



Results of the 26th Annual  
“Questionnaire on Environmental Problems and the Survival of Humankind”

Report (Free text)

**THE ASAHI GLASS FOUNDATION**

September 2017

## Your Opinions on Environmental Problems – Free text

Feel free to write comments on any topic of environmental problems. If there are any items that relate to your opinion in the list of “Environmental issues to be taken into account” below, please tick the box of identical item. You may select multiple items. If you select “10. Others.” Please write the details in the Opinions column.

### Environmental issues to be taken into account

1. Climate Change	2. Biosphere Integrity	3. Land-System Change	4. Biochemical flows	5. Water Resources
6. Population	7. Food	8. Lifestyles	9. Society, Economy and Environment	10. Others

Opinions :

Note) The written statements of the answers posted below are opinions of the individual respondents; and they don't necessary represent the views of our Foundation. We have included the name, country, and our identification number along with the comments, unless the respondent requested anonymity.

### Opinions

6. Globally, this is the biggest problem of all. Only in Europe and Japan is population possibly stabilizing. Elsewhere, the sheer number of humans is affecting biodiversity in an unsustainable way.

[-]

UK, 004

There still appear to be very little attention given to the continued growth of the global human population, compared to more readily soluble issues such as climate change.

[6.Population]

UK, 006

There are so many rapid and adverse environmental changes taking place around me that nostalgia only leads to such a dismay that I do not want to live any longer.

[-]

RAJESH BHAT, INDIA, 007

Others – pollution of land and seas. Too many people stress land and water resources, pollute earth with their waste and hasten natural climate change by creating imbalances.

[1.Climate Change, 5.Water Resources, 6.Population, 10.Others]

DIANE WIESNER, AUSTRALIA, 008

By far, the greatest global issue is over population. All other issues arise from this one.

[-]

Kent Blacklidge, USA, 010

I am greatly concerned about water resources (5) and biogeochemical flows (4).

[4.Biochemical flows]

GENE E. LIKENS, USA, 011

Trump election poses major obstacles of global concern.

[1.Climate Change, 5.Water Resources]

*Bud Ward, USA, 012*

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Not enough coverage of biodiversity/frailty of planetary life-system. Nearly absent coverage/information on poisonous impacts from unregulated chemicals, new nano-structures, new materials, bio-engineered materials.

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows, 5.Water Resources, 9.Society, Economy and Environment, 10.Others]

*USA, 014*

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If we lose biodiversity on the planet, it is doomsday for us.

[2.Biosphere Integrity]

*PHILLIP H. COLMAN, AUSTRALIA, 017*

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We must swear off fossil fuels and resolve to live in a sustainable manner for the sake of future generations.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles]

*USA, 018*

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I still see education as the key element of the creation of sustainability.

[9.Society, Economy and Environment]

*Timothy Barker, UK, 019*

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Runaway climate scenarios; collapse of ocean systems; global war.

[1.Climate Change]

*USA, 020*

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I currently see a convergence of, and synergy between, global environmental issues that puts us at “tipping points” for many of them at once. Biodiversity, loss, climate change, deforestation, excess consumption, and levels of pollution/contamination (including by chemicals and radiation, ionizing and non-ionizing) are accelerating; the current U.S. government’s weakening of environmental regulations has made the situation worse. Despite some small-scale successes scattered around the globe, I expect to see more challenges than we can handle in the near future, including more human displacement, injury, illness, and death as a direct result of environmental problems.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Katie Alvord, USA, 022*

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It will require maximum human effort to combat/reverse/adapt to the effects of climate change. For this reason, the disempowered must be given power, the voiceless must be fed, educated and heard. Human capital is key to environmental security and stability.

[1.Climate Change, 9.Society, Economy and Environment]

*Nadia White, USA, 027*

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All of these are about saving the world’s civilized societies from the results of their own actions. I have no answers. Sustainability is curious and curiously. I wonder whether it can become expansive enough to include the non-human world.

[-]

*USA, 030*

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Climate change and ocean acidification should be separate issues or else grouped under “greenhouse gas emissions.”

[1.Climate Change]

*USA, 031*

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Globally I view population growth as one of the biggest environmental threats. But in the U.S., where I live, people are

insulated from this and many threats – and so contribute to big problems because they do not feel they should, or must, change their lifestyle.

[6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Claudia Geib, USA, 032*

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Many issues affect each other. Algae is a huge issue here in western Lake Erie. It affects land use, water use and is exacerbated by climate change.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources]

*USA, 034*

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Groundwater depletion in the U.S. is a major concern due to agriculture. Regarding climate change, transport is the biggest challenge and I'm skeptical about the pace of EVE adoption being adequate to address the concern. Ocean acidification is also a critical issue because food web collapse in that environment would be disastrous.

[1.Climate Change, 4.Biochemical flows, 5.Water Resources]

*Jared Anderson, USA, 037*

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Necessary action should be taken to develop the environment and to preserve the existing from its ruin without any discrimination.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 9.Society, Economy and Environment]

*INDIA, 038*

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Population increase is at the heart of all environmental problems. I did not tick 7. Food because enough food is generated, and agriculture is probably the biggest enemy to biodiversity, soils, groundwater, perhaps even climat.e

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 6.Population, 9.Society, Economy and Environment]

*Ernst Ulrich von Weizsäcker, GERMANY, 041*

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My #1 and #2 are the key components leading to the other issues. Without resolution, humanity is doomed.

[-]

*USA, 042*

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Climate change has been politicized in U.S.A since 2009; long term (solar) fluctuations have largely been ignored; scientists are not listened to by the science-ignorant politicians.

[-]

*Allen Hatheway, USA, 043*

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The relationship among society, economy, and environment feels fundamentally out of whack – an imbalance that grows worse as population growth heads to more stress on food, water, climate, land use, biodiversity and biochemical flows.

[9.Society, Economy and Environment]

*Douglas Fischer, USA, 045*

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We all suffer from “cognitive dissonance,” the science/ facts/ truth conflict with our lifestyle. Change lifestyle or deny the facts? It is easier to deny the facts.

[1.Climate Change, 8.Lifestyles]

*IAN BURTON, CANADA, 046*

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1. I believe President Trump's administration and the current Republican-controlled Congress will set us back decades in this area. 5. As a resident of the American Southwest, who is reliant on the Colorado River for 90% of my water, this is of particular local concern.8. Americans are returning to heedless consumption now that the recession is behind them.

[1.Climate Change, 5.Water Resources, 8.Lifestyles]

*USA, 048*

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There is a need for reliable information sources easily accessible to general public. Too often between the science and the public understanding are confusion and cant.

[10.Others]

USA, 050

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As the source for industrial energy, reliance on fossil fuels (oil, gas, and coal) should be replaced by renewable sources (solar, wind) as quickly as possible.

[-]

USA, 051

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Asymmetrical S + T, benefit distribution, power/ wealth concentration enables a few to cause impacts on many.

[9.Society, Economy and Environment]

UK, 052

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My opinion for environmental issues in Jordan depend on climate change from 10 years ago, such as water scarcity, agriculture production and food security, to improve adaptation of climate change in Jordan you need a lot of awareness for resident about climate change and what of adaption of climate change specialist farmer and training of women for small project in each areas in Jordan adaption with climate change in rural areas. So we focusing about water harvesting and organic agriculture.

[-]

Mohammed Alfaqieh, JORDAN, 053

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In India, where nearly 70% of the population suffers from poverty, it is not easy to categorize the above environmental issues related by cause and effects, e.g., 6 above causes pronounced effects on 7, 9, 2, 3, 5 and even 1 and 4.

[-]

NALNIDHAR JAYAL, INDIA, 054

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Economic progress aspirant homo sapiens of 21st century genuinely need to be devotedly alert and humane to establish a symbiotic relationship with nature so as to have a good quality of living in every part of the planet. Such stage of sustainable progress can be only achieved through a holistic crusade to deal with all the above mentioned issue in a coordinated and harmonious way keeping in view all the facets of sustainable development.

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R. V. VERMA, INDIA, 055

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9. Our biggest concern is balancing environmental protection with economic development.

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USA, 057

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Expanding population, diseases, shrunk food, to be seriously considered.

[-]

A. SETHU NARAYANAN, INDIA, 059

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Most important issue for Louisiana is coastal erosion.

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Judith Sylvester, USA, 060

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Oceanic island have limited territory. If already over-populated, modern tourism fluxes should be seriously controlled.

[-]

SPAIN, 061

Severe flooding has set back our weak economic growth and wildlife. Increase in cyber crimes, violent crimes, obesity have resulted as citizens do not take responsibility for their actions, e.g. irresponsible parenthood, living on gully banks, sedentary lifestyles.

[1.Climate Change, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*JAMAICA, 062*

Many of the activities undertaken in world economies at the moment are triggered from an irresponsible desire of the general population of developed countries for consumer goods. This is the underlying cause of all the environmental destruction, so it should be addressed as well as the other matters.

Climate change remains the greatest challenge. Lack of consensus at the policy level by politicians is unfortunate, as this is a matter where the best solutions will be reached if countries work together.

Many environmental outcomes will be felt more deeply by those parts of the population that are most in need. This is another area where action needs to be taken to reduce these impacts on vulnerable populations or assist those populations that are suffering from its consequences.

[1.Climate Change, 8.Lifestyles, 9.Society, Economy and Environment]

*AUSTRALIA, E002*

The environmental problems are all inter-related, requiring that all of them be addressed simultaneously. Perhaps Society, Economy and Environment provides the most comprehensive framework, provided that global cooperation can be mobilized to bring about the necessary changes. The concentration of wealth in very few hands while most of the world's people suffer from poverty needs a political response that could well generate the revenues that would be required to address the other problems. The election of Donald Trump has made such a solution more elusive, and should be considered a significant counterproductive step.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Jeffrey A. McNeely, THAILAND, E003*

1. There is still much conflicting information on human induced climate change. Climate change itself is inevitable, but how much are we causing - I think there needs to be an emphasis on a certain major aspect to help gain general consensus/agreement, i.e. one or two issues at a time not just the title 'human induced climate change' which is still hard to sell to all.

2. The loss of biodiversity - there is a general takeover of the planet happening by a minority of more successful species at the expense of the majority of others. This is human induced but includes the success of associated 'pest species' that are able to better compete with many 'native' species, e.g. cats, foxes, rabbits, goats, deer, camels, horses, buffalo, cane toads, weeds and other introduced flora etc. in Australia

3. It is only when you begin to be effected by the loss of some necessary life fuels that you begin to think about conservation e.g. Water shortages in recent years in South Australia (now somewhat forgotten due to several good years of rainfall), the world shortage of oil highlighted some years ago, now largely forgotten. We still need to push for change during times of relative plenty e.g. alternate sustainable power production, shorter showers and turning off taps to clean our teeth - all need to be accentuated to our children until these changes simply become a part of modern life.

[1.Climate Change, 2.Biosphere Integrity, 8.Lifestyles]

*Peter Clark, AUSTRALIA, E004*

While lifestyle and consumption habits are woefully shortsighted on a species-wide scale, this is all exacerbated heavily by the lack of proper reckoning with the need for global scale family planning measures. Human beings are not exempt from carrying capacity. Regardless of technological advancements in food production, we still live within a closed system, and Malthusian population limiting principles cannot be discounted as long as we remain a one-planet species.

