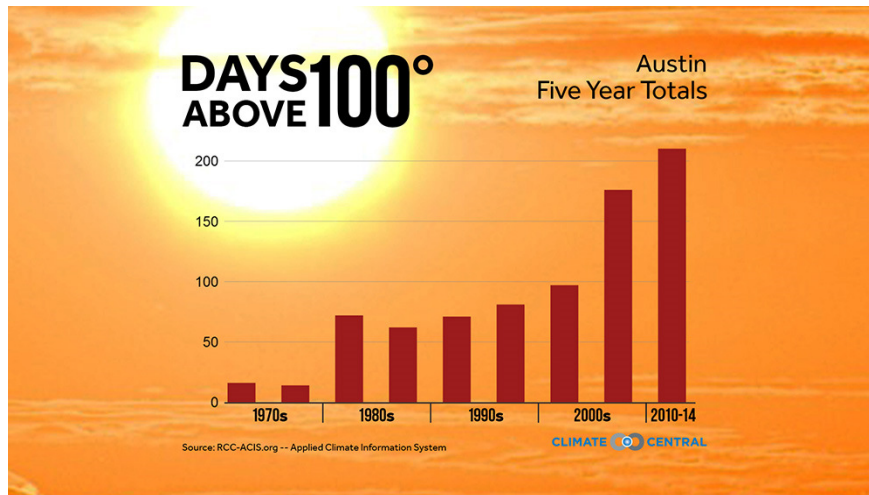


RCP: Representative concentration pathway
Source: IPCC 2014, AR5, WGII.

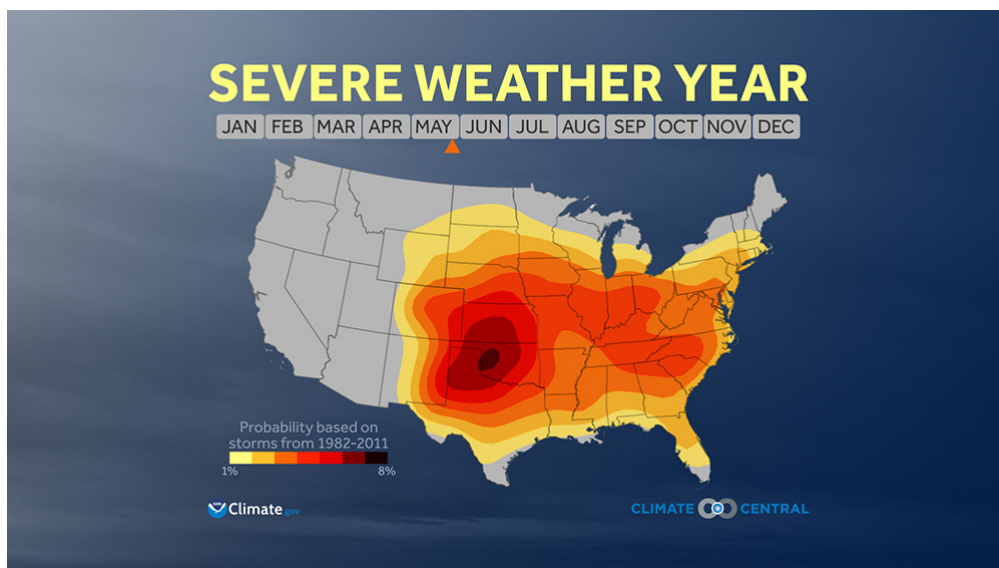
Based on the current modeling the committed CO₂ emissions can influence the end result in 2100 and after. And obviously, when emission is lower, the change and change speed is getting slower. Honestly, the results what we have on table look like “pre-ordered desirable values” and I have serious doubt of the accuracy of the calculations. I feel in my gut the real emission values will be higher and not to mention synergy between other pollution effects and warming phenomena.

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Even more interesting now for everyone how the weather in everyday life will change. As it is reported the extreme weather conditions frequency will increase. It means the number of thunderstorms, the tornadoes and hurricanes and its damages will at similar exponential rate increase in the next. There are records already about the near past how these events occurred.



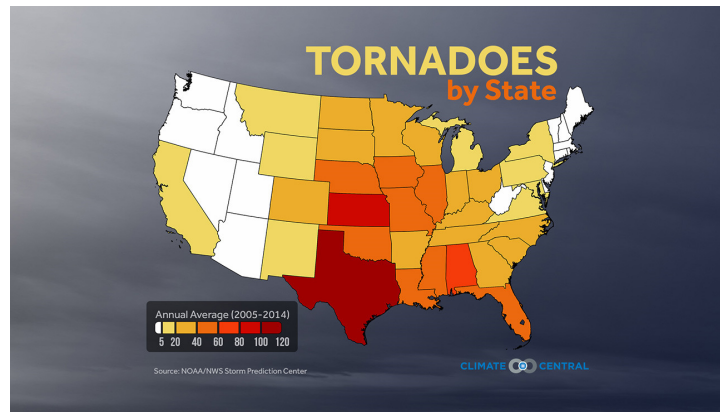
The diagram show the frequency (trend) and occasion changes (hot days in every 5 years in Austin, TX.) The frequency trend and the number of hot days are exponentially increase. Temperature measured in Fahrenheit.



Above map explains us the probability calculation results for heavy storms, the basic data was taken between 1982 and 2011 (30 years). The affected areas are clear. Probably the same statistical analysis can be made for all countries and all continents and similar probability maps can be drawn.

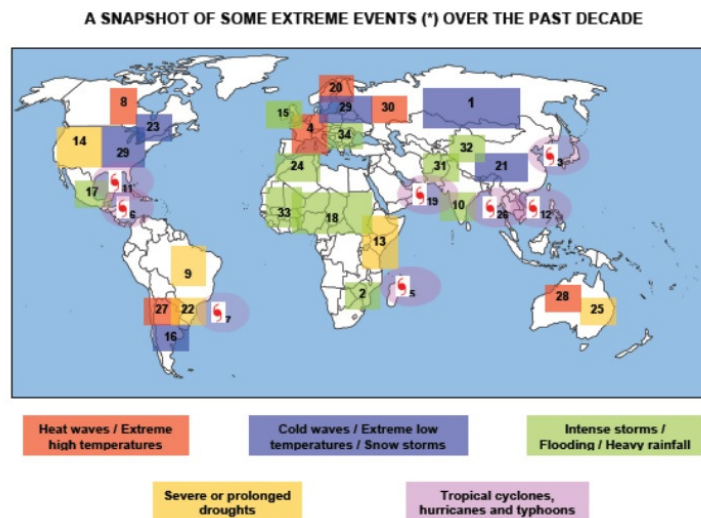
It is interesting how the tornadoes are located and how big is the danger of tornado happening at a certain area. The next map shows the allocation of tornadoes happened between 2004 and 2014. It is quite informative which part is more jeopardized and where can be found safer areas.

It is important to note that map data can easily change in the next decades as weather models are uncertain and in atmosphere “huge” and “fast” disequilibrium changes can occur. We may look after other data showing the frequency changes in time and these data extractions can have better prediction view for the future.

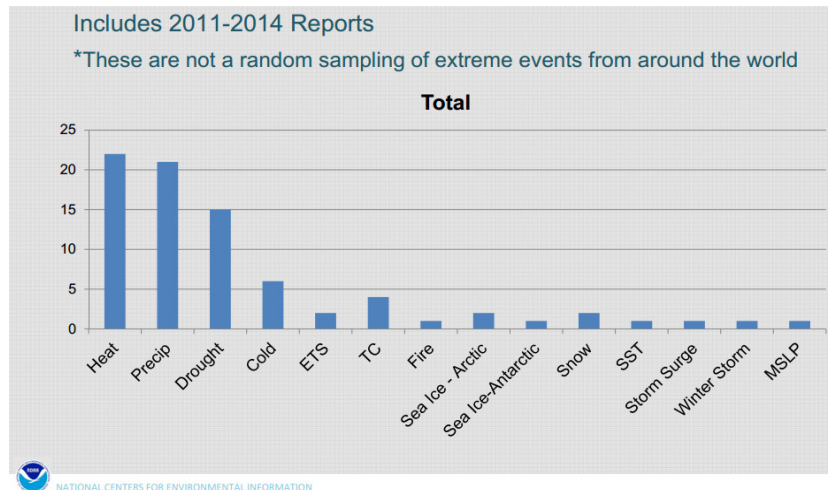


Tornado location and frequency map based on data collected in the last 10 years

And at last but not at least, please have the world map below with statistical evaluation of extreme meteorological events over the past decade (2005-2014). What is sure occurrence of these events will increase and the probabilities of these events will increase. As atmosphere will be energized more as temperature and kinetic energy as well as all each absorbed energy level will increase and these physical circumstances are embedding the extreme and abrupt changes in the weather.



Source: Dr. Janos Mika



Extreme event frequency distribution; Taken from “Explaining extreme events of 2014 – From a Climate perspective” – NOAA report

Epilogue

A revolution is just starting right now. Revolution in society, revolution in global thinking, revolution in each aspects of our relation to biosphere we are living in.

The old ruling social class is not able to live, the upcoming and just forming ruling new social class don't want to live on the same way as it is going on actually. I remember from school this is the definition of revolution.

It doesn't matter what would be the definition of the current social, political or technological social order. We may call it post-industrial society. This old system is not sustainable and now we all know it. At the first section of this work I pointed out the unsustainable way of operation of our actual societies. This is just question of time to have all people on the same opinion, on the same platform. When people realizes their majority, that moment will bring the next revolution and bring by itself the next society order. It doesn't matter what would be the definition of the next social, political or technological order. It is independent from You or Me, it is just coming to our life without any start pistol shot.

And it will change our life: Each element will be affected. Lifestyle, learning habits, context of cooperation, nation, transportation, and “life” word content itself will all meaning be exchanged, redefined. This new age will be much more human, tolerant, common mindset and full of solidarity.

It doesn't matter what is the name of “spaceship” we are sitting on, we may call it Airbus of Lubitz or Titanic. It is sure if we don't start any activities, the vehicle will sink in the foreseen future and the only question when people will realize it and will start crying on board... I would not like to hear this crying and I would not like to see people for fighting their potential life-rescue chances when they already are not able to do anything.

I would be happy to see all of you to be on board of new society and I advise all people to start immediate and drastic turn in non-circular CO₂ emission eradication and its technologies. It doesn't matter what will be the name of Humanity's movement to change the life on Earth. We may call it BEH project or the dawn of a new "Smart-ordered Society".

S.O.S.tainability 2.0 book will tell details of forthcoming new age and new society. Thanks for joining to me to current mental adventure and I do really hope You will be my journey-made for the next trip.

Istvan Szabo PhD