To properly conserve nature, humans must consciously limit the rate of population growth as a societal measure in the next twenty years to avoid being forced out of a boom into a bust cycle by external drivers.

[6.Population]

*Andrew Irvin, FIJI, E005*

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Most of the environmental issues we face today are attributed to anthropogenic sources. The human lifestyle, population, and society/economic has resulted into greater need for natural resources extraction, which at the end will trigger other problems, such as land use system and climate change. In my opinion, these need to be included on any action aimed on better environment condition, and it is not depend on any single nation (such as US). We have to act together, started from individual country and individual person.

[6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Yus Rusila Noor, INDONESIA, E007*

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I think the growth of the human populations is a big impact on the planet, its resources and the environment. As such, proper population planning must be carried out especially in countries where there are inadequate resources for all.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*MALAYSIA, E008*

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Population increase is the main driver for all the problems. The rush for raw materials to produce stuffs for the increasing demand due to life style changes and the rush to make money to own this stuffs, in turn fuel the rush to get more energy, raw materials, conversion of land for food, etc, etc . All this will rush will definitely affect climate, land use, water, biosphere, and biochemical flow. Food as in any countries, are overproduce, not distributed equally, wastage due to unsold, overproduction, odd shapes, disease.... too many people selling food...leads to wastage....and solid waste...

Can't run away as developing countries following the mainstream economy, rush and grab....

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*MALAYSIA, E009*

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Invasive species are becoming a larger problem everywhere, and are not included in the survey

[2.Biosphere Integrity]

*Wilhelmus van de Ven, PHILIPPINES, E010*

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Natural resources are governed by multiple stakeholders that communicate little with each other. Their KPIs are often not inline with each other. Staff on the ground often do not understand the underlying problems and only act according to orders.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*MALAYSIA, E011*

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The climate change is heavily related with the ever-increasing growth of population and its effect on the destruction of natural habitat which in turn reduce the biodiversity integrity. This linked issues should be address all together immediately due to the approaching irreversible limit on the destruction of natural systems of the Earth.

Pressing the issues of population control, put a brake on fossil fuel consumption and reducing the pressure on biodiversity populations will help reduce the pressure on Earth's natural ecosystems. It will give the Earth some breathing space and time to slow the effect and climate change and will eventually let the Earth cope with the climate change effects. This in the long run will help very poor societies to cope and provide security on pressing humanitarian issues such as food, water and health.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*INDONESIA, E012*

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On Society Economy and Environment

As part of an NGO that has worked in the region of a biosphere reserve for 25 years on issues of ecologically sound development our applied research and appropriate technological interventions have been founded on sound science borrowing from empirical knowledge while listening to the voice of indigenous wisdom. The region we work in is rich in cultural and biological diversity. While we have worked to achieve a win win situation for conservation and development; we realise that we can only attempt this by accepting that sometimes it's a 'win' for conservation and a 'settle' for development and vice versa.

In a highly complex coupled natural human landscapes like that of the Indian context its easier to aspire for development goals and to compromise conservation goals in the bargain. In spite of this ground reality, there is a significant voice for conservation which has led to strong policies which enable high indices for biodiversity conservation to be met. Obviously something is working for people and nature in this setting.

Integrating lessons from diverse regions may be an important step forward in forging alliances for conservation. This could be the paradigm shift that will perhaps arrest many of the pressing issues we see in the world today – biodiversity loss; climate change; acidification of oceans, ecosystem collapse; rising poverty; rising affluence. Prof Gus Speth founder of the World Resources Institute very aptly says how he thought that with 30 years of good science we would be able to solve all the problems of the world only to realise that the real problems were more anthropogenic of selfishness, apathy and greed and to eradicate these we need social and cultural transformations.

Transformations are what we need and those can only be built through alliances. These alliances mean coming to the negotiation forum with less baggage and learning to speak many languages not just human but of the plants and animals; not just of the plants and animals but that of cultures and economies and markets.

A small group of islands in the Indian ocean, Lakshadweep is awaiting the El Nino currents that are moving from the Pacific islands and predicted to hit their atoll waters by the middle of this year. The reefs were just rebuilding the devastation that they underwent 20 years ago. Scientists can only watch and prepare to study the aftermath of the event this year. We will become wiser from the knowledge gathered but will that impact any of our actions and plans for the next twenty years?

[9.Society, Economy and Environment]

*INDIA, E013*

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Malaysia is a developing country and our economy still rely on natural resources and agriculture. Thus, land conversion from rain forest to oil palm plantation is a major environmental issue. With the expansion of agricultural land, other problems like water pollution, biodiversity loss and forest fire are difficult to control and measures by relevant authorities are not satisfactory.

[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 9.Society, Economy and Environment, 10.Others]

*MALAYSIA, E014*

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1. Climate change is an issue of major importance, and if we wait until we have ""absolute proof"" that it is man-made (which I have no doubt it is) it will be too late to react.

6, 8 and 9: these three (population, population increase; attitude of the society in relation to environment; lifestyles, esp. consumption) are the cause of all problems. I'm very concerned about water resources and biodiversity (including integrity of natural habitats), but obviously these are problems (as is climate change) caused by the ever increasing human population and its consumption of natural resources.

[1.Climate Change, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Robert Zwahlen, SWITZERLAND, E015*

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In developing countries, especially like India where population is also very large, the land system change is expected to be rapid and in large scale. As the population growth is out of control, the demand supply gap shall increase and the gap shall never close. To meet the demand, more and more industries are being set up and are also highly promoted by government of India in anticipation of being a technological sound nation. However, this run of India of becoming a developed nation has lead to devastating land use change. More and more land, be it fallow land, agriculture land or coastal waste land are being converted to industrial zones which emits loads of pollution be it air, water, marine or noise ! Currently, India is loosing thousands of hectare of land every day. In the state of Maharashtra alone 1.59 million hectare of prime farmland was converted to

non-agricultural uses during the 20-year period 1991-2011. Imagine the scenario for rest 29 states of India. This is alarming and government needs to frame policies which regulates this conversion of land and also strictly enforce the Biodiversity conservation Laws and Pollution prevention Laws that are prevailing since 60 years of India's independence.

[3.Land-System Change]

*Dr. Virag R Vyas, INDIA, E016*

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There is a string synergism between these factors which means the deterioration of the environment probably follows is declining logistic curve with a very steep slope. It is very difficult to assess where/when the downward shift will take place,



but when it starts happening it will be rapid.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population]

*David Saltz, ISRAEL, E018*

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The global loss of biodiversity is ongoing and we have not even understood, how many species are on earth and which ones are disappearing. It is most likely that the majority of species that go extinct are invertebrates, but there is very little interest in this issue. Almost all conservation action goes towards large vertebrates and birds. Invertebrates disappear unnoticed. For the majority of species on earth that already have been described - those in the tropical hotspots of biodiversity - we only have a name and the locality from where the type specimen has been collected. We urgently need large efforts to fully explore biodiversity on earth and preserve as many species as we can.

[2.Biosphere Integrity]

*GERMANY, E019*

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Philippines is among the countries most vulnerable to climate change. If the changes are not mitigated and if the government including humanity itself fails to introduce interventions, the consequences will be more alarming and disturbing.

[1.Climate Change]

*PATRICK, PHILIPPINES, E020*

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Governance of biodiversity and environmental issues is still very weak in developing countries. One of the reasons for this is the fact that government staff are constantly changing and there is very little institutional memory within the organization/agency. Another reason is that very little focus is given to long-term planning; in Malaysia, the government works to a 5-year planning cycle and there is very little effort to look back to what happened over the last 5 years before developing the new 5-year plan.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 9.Society, Economy and Environment, 10.Others]

*Rebecca D'Cruz, MALAYSIA, E023*

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Evening is falling on the Maladaptive Ape.

The ubiquity of carcinogenic and teratogenic pollutants may already be irreversible.

We will certainly crash without population correction, which itself may come in the form of a crash.

Warfare and militarization in service to capital are ultimately damning, as is any system dependent upon perpetual growth.

Both inequality and widespread affluence are unsustainable. We need to recognize and aspire toward ""enough"" instead of ""more,"" and to adopt, in the words of the Korean poet Ko Un, a posture of ""minimum ownership.""

We are not special, and we will not get special rules. The natural history of growth and collapse will treat us the same as any other species, aided by our extreme weight and weaponization.

Only extreme attention and response to the rest of nature around us, including the smallest life forms, and consequent change in behavior, will confer any hope for us as a functioning species.

Otherwise, evolution will mock our tardy rage.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Robert Michael Pyle, USA, E024*

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Population growth is the biggest impact to natural environment. With young populations mostly in Asia--we will continue to grow in years to come.

Inequality among people and the race to achieve the materialistic possession have driven people so much that traditional values and culture are collapsing. This also means that nature and environment will deteriorate as the values and disciplines wear out.

Economic progress should be for prosperity. There is lack of understanding among many that prosperity cannot be achieved at the cost of damaging nature or environment.

Climate change is driven by few countries which pollute the rest of the world. The lavish western living style is of high quality and people in developed country are reluctant to give up habits and luxury to benefit the rest of the world. Climate disruption

is causing uncertainty all over the world, and developed countries and polluters should be the first to adapt their living styles to impact less especially the poor of the world. Poor do not contribute in climate change in the same way as the rich do and are not aware of the global scenario.

There is much that the developed, educated and wealthy can do for making the world more beautiful. We must run a project targeted to these people not to the poor!

[1.Climate Change, 6.Population, 9.Society, Economy and Environment]

*NEPAL, E026*

Population and consumption are the driver of nearly all our environmental/social and economic problems. Reducing world population and improving distribution must be a world priority.

[1.Climate Change, 6.Population, 8.Lifestyles]

*David Vernon, AUSTRALIA, E028*

There is a lack of willingness to recognise just how big an impact we are having on the environment. Despite lots of high profile 'green' activity and products we are still living in a fundamentally unsustainable way.

[1.Climate Change, 3.Land-System Change]

*Duncan McCallum, UK, E030*

Time is being lost to strengthen Paris Agreement. Time is being wasted catering for political nationalism in North America and Europe. Vested interests have assumed greater control of climate policy.

[1.Climate Change]

*IRELAND, E032*

Water will be the main issue in the near future: 1) by climate change there will be a rise of waterlevels around the globe and the poorer countries will have great problems to keep their land dry. Islands will disappear; 2) fresh water will be a new reason to fight for- so water can be a new source for wars to survive. Life in general need water. As the richer countries still can survive people will come to these countries/climate migration due to economic reasons/dryer areas- sub sahara- Africa's population will grow to 2 billion inhabitants and this cannot be carried by the continent. Economical development for the local residents is uncertain. To conclude: due to climate change- water will be a main issue and due to growth of population there will be a continuous flow of people to richer countries.

[1.Climate Change, 5.Water Resources, 6.Population]

*baars gerard, THE NETHERLANDS, E033*

Population increases are still the greatest issue because all other environmental problems stem from resource over-stretching as a result of there being too many people for the planet to support. We are losing biodiversity as the growing population demands what little is left and other species lose out. We will not know the impact of ecosystem breakdown that is irreversible in the human timeframe once species have disappeared never to return. Climate change has tremendous impact and must be halted. It has the potential to completely break down the functioning of the planet but I do believe we can reverse it if we act appropriately.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*UK, E037*

The issue of a growing human population continues not to be addressed, even though it is the driver and cause of most environmental problems worldwide. Following closely on its heels, the issue of lifestyles and consumption patterns especially in developed countries needs to be looked into. Our unsustainable dietary and consumption patterns are putting pressure in other parts of the world and driving problems such as deforestation, encroachment of nature habitats and wildlife trafficking.

[2.Biosphere Integrity, 3.Land-System Change, 6.Population, 8.Lifestyles]

*Marta, BELGIUM, E038*

Society is the problem but also the solution. We have to change bad habits and make new ones for the future

[9.Society, Economy and Environment]

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Air pollution and land use should attract specific attention

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 9.Society, Economy and Environment]

BELGIUM, E044

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Land-system change is imho the most important issue, that should be tackled with appropriate regulations to be managed properly and sustainably, however (and many would add "unfortunately") this need a state with a strong economy.

[3.Land-System Change]

ITALY, E045

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The amount to GHG already emitted into the air is sufficient to produce enormous damage from climate change over the coming century or more. It is impossible now to avoid climate change; we can try only to make our societies more resilient for dealing with the shocks that are coming and to reduce GHG emissions in order to prevent even more catastrophic futures. However, we are close to entering a period when human decisions about GHG emissions are rather unimportant. Tipping points involving, for example, methane emissions from the tundra may soon become self-sustaining sources that dwarf any reductions we can achieve.

[1.Climate Change]

USA, E046

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Climate change is not being addressed adequately at various scales just narrative change and insufficient shifts in energy type and degree of use and continuing loss of natural buffers and increasing agricultural systems based on livestock which contribute significantly

Land continues to be capped and unavailable for buffering against environmental catastrophe

Water systems continue to be overexploited and damaged through pollution, loss of watersheds and engineering

Food systems are broken leading to obesity and malnutrition in different contexts amongst a large proportion of the planet.

Political economy is unable in its present form to resolve the problems as the systems themselves inherently drive the changes - the system needs to fundamentally change away from a selfish money-wealth, production based model to a sustainable, quality and needs oriented rather than quantity or consumptive oriented, and ethical, moral, fair and rights based system.

Indicators on the biosphere degradation are continuing downwards current systems to address this are failing in most sectors and with most species.

Population is less concerning now as indicators are for plateauing the main problem now is individual consumption patterns with respect to the environment.

Pollution remains a threat and increases as land agriculture consolidation continues, corporate irresponsibility increases and individual responsibility decreases especially with urbanisation and disconnection between people and the environment

Lifestyles are individual based rather than community based and over-consumptive.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

Richard Anthony Kock, UK, E047

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Our world is small, limited and it becomes - ever smaller! But our planet also shrank in other ways: we consume it. Every year, the rate of deforestation increases, while agricultural land is refined or consumed for the production of energy, while hunger and inadequate living conditions force more and more people into the still untouched parts of our earth. The Arctic melts, hurra, the way to new petroleum and natural gas storage is free. Every year we let more cows graze, fly and drive more and more and produce more garbage. We are already taking more than the planet can give and with each new year, the nature is more forced into their reserve! The gap between sustainable economic activity and real consumption is growing daily. The question is, how much do I really need to live? To survive? How much is ... fair? To question our consumption would be a courageous affair. Uncomfortable. With surprising results maybe. And yet: prosperity and well-being are increasing only marginally. From a certain point onwards, the image reverses and shows that in most cultures life happiness is largely independent of material luxury - apart from a certain basic comfort. When we are ready to revive our personal lifestyle, buy more consciously and question more, we save money and banish unnecessary things from our lives. And at the same time, it

give us more room to appreciate the things that surround us, and to have joy in them.

[8.Lifestyles]

*Martin Hartmann, AUSTRIA, E048*

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Global warming and climatic aberrations become more and more intense. Actually the point of no return has already been passed. Adaption to climate change has become imperative.

Water is rapidly becoming a scarce good. Much has to be done to save all water resources against pollution, overuse etc.

A new economic paradigm has to be established taken environmental considerations into account. The status of women and girls needs a lot of improvement.

[1.Climate Change, 5.Water Resources, 9.Society, Economy and Environment]

*NETHERLANDS, E050*

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I was very doubtful concerning the only three environmental issues to be included in the first question. In fact, I believe that also water resources, population and lifestyle at least derese to be included. But I was asked to limit the issues to three....

[5.Water Resources, 6.Population, 8.Lifestyles]

*ITALY, E053*

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All of the above issues reflect the grave predicament humanity finds itself in. They are all driven by three key drivers of UNsustainability - overpopulation, overconsumption and the endless growth economy. Climate change is actually a function of these three. The other key problem is our unsustainable worldview and ethics. Modernism, anthropocentrism, utilitarianism, resourcism and technocentrism have all failed. We need an new worldview - ecocentrism to guide us to a sustainable future. Sustainable development has failed as it is based on further growth when we live on a finite planet and have already exceeded ecological limits. We must be truly sustainable now and that means controlling population, consumption and improving equity and changing ethics. We need a steady state economy not a neoclassical growth economy whose only solution to the environmental crisis is yet more growth, the cause of the problem.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Dr Haydn Washington, AUSTRALIA, E054*

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I tried to keep a systemic relationship between the issues considered.

[1.Climate Change, 2.Biosphere Integrity, 6.Population, 8.Lifestyles]

*BELGIUM, E055*

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Klaus-Dieter Rauser, Tübingen, Germany published on 16. June 2016 a quite interesting discussion paper in German language. The title translation: Will it be too late or can Homo sapiens still be rescued? Thoughts about active species conservation and the role of prognosis as a means of species conservation.

Species conservation in the context of the paper means conservation of Homo sapiens. He puts us, the human mankind, in the Center of species conservation efforts and suggests how to achieve this aim.

It might be worthwhile to produce an english translation of the paper and to distribute it widely.

Contact: mail@homo-sapiens.info

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*GERMANY, E056*

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We passed the tipping points in many systems. So given the positive feedback loops it is a question of time only when the collapse of global civilization will start in big numbers. We are midst in the 6th mass extinction caused by human beings at an unprecedented speed. Be prepared for dramatic global changes within 1-2 decade(s) max. and appreciate with gratitude every single day on this wonderful globe called earth.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Enderlin Martin, SCHWEIZ, E058*

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Shortage of water resources is the most severe challenge in the Arab region. This directly impacts food production. However, inefficient use of water for irrigation, whereas agriculture consumes 85 percent of fresh water with record 60 percent losses, poses additional stress on already dwindling water. This demands a nexus approach. Unchecked growth in population exacerbates the situation. No serious measures are taken to modify lifestyles and consumption patterns in such a way to balance limited resources with demand. With the impacts of climate change, the situation will be out of control if no immediate measures are taken.

[1.Climate Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles]

*Najib Saab, LEBANON, E060*

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The world community has yet to show that it accepts the science on climate change and the need for anthropogenic emissions to reduce to zero by the second half of this century if we are to limit warming to well below 2 degrees C above preindustrial levels and to zero by around 2050 if we are to limit warming to 1.5 degrees. The world community does not grasp the urgency of the climate change problem.

The world's biodiversity continues to erode at unprecedented rates. We are living in the midst of a global biodiversity crisis and yet this has not registered at any level of society, economics or politics.

The world's human population continues to increase, exerting growing pressure on natural resources to the extent that the very sustainability of the human endeavour on this planet is called into question.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*Brendan Mackey, AUSTRALIA, E061*

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I am concerned about the impacts of the UK leaving the EU on the UK's economy and environmental safeguards

[9.Society, Economy and Environment]

*UK, E064*

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Important issues related to the mediation of negative environmental impacts have still not be dealt effectively.

Furthermore, important countries/ stakeholders seem to back off from previous environmentally friendly decisions (USA from COP21 decisions).

The pessimistic opinion stands to previous decisions that were not eventually upheld.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources]

*CYPRUS, E065*

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The only wild areas that will survive are those that are

1. Biologically large and allowed to restore themselves
2. Financially self-supporting for their benefits to local, national and international societies
3. Thoroughly integrated with their local, national and international societies.

All the rest of the world is a poorly managed human garden, and humanity is making a total mess of that, and there is nothing that I can do to prevent that. The Pleistocene Ape will continue to soil its nest until various Pleistocene laws of the natural world take their toll.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources]

*USA, E067*

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Inter generational crimes are being committed. We must stop these or we may undermine the ability of life to be sustained on the planet. Our responsibilities are huge and the longer we wait the worse it will get.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 7.Food]

*UK, E069*

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This section fails to effectively account for financial incentives guiding the behavior that shapes most of the issues. Lack of sophistication in our approach, and the failure to innovate, dooms the majority of our efforts.

[9.Society, Economy and Environment]

*John Waugh, USA, E070*

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Having elected an administration that refuses policies based on our environmental reality, the potential for disastrous effect is hugely increased.

[9.Society, Economy and Environment]

*USA, E071*

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World is not doing enough.

[1.Climate Change]

*UK, E072*

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I cannot be quoted as a federal employee; the opinions expressed here are mine alone.

All these elements are of course interlinked and affect each other in unknowable ways.

I feel we have already reached the tipping point and that societal catastrophe/apocalypse within the next 100 years is unavoidable.

Water resources will continue to cause strife and even war within the next 10 years in areas not currently at a crisis.

Societal norms are each day more selfish and non-altruistic, and this will be ultimately what causes the snowballing effect of crises in other areas. We are fortunately seeing some self-controlling actions in the area of population in developed countries, and lifestyles are more isolationist as we become electronically more connected.

My area of expertise is biodiversity, and yet the problems there are just symptoms of the deeper issues of climate change, water resources, society, population, and lifestyles.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*USA, E074*

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In our country, environment issues became urgent to improve. Pollution is everywhere in 2 deltas so that safety food is the concern in the cities and even in the countryside which be urbanized. They made people feel no safety.

[1.Climate Change, 4.Biochemical flows, 5.Water Resources, 7.Food, 9.Society, Economy and Environment]

*Hoang Lan Anh, VIETNAM, E075*

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This is solely my personal opinion

My main worry is the growing population and the resulting water and food scarcity. It seems like major natural disasters are the only way of controlling our population. Governments around the world aren't doing enough to manage this growth. Mostly due to political and religious reasons. Whether it is the Republican vs Democratic stance on abortion and birth control, the extremists vs liberals showdown in the Muslim world, Hindu extremist vs liberals confrontation in India, the million sects of Christianity, the unrest in the middle east or the Warlord vs Democratically elected representatives in Africa.

A lot of time and resources are lost in deliberating major environmental gatherings with little money actually seeping down to the action on the ground. It make me sick how much this sector spends on event logistics, travel, consultants etc. We need a more local approach where the citizens of each country take care of their issues without depending on external funds which come with hidden agendas and political and religious views.

[1.Climate Change, 5.Water Resources, 7.Food]

*Sajid Ali, USA, E076*

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The populist, anti-science sentiment that has seized the US and other countries (e.g., France) is a huge step backward for the Planet.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 9.Society, Economy and Environment]

*USA, E080*

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You ask whether political contexts are changing the sense of 'doom.' They are: we can clearly no longer depend on government etc. to safeguard the future of the planet; we need to shift towards more equitable and sustainable systems and beliefs.

Good to see you link to the SDGs.

Tipping points around freshwater system degradation and ocean acidification are occurring more quickly than the Planetary

Boundaries work suggests (and perhaps should not be bundled up in land-use, climate change and biosphere integrity). They need to be made more apparent and evident!

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 7.Food, 9.Society, Economy and Environment]

*UK, E081*

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In my opinion the continuously growing population in many countries is the largest direct problem, although the "improving" lifestyle may have similar effects but a little bit slower.

[6.Population]

*Klaus-Gerhard Heller, GERMANY, E082*

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It is a worry that consumption and lack of respect for our natural resources are going to impact the long-term well-being of people and the environment. Greed and inertia appear to be driving lifestyles and people who have everything they need do not think about those who need a cleaner planet to survive.

[9.Society, Economy and Environment]

*UK, E083*

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Really the majority of these problems are linked to life style choices of people, though I am not inclined to support population reduction measures at this time. I am very concerned about the level of material pollution we appear to be comfortable living with due to its impact on our wildlife and waterways. There is a high level of illiteracy when it comes to the needs of our ecological communities that in the end really support our economy and human welfare. Climate threats will impact all of these issues and exacerbate many.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

*USA, E084*

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Looking at our planet in its entirety, each of these issues speak to serious environmental-sustainability issues. Some are more serious than others depending on where one lives. I attended the 1972 UN Conference on the Human Environment in Stockholm. The single biggest issue addressed there was 'population growth'. This remains a fundamental issue but is not talked about very much.

If humankind is to avoid a real 'doomsday' scenario, then all of the above issues must be given priority to protect our environment and mankind must also somehow manage total population to create a balance. If this is not done by good planning and voluntary action, then nature and human conflict will take over to control population at a level that can be sustained.

For my grandchildren's sake, I hope we are collectively up to the challenge.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*CANADA, E085*

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All this environmental problems must be taken into account because we live in an ecosystem. Everything is related and linked, if we pay attention in food but not in Water Resources we are leaving a very important element of the food production outside and we are not watching the big picture. Even if you are talking about food waste, this is a water pollution source as well and it's related with the population and lifestyles.

If we want to reach the SDGs we need to think in a systemic way, where everything is part of this system and if something is not working properly the system will fail soon or later. We need to start thinking about equity and no poverty in order to have planned land system change or even avoid it. It includes the water resources and food. Population and Society, Economy and Environment even lifestyle are closely linked together and any change on them will have consequences.

We need to educate to the people and create awareness about all the problems and sacrifice money instead of lives, including animal lives, not only human beings.

[10.Others]

*Sergio Sanchez, MEXICO, E087*

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The main challenge is that everything is interconnected. The limitation (if not the failure) of the SDGs is the lack of integration. However, not addressing (and protecting) the basic ecosystem services and functions (i.e. SDGs #6, 13, 14, and 15) means the incapacity to address the other challenges.

[9.Society, Economy and Environment]

*CANADA, E088*

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The root of evil is overpopulation / exponential growth of mankind. There are enough resources for all of us - as long as we are not too many. That is how easy it is.

[6.Population]

*Lauri Kahana, FINLAND, E091*

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**Ocean Acidification**

I mainly work on mangrove forest related conservation issues, but these issues involve all of the above checked items of concern.

I would simply like to mention that today there are solutions, innovations, technical inventions or advancements, and alternatives that now exist and could be put in place in order to mitigate all of the social and environmental problems we face today. It is a lack of invested energy and power that stops us from making a better world today with a more livable and secure future tomorrow. Though I do see the worsening of our global situation under the new US government administration, I think we were already in the "severe" category, even under the previous administration. It has just gotten a lot worse under the new one!

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Alfredo Quarto, USA, E093*

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We are beset by a multitude of problems from climate change to biodiversity loss, overpopulation, toxic pollution, etc. Each one is critical, but underlying all of these issues is economics and the corporate agenda. Corporations exist for one reason, to make money, the faster and the more, the better. So long as we critique issues like climate change or deforestation with the economic consequences as a major consideration, the environment will always lose. We cannot force nature to conform to our needs but we elevate human constructs - capitalism, borders, corporations, the economy, the market - and try to shoehorn nature to fulfill their needs.

The economic paradigm that has spread around the globe is fundamentally destructive of the biosphere for two primary reasons: it is predicated on the notion that steady growth is the definition of success or progress. It is impossible in a finite world, but the growth imperative drowns out the important questions like what is an economy for, are there no limits, how much is enough, are we happier with all this growth. They are what we should be trying to answer.

An even more fundamental problem is that nature's services - water filtration, removal of carbon dioxide, production of oxygen, flood control, soil production, climate stabilization, decay, pollination, etc are simply not a part of conventional economics. In past battles I've been involved in over forests, I have been expected to provide economic justification for protection yet cannot mention nature's services as a tangible economic argument. Now in battles over climate, Canada justifies building more oil pipelines even though we have signed the Paris agreement which demands that we phase out oil very quickly. In Nova Scotia, coal mines are being reopened to create more jobs. And we continue to subsidize the most profitable sector, fossil fuels while pleading lack of funds for public transit or renewable energy options.

The most egregious model is the "triple bottom line" in which the economy, society and environment are depicted as circles of equal size and the sweet spot is the place where all three overlap. This is absolutely ludicrous. The real model is one very large circle which is the biosphere. Within that are five to ten million circles of varying size which is all the species of plants and animals within that biosphere. But one circle (humans) now takes up 40% of the bigger circle (we use over 40% of the net primary productivity of the planet) which is why we drive other species to extinction. Within the circle that is us or society, the economy should be a much smaller circle. That is a better representation than the triple bottom line whereby the economy is elevated to the same size as both society and the environment. David Suzuki.

[10.Others]

*david suzuki, CANADA, E094*



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My rationale for rating climate change at 11.50 pm on the clock is based on my understanding of climate tipping points and positive feed-backs. Feedbacks, including albedo loss from polar regions, permafrost melt releasing methane, and methane hydrate 'ice gas' release off continental shelves, are already occurring. These, and other, positive feedbacks may well, in coming decades, drive our climate system well beyond the 2 degree C 'limit' agreed by politicians in Paris. Hence I am extremely concerned that climate tipping points may already be reached. My own research area of coral reefs, often called the 'canary in the coal mine' of climate change, are in rapid decline globally, with mass bleaching events occurring annually, well in advance of the modeled scenarios which predicted such impacts by mid-21st century. This is clear evidence of the severity of climate impacts already in train. Of course there are decadal lags in the climate system, and there is massive climate warming 'commitment' already locked into the climate system. Hence the situation warrants 'extreme concern'. In Australia and New Zealand, our governments, despite paying 'lip-service' to climate change and signing recent international agreements (eg. Paris) are still in denial in respect of energy and land-use policies. This is evidenced by continuing support for exploration and mining of fossil fuels, including coal (eg the proposed Adani Carmichael thermal coal mine in Queensland, to be exported through the Great Barrier Reef to India, among others), expansion of industrial agriculture focused on methane-producing livestock (eg. dairying in New Zealand), and deforestation (exceeding reforestation). There is simply no way that these countries will reach their Paris targets under current policies. These impacts, in turn, are affecting freshwater quality and quantity at national levels. With climate change denialists now in power in USA, and elsewhere, we continue to waste increasingly precious time to address this urgent issue. Indeed we continue to head in the wrong direction in terms of environmental stewardship and inter-generational equity.

[1.Climate Change, 3.Land-System Change, 5.Water Resources]

*Lyndon DeVantier, NEW ZEALAND, E095*

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I think that with the change of president in the USA Climate change and biochemical flows are closer to 12 on the doomsday clock than before. However, this will not inflict the situation in the region where I live immediately or primarily.

[1.Climate Change, 4.Biochemical flows]

*SWEDEN, E096*

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Population growth is the driver for all the other environmental issues. Until growth is reduced - most likely by catastrophic causes such as disease and starvation - all the other issues will continue to become more problematic.

[6.Population]

*Frank Lance Craighead, USA, E097*

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The greatest threat to the globe is now selfish governance. While some nations are led by governments which have a respect for the future of the planet and for their citizens and environments, many appear to be abandoning or destroying systems which consider overall sustainability, equity or the rights of others.

While we increasingly have copious information which could be used to risk reduce the future, and a burgeoning technological capacity which if supported could address most of the threats, many are trapped in their own bubbles and listen only to those who agree with them. It has become possible to live in a self segregated group who reinforce behaviors which are not compatible with a sustainable future and to listen only to others who believe the same.

[1.Climate Change, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*EDWARD MANNING, CANADA, E098*

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Extremely concerning that current American president chooses to ignore climate and environmental risk factors. The rise of hard right political groups in other parts of the world with similar attitudes to climate science exacerbates the dangers created by Trump and this politics of wilful ignorance.

[1.Climate Change]

*AUSTRALIA, E104*

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Living in Hawaii is very unique because we are isolated from the US Continent. We are dependent on food being brought in from overseas. I would like to see Hawaii be more sustainable - farmers growing crops and raising livestock for Hawaii's people. I am also concerned about the cleanliness of our water supply from mountain to ocean. We in Hawaii need a

better plan for land use, sustainability and clean water.  
[3.Land-System Change, 5.Water Resources, 7.Food]

USA, E106

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1. Mitigation an urgent priority; building adaptive capacity needs to begin  
3. Rapid loss of natural ecosystems needs to halted. Linked to 2.  
4. Heavy pollution water bodies, land and atmosphere must stop.  
5. Water scarcity becoming growing problem for many countries and needs to be addressed.  
7. Food security in less developed countries remains a critical global issue.  
8. Need to reduce use of resources and huge generation of waste and pollution in current lifestyles  
9. Social values need to change, away from materialism and towards appreciation of nature.  
[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

JAPAN, E108

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The three that I have selected are all interrelated. Climate change, which affects all the others (including those not selected), is especially affected by the amount of people on Earth in relation to their energy needs. The resulting climate change, with its concomitant changes in weather patterns (changing water resources) affects the ability to provide food for the increased population, and all is exacerbated by the desire (and sometimes realized) improvement in lifestyle.  
[1.Climate Change, 2.Biosphere Integrity, 6.Population]

USA, E109

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I feel that the increasing population of human beings - the top predator in the system - is the fundamental basis of all of our problems: It impacts the availability of food, consumption patterns, land system change, water resources, fossil fuel and other GHG bases and hence biodiversity decimation. If somehow human population can be stabilized, then we may see an improvement in the availability resources and climate related losses.  
[-]

syed akif, PAKISTAN, E110

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Land use, Biodiversity integrity, and water resources are strongly connected each other. Indonesia as developing countries have to taking into account these issues within development planning. We believe that forest able to give human living support through its biodiversity and environment services, as well as water.  
[2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources]

INDONESIA, E111

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One point that has to recognized and highlighted is soil conservation. Soil is a living organic resource and a critical component of life and all natural resources and links all ecosystems.  
[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

Emmanuel C. Talag, PHILIPPINES, E112

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Climate Change will affect the life-style of people in general and the poor people in particular. Many new diseases are expected to erupt. Tolerance level of human and animal beings will be very low to mitigate the change in climate.  
Water Resources are uneven in the world. Some countries are self-sufficient, some have more than their requirements, and many have very less of drinking water resources. Is it possible to bring about WATER EQUALITY in the world by meticulous planning by the policy makers of different developed nations?  
Food is unevenly distributed according to the wealth and population of the country. in some countries the food waste on one day is enough to serve the people of Somalia for one month.Food for all is achievable and we must work towards it with all fairness.  
[1.Climate Change, 5.Water Resources, 7.Food]

Michael Arjello Jothi Rajan, INDIA, E113

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Most of the environmental issues are inter-related Land use change in India has had a drastic effect. Land use change in the form of degradation, encroachment of forest areas, infrastructure project, linear intrusion, mining activities, agriculture, cattle grazing has impacted the biodiversity as a result of which there is a scarcity of water, climate change and other environmental impacts. All these are to a great extent a consequence of land use change.

[1.Climate Change, 3.Land-System Change, 6.Population, 9.Society, Economy and Environment]

*Rakesh kalva, INDIA, E114*

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The biggest problem with the increasing population. This increase drives other problems eg. change in land use affecting biodiversity, biochemical flow. Secondly, the increase population demands more food, again altering land use, resulting in pollution and production of chemicals responsible for climate change.

I don't believe there is any way to measure which problem will impact human civilization most in future, but it is definite that these all combined together will limit growth of human civilization in future or worse, exterminate humans from earth.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 6.Population, 7.Food]

*Tek Raj Bhatt, NEPAL, E120*

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We the humans are largely responsible for the present day problems. We should remember and practice the famous Indian saying " Nature protects if she is protected". All elements and all creatures, big or small, are vital for the web of life to continue; humans must learn to share with fellow creatures on the planet earth. We must remember, we are the most recent inhabitants of the planet earth, and must not take the role of a master, rather we should remain humble in our attitudes and consumption patterns and lifestyle.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Lok Man S Palni, INDIA, E124*

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In Malaysia, the regulatory and legal framework conserving and managing the environment is inadequate. This is largely due to the type of laws and regulations that we have. We have large numbers of natural resource-focused laws, government policies, Plans and guidelines. These are generally designated to deal with and manage one natural resource or one particular industry or the assessment of one act at any one time. While it has its merits, this approach cannot be sustained if Malaysia is serious about managing its environment in the long run.

Malaysia needs an all encompassing express constitutional right for the protection and conservation of the Environment; along with procedural and substantive laws that promote freedom of information, right to public participation without fear or retribution and access to a justice system that is impartial.

It needs a two-fold move: real and substantial support for the three pillars of environmental democracy and a fundamental constitutional shift in its approach to who is in charge of the environment.

[9.Society, Economy and Environment]

*MALAYSIA, E125*

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Almost 14 million people have been affected by the torrential rains in Pakistan, making it a more serious humanitarian disaster than the South Asian tsunami and recent earthquakes in Kashmir and Haiti combined. The disaster was driven by a 'supercharged jet stream' that has also caused floods in China and a prolonged heatwave in Russia.

It comes after flash floods in France and Eastern Europe killed more than 30 people over the summer.

Experts from the United Nations (UN) and universities around the world said the recent "extreme weather events" prove global warming is already happening. The 'dramatic' weather patterns are consistent with changes in the climate caused by mankind. These are events which reproduce and intensify in a climate disturbed by greenhouse gas pollution. Extreme events are one of the ways in which climatic changes become dramatically visible.

The UN has rated the floods in Pakistan as the greatest humanitarian crisis in recent history, with 13.8 million people affected and 1,600 dead.

Flooding in China has killed more than 1,100 people this year and caused tens of billions of dollars in damage across 28 provinces and regions.

In Russia the morgues are overflowing in Moscow and wildfires are raging in the countryside after the worst heatwave in 130

years.

Dr Peter Stott, head of climate monitoring and attribution at the Met Office, said it was impossible to attribute any one of these particular weather events to global warming alone. According to him there is "clear evidence" of an increase in the frequency of extreme weather events because of climate change.

Global warming is likely to be make extreme events worse. For example, when there is more heat in the atmosphere it holds more water and therefore floods in places like Pakistan are heavier. If we have these type of extreme weather patterns then climate change has loaded the dice so there is more risk of bad things happening.

According to official figures, 90 per cent of industrial effluent and sewage produced in the country's biggest city poured into the sea either directly or via Lyari and Malir rivers.

According to information recently placed in the National Assembly, about 550 million gallons per day (MGD) of mostly untreated wastewater is affecting the coastal areas and the problem would worsen if no remedial measures are undertaken.

It said that Karachi Water & Sewerage Board had three sewage treatment plants. Of the total 472 MGD, the plants treat only 55 MGD of sewage and the rest finds its way to the sea.

For the industrial waste of 78 MGD there is only one treatment plant with a designed capacity of treating 10 MGD.

The city district government of Karachi has been planning for some time to set up six treatment plants at several sites to meet the National Environmental Quality Standards (NEQs).

The Marine Pollution Control Board has also taken up the matter of protecting the marine life and ecosystem, but nothing has been achieved so far.

According to another plan aimed at controlling water pollution in and around the city, the Karachi Port Trust will provide funds for a study to assess the problem of solid waste thrown into the sea.

All the measures announced to deal with the increasing pollution in coastal areas had so far proved to be a mere eyewash. The federal government could only provide a conducive environment for required interventions and the rest had to be managed by the Sindh and Karachi city governments. There are already installed treatment plants were not being used to their capacity.

There were a number of cantonment boards, KWSB, KPT, Pakistan Navy, DHA and the City government, but it was not an easy job to manage the waste unless they worked under a uniform strategy.

There should be some serious action plans to cope with industrial waste and water issues in Pakistan, specifically Sindh.

[1.Climate Change, 4.Biochemical flows, 5.Water Resources]

*Amjad Siddique, PAKISTAN, E126*

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In my region (Southeast Asia) there is a great need of enhancing local capacity to deal with pressing environmental problems. We need to invest in capacity and leadership.

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*Ahimsa Campos Arceiz, MALAYSIA, E128*

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Political and economic crises, the war in Ukraine leads to a reduction in the financing of environmental activities, especially those necessary for climate change. Corruption in the government and poverty on the ground contribute to illegal construction in protected areas and poaching.

[1.Climate Change, 3.Land-System Change, 9.Society, Economy and Environment]

*Rutovskaya, RUSSIA, E129*

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Pollution should be considered equally important. Balancing nature conservation with development should be emphasized for sustainability.

[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 7.Food, 9.Society, Economy and Environment]

*NEPAL, E132*

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All of these issues are to be considered important and interconnected. There is also a \*missing\* issue, which deserves equal attention: the oceans and seas. These are partly hidden in the issues of "biosphere integrity" or "biochemical flows," but the oceans are a massive, global system, like the atmosphere, with critical regulating functions as well as being a source of food for billions. And yet, they are not given the same attention as "climate change", which is the atmosphere. The ocean is

\*equal\* to the atmosphere in terms of its importance for life on Earth and the Asahi Glass Foundation should please consider updating its framing of the issues to reflect this.

I could provide many data on the issues in the ocean. Note that among many other areas of work (e.g. advising part of the UN Secretariat on SDG implementation), I am currently advising WWF on ocean and Arctic issues, related to the development and growth of the "blue economy" -- the marine economy -- and efforts to make that more sustainable.

[10.Others]

ALAN ATKISSON, SWEDEN, E136

Population is too high.

Climate change is probably irreversible.

Evolutionary psychology means we are unable to understand these global issues and threats.

[1.Climate Change, 6.Population]

LAO PDR, E137

Environmental issues presented are all interconnected which greatly affects one another. For the Philippines, the threat from climate change greatly affects biosphere integrity, the society, economy and the environment.

There are different strategies being done in both horizontal (institutional/ governance/ social) and vertical (ecosystems/ecological) levels. Hope this kind of survey may provide information that can really help management and conservation efforts.

[1.Climate Change, 2.Biosphere Integrity, 9.Society, Economy and Environment]

PHILIPPINES, E138

The current economic system has gone past its use by date

Under the current model there can be no solution.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

Ian, AUSTRALIA, E141

It probably already too late to avert catastrophic climate change which will cause the collapse of society globally. The physical and biotic support systems of the planet will be destroyed, along with much of present biodiversity This results from the size of the human population, and our unsustainable consumption of resources. Most serious biologists and environmental professionals (specially) already recognize this. However, the habit of concerning ourselves with our own fields of interest, which is all we can do, enables us to fight on (probably fruitlessly) but nevertheless with hope that something might be salvaged. My own primary concern is in the field of biodiversity conservation.

[-]

THAILAND, E142

Climate change underpins the collapse of all systems based on human consumption patterns. At the current rate extinct is imminent.

[1.Climate Change]

AUSTRIA, E143

Biodiversity loss is irreversible. I believe in intrinsic value of species, so for me it is the greatest tragedy.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

Helen Kopnina, THE NETHERLANDS, E144

Personally, withing the Environmental Problems box,I am focusing my interest in food hygiene and quality, eco-sustainability of processes, and new source of proteing for the human population.

I believe that in the One Health perspective, all the issues above are very much connected. particularly I am exploring the production of insect based food as a nove ecosustainable process to feed the human population and fight hunger. human population is growing fast and we are in the need to preserve our environment resources and find new way (also new life

styles) in order to be a good guest of our planet. Water is decreasing, land is getting more and more poor, animals welfare is raising, food habits need to be more ""helathy"" and mostly more scientifically driven (effect of food in the human cells DNA...).

[1.Climate Change, 3.Land-System Change, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Nicola Pussini, ITALY, E145*

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The land management system is severely changing as per the use and perception of consumption of natural resources. Political gains are extremely affecting the situation and frequent change in power changes the overall situation and affects the environment badly, as most of them do not want to continue with good practices being implemented by previous government. Another problem is attitude of people to get rich as early as possible and also they don't even care what impact would be on the environment. It is difficult to understand that when this thirst will be completed.

Political parties more specifically in developing and underdeveloped countries seems to be having no concern with local population except in some cases. Business have been given prime importance in recent past and the says from richest personnel in the world are getting prominence over most deserved.

My opinion is that offcourse the people in power shall be given privilege over the decision but it shall not be given as 100% weightage over any other concerns.

[3.Land-System Change]

*SHIV, INDIA, E146*

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The issue that is missing is the importance of energy without which 1.3bn people will continue to starve - the bottom billion.

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*Brian Heap, UK, E147*

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Low state and Federal Government priority for renewable energy production to replace highly polluting options.

Poor state environmental protection priorities.

Low state and federal governmental priority for environmental and species protection, including Ramsar sites and reserves.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Phil STRAW, AUSTRALIA, E153*

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We need to re-think our development policies as well as our individual behaviors to ensure a sustainable future to the humankind and to the biosphere

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources]

*Piero Genovesi, ITALY, E155*

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While a prevalent view is that the recent US presidential election is potentially very harmful to American and global environmental stewardship and conservation, I am hopeful that it will actually have the opposite effect by mobilizing greater environmental concern and action by stakeholders who feel motivated and obliged to get involved and pressure others to contribute to greater responsibility and stewardship.

[1.Climate Change, 4.Biochemical flows, 8.Lifestyles, 9.Society, Economy and Environment]

*CANADA, E157*

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It is too late; the governments have virtually no idea of what is happening in the next 20 years.

[1.Climate Change]

*USA, E160*

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Biodiversity is under the threats due to habitat degradation and unsustainable use. Big animals, sturgeon fishes among species and wetlands among habitats are most threatened.

[2.Biosphere Integrity]

*Alexander Solokha, RUSSIA, E162*

With the new president of the United States my greatest fear is an immediate Thermo nuclear war. Trump is a very thin-skinned adolescent way over his head.

Trump is a symptom of the general distress of Modern developed societies. The world is lurching towards fascism and Xenophobia.

Trump's rise to power has made civility in society unnecessary. As he does not conform to any levels of decency nor honesty, society is following suit.

It is now acceptable to be racist, homophobic, and rude. This is demonstrated by the sharp spike in hate crimes across the United States.

While the United States had made great strides in cleaning our environment, Trump is now undoing all that work. Is now okay to pollute.

Number nine society and the economy, basic social norms are breaking down.

My last concern number six population: there are just too many people in the world and that can be seen by the mass migrations. Every young able-bodied person in West Africa is trying to get into Europe. All of West Africa cannot move to Europe.

Likewise vast population moves are coming from Central America into the United States. Building a massive wall on our southern border is ludicrous. But I fear the wall is not only to keep the Latinos out of the United States but also to keep our citizenry in the United States. Walls are not helpful.

I am extremely distressed, we are devolving into a society that only cares about themselves with no compassion for anyone else who might need our help. Basically a dog eat dog world. And I see no hope of any immediate resolution.

[1.Climate Change, 6.Population, 9.Society, Economy and Environment]

*David Schweidenback, USA, E164*

US President Trump and his administration are taking steps free up exploitation of natural resources which will free up the wealthy top tier to gain more wealth and control more resources around the globe and will allow them to gain more control over a majority of the population. There is a limit to human growth and we've already exceeded the limits of acceptable change. The decline of environmental efficacy of the planet has already been exceeded and it is now just a matter of the ability of humankind to survive...or not.

[1.Climate Change, 3.Land-System Change, 6.Population, 8.Lifestyles]

*Michael Olwyler, USA, E170*

There is great concern for the environment within the current political climate in the US. There is hope that local and state government will continue to address these issues and not be required to implement bad federal policies that will further damage our environment. The hope is that big business will not take the opportunity to ignore their responsibility to care for the earth, but this will be seen as time progresses. There is hope that carbon trading or market forces will allow for the pursuit of renewable energy. However, this too is uncertain. Let's just hope the American public does not get complacent and demands that we do the right thing. Unfortunately, many don't understand climate change nor want to give up their consumption lifestyle, thus we are fighting a battle.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*USA, E171*

Population limits and the need to decrease population to sustainable levels are the most difficult, urgent, and neglected problems facing humanity.

[6.Population]

*John Flux, NEW ZEALAND, E173*

Climate change, Population growth, Biosphere Integrity and Lifestyles are intricately linked to each other. Logic demands to start at population growth as the root of most evils, but this is the politically most difficult part. Nevertheless, I am terrified that the problem is not even publicly spoken about. Nobody wants to advocate abortion or forced measures for fewer children, but if nothing is done, population size will regulate itself drastically, and with means nobody will want - war, famine, disease, worldwide migrations. Therefore, the issue must be adressed and first steps taken to cut growth rates in developing countries,

e.g. by directly linking developmental aid and other funds to measures against population growth.

[1.Climate Change, 2.Biosphere Integrity, 6.Population, 8.Lifestyles]

GERMANY, E174

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Many of the environmental problems in Australia are underpinned by social and political issues:

\* Lack of understanding that healthy human societies rely on healthy natural environments.

\* Polarisation of debates on environmental matters.

\* Inadequate leadership, on many matters, at the national government level. The absence of a strategy on energy security is a good example of this - the current response to this very real problem seems to consist of a series of uncoordinated knee-jerk reactions.

\* Further to the previous point, many people and communities know what is required to solve biodiversity threats and are working to solve them despite inadequate government leadership.

[9.Society, Economy and Environment]

Chris Banks, AUSTRALIA, E175

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Our Prime Minister Mr. Narendraji Modi launched the First Programme regarding the environmental issue is CLEAN INDIA Programme by this all the sectors of India participated in this Campaign. Regarding the Electricity the the government give motivation to use the SOLAR System in every sectors i.e. School, Colleges, Offices and Industrial use. Last three years in our area Draught so government of Maharashtra focus on the issue on water conservation and make a concrete work on the water conservation in which small scale water reservoirs and barrages constructed on the rivers and streams. The 5 Biodiversity hot spots are declared and in this area development and modernization is done without the disturbance of biodiversity.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources]

INDIA, E176

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In Australia, the lack of political and community consensus on causation of climate change is impeding the development and uptake of appropriate risk mitigation measures (ranked second).

In Victoria, increases in the frequency and intensity of storms, drought, wildfire (ranked first) are having the most dramatic effect on water availability and security (ranked third), particularly in the north western areas of the state, and biodiversity (ranked fourth).

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AUSTRALIA, E177

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Fast approaching or past the point where feedbacks will limit our capacity to mitigate change. Flow on effects will very seriously impact on water resources and ecosystems. Maladaptive approaches will further degrade ecosystems.

[1.Climate Change]

AUSTRALIA, E178

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I feel that ALL of the above are issues that we as human beings having created, must now address. It is worrying that so many people just don't seem to realise how dire the situation actually is!

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

Joanne, AUSTRALIA, E179

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While the rest of the world is committed to moving forward to address climate change and embracing cleaner energy, the US will be going backward by ignoring scientific evidence that form the basis for global actions to reduce greenhouse gases and mitigate their adverse effects on society, the economy and the environment.

Not only have governments throughout the world have committed to policies and actions to address climate change and embrace cleaner energy, so has businesses by committing to doing the right thing by moving towards adopting renewables and environmentally friendly policies, practices and programs that lead to sustainable growth.

One can only hope that Americans are wiser than the Trump administration and will challenge and reverse his misdirected policies that threaten to dismantle US environmental policies; that ignore the scientific evidence of climate change; that



renege on the USA's international commitments to climate change; that increase the use of coal; and that reduce the EPA's capacity all of which pose a significant blow to the global efforts to reduce greenhouse gas emissions and mitigate their adverse effects on society, the environment and the economy.

[1.Climate Change, 9.Society, Economy and Environment]

*Patrice LeBlanc, CANADA, E180*

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Whilst there is some good news in our region (recovery of endangered reptile and 2 species of endangered birds), it is unfortunately outweighed by continued declines of endangered species and habitat loss.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change]

*USA, E184*

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Climate change is of overwhelming concern - the time is running out for all countries to limit average global temperature rises. We will see more extreme weather events - cyclones, droughts etc. My country has a federal government not willing not acknowledge the existence or impact of climate change, nor set a short or long terms energy policy that will decarbonise the economy. With a strong coal lobby, and climate sceptics and conservatives in government, the current outlook is dire. Politicians do not accept the science nor seem prepared to acknowledge the reality nor be prepared to sell the difficult and unpopular message that there will be pain associated with transitioning economies way from fossil fuels; but the sooner this is done, the less pain will have to be suffered. Some pain now - or much more pain later. Changing energy demand - conserving demand and improving efficiency - and changing to sustainable energy supply is an issue the government is just not willing to address in any degree to the extent that is needed. Energy and climate and change are issues used for political point scoring - there is no real leadership.

Climate change, biodiversity, pollution and water supplies; land degradation and clearance of native vegetation; are all issues that in some ways are interlinked (eg climate change and biodiversity) and are all pressing environmental problems. We have some good stories but overall the state of environment reports show continuing declines in environmental health across a range of issues. Overallocation and use of water is a continuing issue, despite efforts to buy back water for the environment. Land degradation and pollution from farming, and native vegetation clearance, are continuing issues. Biological diversity is worsening. Again, while some species may show signs of recovery, overall the situation is declining.

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows, 5.Water Resources, 9.Society, Economy and Environment]

*AUSTRALIA, E186*

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Our biggest concerns all stem from overpopulation and over-consumption as these impact all the environmental, social and economic problems listed above. Until we address these issues properly, then we will continue on in the same vain we have been going for the past 200 hundred years.

Unfortunately, our politicians are not prepared to address these issues directly in fear of political instability, economic ruin and widespread chaos - however, if we don't address these issues now, then these issues will arise irrespective and they will often have unforeseen dire circumstances and consequences associated with them. We can, with proper planning, strategies and commitment deal with many of these issues now in a controlled manner rather than waiting for some environmental (or other) disaster to strike us.

Sadly, it often takes some adverse event to get real action in place, but as an ""intelligent"" species, why wait until then. Our politicians and decision-makers (which includes corporations, NGO's, local and central government officials) all need to act now and not put their heads in the sand. Even the Paris Climate Change conference did not go far enough for some real change to occur - and now we have a US administration in complete denial. The clock is ticking and time is running out.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Craig Morley, NEW ZEALAND, E187*

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Even though I am extremely concerned, the irony is that the solutions already exist to safeguard our planet for current and future situations. Sometimes it's impossible to think that people in powerful positions really don't seem to care about the implications of their decisions. The tide can be turned and everyone knows it, and it won't even take much to make it happen. We don't even have to drastically change our lifestyles. No one should ever give up. Every little positive action counts. We can still eat meat, but do we really need to eat as much? Alternative and sustainable energy sources are now plentiful - how

much would it really take to transition over to renewables? Plastic bags are being phased-out in many places - we need to see this trend continue. Human and wildlife trafficking could easily be a thing of the past with proper education systems in place. In many cases the answers are so simple, but yet we are so resistant to changing our ways.

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THAILAND, E188

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I feel, we should not just talking and talking and putting into black and white and shelved. We rigorously are working on flagship species and programs to save from extinction but now we are now struck because there is no one coming forward to support our effort. I have been making my stand at many of the international conferences, workshop, seminars and many people that i met to come on board and start supporting our conservation journey but it is to our discouragement that no one actually comes.

We have two flagship species in Bhutan. White Bellied Heron (WBH) and Black Neck Crane (BNC), where RSPN has worked for the last 30 years. WBH is critically endangered worldwide (Population less than 60 individuals) and Bhutan host 28 individuals. BNC very vulnerable all over the world now. Please visit at [www.rspnbhutan.org](http://www.rspnbhutan.org)

Let's work together to solve our commons. Not only talk!

[1.Climate Change, 5.Water Resources, 7.Food, 9.Society, Economy and Environment]

Kinley Tenzin, BHUTAN, E191

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Climate Change: Denial of scientific research in the area of climate change and elsewhere is speeding up the doomsday clock. If we lose guidance by science, the human population will go to extinction, perhaps taking the Earth with us. Land-System Change: So much tropical forest and natural forest has been lost already that the consequences are not truly foreseeable. I believe tropical forests are still the lungs of the planet and without it the planet will die. Biosphere Integrity: We are losing species and large groups of animals (and plants) at a rate that is unsustainable. Scientists are puzzled by some phenomena, e.g. die off of bees worldwide, which seem to be caused by mechanisms we haven't even approached and are far from understanding. Time is truly running out to solve global issues on biosphere destruction. Biochemical flows: despite good will in many nations pollution is far from being under control anywhere on the planet. Pollution of water, air, and land is rampant and seems unstoppable. I believe part of this problem is humankind's hunger for power. Population: soon the carrying capacity of Earth will be reached and a cascade of unforeseen and unstoppable effects will be set in motion. We have populated every corner of this planet in such a short time and we are multiplying at rates that are unsustainable. The capacity to reproduce is unlimited but resources are always limited. Soon we will hit this limitation and the poorest of our fellow human beings will be the first to feel and experience the true meaning of limited resources.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 6.Population, 9.Society, Economy and Environment]

USA, E193

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Need to think new ways/strategies of incorporating nature with urbanization in order to effectively utilize ecosystem goods and services. Urban biodiversity that requires much external input to maintain is not efficient. Innovative ways of 'building with nature' are useful instead of 'building before nature'.

[2.Biosphere Integrity]

SINGAPORE, E194

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The problems and issues have now become so complex and interrelated that the fears and anticipation for and of exponentially irreversible damage - and hence extinction - become increasingly realistic and likely. The ongoing dominance of an inappropriate political-economic system and the recent events making it even more inappropriate (Trump, Brexit, nuclear threat and the boycott of the nuclear disarmament conference by the major members of the guilty party, etc, etc.) does not give any hope that we ever may be able to stop the collapse... Whilst it is now also more and more clear that capitalism will 'end', one has to think about the damage it will inflict on the weakest members of our own species and on the other species and which should assist in keeping the planet livable.

So, it's probably most appropriate at present to deliberately start to develop alternative ways of surviving by reactivating those skills and relational capabilities which have assisted our species to survive for the millions of years of our evolution when we had to defend ourselves against so many much stronger factors and elements in the environment... we could ONLY have

managed to survive because we collaborated rather than think of ourselves as individualistic competitors. Without deep systemic and (inter)personal change we may as well give up the fight...

[1.Climate Change, 2.Biosphere Integrity, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Jacques Boulet, AUSTRALIA, E196*

Living in the UK, Brexit also significantly affected my decisions since in all likelihood environmental protection will be weakened by our departure from the EU.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*UK, E199*

The overall driving force is growth. Growth of the human population and connected the growth of consumption and improved health care, leading to more and more land use changes loss of biodiversity and habitats, disturbance and over exploitation of natural resource with huge unpredictable ramifications on water, soil and marine resources and ultimately in the suffocation of the natural world. This growth will also lead to more pollution and waste production that is not in control and polluting our natural habitats and the oceans already irreversibly. The climate change mitigation measures so far have been implemented mostly with detrimental effects on biodiversity (wind parks on birds and bats) but more poignantly hydro power destroying the fine balance of water sediment and nutrient flows with multiple ecosystem services that are severely hampered by hydro power expansion. The escape into nuclear is just testament of the growth philosophy that does seemingly supply endless amounts of energy without solving major issues on security and the waste problem and even more importantly would allow a seemingly endless power engine driving further destruction to natural environment, biodiversity soil and water.

Population growth is the main driver of environmental destruction and the elephant in the room. Unrestricted population growth is not compliant with the natural system and environment we are living in and rely on. We need urgently a global action plan to mitigate the population growth in all corners of the world. Climate change, pollution and unsustainable development and all the other problems are intricately related to unlimited human population growth. If we focus to tackle on this first we can address all the other issues subsequently with much more vigour and success.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 6.Population, 8.Lifestyles]

*Christoph Zöckler, UK, E203*

The above indicated environmental issues mixes causes and consequences.

Our lifestyle, that is leading to the blind depletion of our resources, is the first factor affecting the planet. Climate change, biodiversity loss, are all the results of our actions.

[6.Population, 8.Lifestyles]

*ITALY, E206*

I believe 8 and 9 are the most important as all the others are related to these. Within this categories I'd emphasise the need to 1) address inequality, 2) reduce and rationalise consumption and 3) reduce waste.

[8.Lifestyles, 9.Society, Economy and Environment]

*UK, E209*

These are all interrelated issues. As TREE AID, the most pressing issue for us is the issue of forest management and maintaining and increasing tree cover globally as a key strategy to address the interrelated problems of climate change, adequate water and food supply. We are concerned about the declining quality of soils globally and the dependence on artificial fertilizer, particularly in expanding commercial agriculture to Africa. Soil quality is reaching crisis point and without a focus on trees and vegetation to allow soils the opportunity to regenerate, we are risking a very food insecure future.

The Trump administration reduction of funding for climate change programmes and investment in coal, oil and gas is a major concern. More alarming is the talk of investment in geo-engineering as a strategy to address climate change and the implications for negative climate impacts on South America, Asia and Africa as a result. Basically the protection of the rich north at the expense of the poor south.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

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Biodiversity issues and water availability are also key. Of course, all are interlinked in Western Europe. But climate change overrides them all.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

UK, E214

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We are at a tipping point in terms of our connection to and care of our environment. The message does not seem to be being taken on board by people in positions of power (politicians and corporations) or the general public. It seems as though the problems are too big and scary so people would rather ignore them and pretend they do not exist.

We need to find a way to counter this as we can change the course we are on if we act now on climate change, population and biosphere integrity. A stronger message needs to be sent about the extinction crisis that is currently unfolding - nations must change their attitudes to wildlife and nature.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

UK, E216

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It's all related, and there has been plenty of excellent writing and thought about how to proceed. International cooperation and governance are of the utmost importance, but this also scales downward at the federal level. Big business may fund an important percentage of economies, but it will not regulate the common good, which is falling by the wayside in many cases. Relying on an intricate balance of ecosystem services provided by the biodiversity of life means that not one of the above can be ignored.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

UK, E218

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The IUCN has recognised the connection between human population growth and conservation challenges in Resolutions 15/3, 16/3, 17/17, and 18/17, which we welcome, particularly in light of UN population projections in already vulnerable regions such as Africa. In Africa, the current population is estimated at 1.2 billion, projected to rise to 2.5 billion by 2050 and 4.4 billion by 2100. High population growth rates are in part due to an unmet need for family planning. Indeed, the World Health Organisation estimates that 225 million women in developing countries want to delay or prevent pregnancy, but lack access to modern methods of contraception (this is the "unmet need"). The unmet need tends to be greatest in isolated rural areas, often overlapping with areas of highest conservation priority. Notwithstanding all of the above, the conservation sector is being too slow to respond to these realities.

We, along with the IUCN and other international bodies, acknowledge the challenges faced by the world's poorest nations due to climate change are exacerbated by population growth, with barriers to accessing voluntary, rights-based family planning information and services a major contributing factor. We would like to highlight that the Intergovernmental Panel on Climate Change has recognised family planning as a climate adaptation strategy with family planning projects eligible for adaptation financing.

In light of the Sustainable Development Goals, which call for an integrated approach to ensure their achievement, we would like to encourage the IUCN, IUCN members and the whole conservation community to champion integrated approaches to addressing conservation, which includes population. The Population, Health and Environment model is one such approach, taking demographic and health realities into account, unlike the overwhelming majority of traditional conservation programmes. PHE projects are an approach to human development integrating health and family planning improvements, with conservation efforts. Evidence shows this maximises synergies for better conservation and human health outcomes compared to single-sector approaches. The conservation sector urgently needs to partner with expert sexual and reproductive health organisations to implement this model.

[6.Population]

David Johnson, UK, E221

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Having a new President in the USA that is a climate-change denier and an isolationist who does not support a humane USAID

level of support for the poorest and most environmentally threatened in the world can only ever be a bad thing both for global environment and poverty alleviation.

[1.Climate Change]

*UK, E226*

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Carbon and methane emissions induced by consumption of natural resources need to be controlled and minimized with drastic climate action. Focusing on sustainability, resilience, and quality of life can minimize dramatic losses of human lives in the next 50 or so years.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*USA, E227*

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Although the impacts of climate change are clear and present in many areas of the world, for the DC area/Eastern USA, overpopulation and excess consumption are the most troubling in my opinion. These two factors have direct links to issues such as pollution, food/water shortages, and improper land usage. There's a noticeable disconnect in people who reside in heavily-populated cities on the East Coast of the United States with their relation to, and subsequent issues from, climate change. It's troubling to note that the signs and warnings most Americans want to see in order to "believe" the science, will be seen at a time that most scientists might consider too late or past the point of no return. It's additionally difficult when politicians choose to politicize the issues instead of holding true and honest debates on what we can collectively do as a country and society.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*USA, E228*

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The problem:

Food Security is one of the major global challenges of the 21st century. Today there are 7.49 billion humans, 78% live in developing countries, by 2050 there will be 9.6 billion with 86% living in developing countries (<http://www.worldometers.info/world-population/>). Delivering food security for all these people will require by 2050 will require food supplies to increase by 60% globally, and 100% in developing countries (FAO, 2011), while at the same time climate change is predicted to reduce agricultural production by 2% each decade this century (IPCC, 2014). Agriculture will require an unprecedented transformation to increase production while mitigating the impact of climate change. For plant breeders to deliver the necessary enhanced cultivars they will need access to significantly greater breadth of adaptive genetic resources, such diversity is only available in crop wild relatives (CWR), the original crop progenitors. The considerable value of CWR as gene donors for crop improvement is well documented and their potential to contribute to food and economic security is universally recognized. However, their use in cultivar development assumes their availability for breeders use. This is not the case, CWR are threatened in the wild (16% of CWR are threatened or Near Threatened and 4% are Critically Endangered; Kell et al., 2012) and poorly conserved (Castañeda et al., 2016 found a third of CWR had no ex situ holdings, a third had <10 accessions per CWR and 72% were a high priority for further collection, while globally only a handful of in situ sites where CWR are actively conserved exist and none meet the Iriondo et al. (2012) standard for In situ CWR conservation). If the global challenge to food security, for today and for future generations, is to be met, the development and implementation of an effective complementary programme for the conservation of CWR both in situ and ex situ is essential to maintain CWR diversity as well as to ensure the continued evolution of new, adaptive traits.

What has been done:

Since the millennium, knowledge and active conservation of CWR diversity has significantly increased. Initially with the development of an agreed definition of a CWR (Maxted et al., 2006), which enabled the identification of the breadth of taxonomic CWR diversity at national, regional and global levels and led to the proposal of a global prioritizing CWR inventory for conservation action (Vincent et al., 2014). The definition and inventory were used to highlight the global centres of CWR diversity and establish global ex situ conservation priorities (Castañeda-Álvarez et al., 2016). CWR ex situ collection priorities have subsequently been actioned by the Crop Trust and Royal Botanic Garden, Kew, working in collaboration with national plant genetic resource programme largely in developing countries (Dempewolf et al., 2014). Also a call for action for strengthening in situ conservation of plant genetic resources through the incorporation of active CWR conservation in protected area networks, and link in situ conservation to sustainable use was made by the Secretariats of Convention on

Biological Diversity (CBD), International Treaty on Plants Genetic Resources for Food and Agriculture, CGRFA along with Bioversity International to their respective Contracting Parties, together with the national focal points of the CBD Programme of Work on Protected Areas (PoWPA). However, very limited progress has been made with either global, regional or national in situ CWR conservation. Some countries have started to develop National CWR Conservation Strategies and recently the top 150 globally locations where CWR in situ conservation could most effectively be actioned have been identified (Vincent et al., 2017), but only two or three sites claim currently to actively conserve CWR diversity in situ and these are ad hoc, not coordinated in an efficient network structure.

What still needs doing:

Global action to design and implement a global network of in situ 'genetic reserves' within CWR hotspots areas is urgently needed to ensure their conservation and sustainable use, for the benefit of our current and future food security. The imperative for in situ CWR conservation is clear: to capture the diversity of wild populations that may be of use for crop improvement, these populations need to continue to thrive in their natural habitats and adapt to changing environmental conditions. Applying ex situ conservation techniques alone will not capture or maintain the full breadth of CWR diversity required by breeders and farmers to sustain food security. The FAO Commission on GRFA called for the development of a global network of populations / site for in situ conservation of CWR in the 2nd Global Plan of Action for PGRFA (FAO, 2011), having already initiated actions in this area by commissioning a thematic background study on how this might be achieved (Maxted and Kell, 2009) and subsequently holding a Technical Workshop "Towards the establishment of a global network for in situ conservation and on-farm management of plant genetic resources for food and agriculture" (FAO, 2013). Although establishing an integrated, global, regional and national network of CWR in situ sites / populations remains a widely agreed high priority (Maxted et al., 2016), concrete plans and practical field implementation have yet to be agreed or commence, even though the area that might host such site / populations have recently been identified (Vincent et al., 2017). The agreement of action plans and their implementation is timely, not just because of the need to serve the food security challenge, feed the rising human population in timed of ecosystem instability, but also to build on and formalize the in situ CWR conservation planning already initiated in many parts of the world.

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[7.Food]

*Nige Maxted, UK, E229*

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I am a scientist specializing in neotropical medicinal plants and crops. Through my career I have seen first-hand the destruction of tropical forests and some areas wehre I once collected have now been clearcut for agriculture. My collections are all that remains. Climate change is affecting all of the areas in the Americas where I have worked with unpredictable and disasterous consequences at times. The needs of an expanding human population have a direct negative affect on the environment and the effect of climate change is having a very negative effect on agriculture and food production in the tropics. Still there is hope if direct action is taken soon through international cooperation and agencies such as the CGIAR agriculture centre and conservation organizations like IUCN.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 6.Population]

*John Arnason, CANADA, E230*

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All the environmental issues are inter-related. Humanity is far too busy consuming every resource in sight and the future is bleak indeed. We live as if there is no tomorrow. At the rate at which we are moving - that may well be the case.

[3.Land-System Change, 5.Water Resources, 6.Population]

*Faisal Abu-Izzeddin, LEBANON, E232*

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Politics influencing the environment and sustainability has never been that critical.

[9.Society, Economy and Environment]

*CANADA, E234*

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As a plant ecologist, I have seen first-hand the impact of climate change on our ecological communities. These are not small changes, but devastating losses of entire seedling populations, deaths of ancient trees, range shifts, invasions, root rot and erosion from flooding, and rampant forest diseases. The synergistic impacts of human-induced climate change and our continued destruction of natural ecosystems are staggering and frankly make me cry.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

*USA, E235*

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All these environmental issues play an important role and interact / overlap. In Jordan the legislation is partly weak and laws are often not implemented. The EIA system is not functioning properly, and investments always have priority at the cost of the environment. There are some solutions being suggested for the water problems including mega-projects which require immense funding and again are often harmful for the environment e.g. the Red-Dead canal project - these problems become opportunities to get funding and for making business rather than solving problems. The energy issue is also dominated by monopolizing companies and lobbies backed by the government, often harming the environment and biodiversity, EIAs having just a cosmetic role.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 7.Food]

*JORDAN, E236*

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Inequality of consumption and lack of global perspective have

left us without leadership towards a sustainable sharing of resources.

We do not expect a political solution.

[8.Lifestyles]

*william hunt, USA, E237*

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In our country we have serious problems with water because we have a very hard draw period as a result of climatic change. As an island we suffer with more impact all the consequences of these changes. By the other side, the impact of the land use by agriculture is another important theme to take into account in Cuba.

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*CUBA, E241*

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We are living in general beyond our environmental means, with depleting fisheries, forests and other resources, due largely to over-exploitation and meeting the needs of a growing population and ever more affluent / demanding society. Resources are not limitless. Climate change impacts exacerbate the situation. Water scarcity will become a key issue in some areas. Meanwhile, many governments prioritise the status quo, and climate actions don't go far enough. The social rubric of many societies are eroded, and traditional livelihoods / indigenous management systems becoming lost. Biodiversity is in serious decline whilst habitats are converted to agriculture or fires rage. Some look to technology to reverse our impacts, but it's of course more sensible to live within our means. Concepts like 'fair trade' and 'sustainably caught' should not be fringe concepts. [1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*UK, E242*

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I consider climate change (global warming and ocean acidification) to be such a severe and urgent threat to biodiversity and humanity because of the nearness committing the climate system to passing critical tipping points. Severe as the observable effects are (for example coral reef bleaching), the true impacts of current CO2 levels are largely masked by climate system inertia. There is also inertia in biodiversity response, threat evaluation and policy response.

Because of the above considerations the mass extinction threat, and it's implications for humanity's well being, is grossly underestimated. This is as much a reflection on the failure of the conservation and wider environmental community as it is of the political process.

The tragedy of these inertia dynamics is that by the time the reality of the global warming and OA threat becomes clear enough to sufficiently influence mitigation and adaptation policy it will be too late to avoid the realization of worse case scenarios regardless of how much political will and resources are committed.

The great crisis currently playing out on the world's coral reefs should be soliciting commensurate climate change mitigation policy response but sadly this is not the case. The same situation pertains to the major cryosphere system impacts. This is why, in my opinion that situation is so grave.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Paul Pearce-Kelly, UK, E243*

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Climate change is the number one problem we are facing because of its multiple impacts on our way of life. We live on very small islands and everyday our limited land area is being eaten away by sea level rise induced coastal erosion. when seawalls are put in the waves eat away at other uninhabited places down the coast at a faster rate. The amount of heat and the drops in temperature are getting markedly contrasting - with noticeable very hot days and night and very cold days and nights whereas before the season was either cold and dry or warm and wet. We see plants flowering and fruiting out of season and certain fruit trees which used to be seasonal are now available all year long. Our Cyclones are getting stronger as well as not following its normal path. Climate change is certainly upon us.

Our reservoirs are always running dry causing water shortages where none used to happen before. It is not actually unaccounted for water but the reservoirs are not filling up as population increases and the current water sources cannot cope with the demand. Now pristine ecosystems are being considered for development as water sources for the cities and this is threatening critical ecosystem services.



The haphazard land use is threatening critical ecosystems that protect us naturally. Mangroves are being stripped from the coast and forests are lost in the name of development. If things are not controlled we will lose our water resources because of unsustainable land use practices.

[1.Climate Change, 3.Land-System Change, 5.Water Resources]

*Ifereimi Dau, FIJI, E245*

Disconnect from the natural world.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Nancy, USA, E248*

I think the subject of Society, Economy and Environment is our first and basic object for solving environmental issues.

[9.Society, Economy and Environment]

*IRAN, E249*

I am based in Asia, an area where vertebrates are classed as more threatened than any other part of the planet. Deforestation rates have barely decreased in this region, and we expect to see the total loss of various biomes in the next 8-10 years. Combined with the loss of important habitats we have high rates of hunting and other forms of exploitation.

Without the maintreaming of sustainability, and the better enforcement of multilateral agreements (i.e. CITES, CBD) we will see major, and irreversible losses of biodiversity in a very short timespan.

[2.Biosphere Integrity]

*alice hughes, CHINA, E257*

Overfishing, overharvesting natural ressources.

[9.Society, Economy and Environment, 10.Others]

*TANZANIA, ZANZIBAR, E260*

Al the current population growth climate change is affecting biosphere integrity and severall critical ecosystems are extremelly endangered.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*Pedro Sarmiento, PORTUGAL, E261*

Earth population is too big. The measures that aim to contain the growth are too soft: the Eart needs a large human population decrease in this century, beacuse all the innovation in making our footprint smaller are useless if we don't reduce the feets on the ground.

[1.Climate Change, 3.Land-System Change, 6.Population]

*ITALY, E262*

Insecurity/ environmental security is a major issue in mu view:

Population growth is a major driver for many environmental concerns (albeit that in Western Europe it is reasonably under control). However Population growth and the related issues such as food (in-)security, land- and water use changes, loss of biodiversity lead to a very unstable situation, aggravated by greedy lifestyles ("America first"). It is undeniable that the refugee problem and the large consequential migrations is related io the deterioration in livelihood in the affected countries, leading to tensions, conflicts, famine and general feeling of insecurity spreading into the (at first sight) non-affected countries.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Pieter Wit, THE NETHERLANDS, E263*

While world population continues to rise, any advances we make on the other topics will be negated.

[6.Population]

*Wendy Strahm, SWITZERLAND, E264*

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The inability of world governments to agree on and implement effective mitigation response policy for anthropogenic climate change has resulted in the continuation of an exponential growth in greenhouse gas emissions (GHGs) that averages 3.1 per cent per year since 1870. World GHG emission levels surpassed the IPCC worst case (business as usual) scenario every year since 2004. Because of increasing temperatures due to GHG emissions a suite of amplifying feedback mechanisms have engaged and by now are most likely unstoppable. These processes, acting in concert with the biological and physical inertia of the Earth system in responding to atmospheric loading of GHGs, along with economic, political and social barriers to emission reduction, currently place Earth's climate trajectory well within the IPCC's worse case scenario. For more details see Jennings (2013) *Global Policy* 4(1):32-42.

A recent study of climate change impacts to 39 large landscape ecosystems across 1,228,167 km<sup>2</sup> of the Southwest USA shows that the species composition (functional biodiversity) of most are severely threatened. For more information see Jennings and Harris (2016) *Landscape Ecology* 32(1):195-207.

Jennings has shown (in lectures) a correlation between global population growth and GHG emissions between 1870 and 2013 of 0.92.

[1.Climate Change, 3.Land-System Change, 6.Population]

*Michael Jennings, USA, E268*

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There is no prospect of the global action in the short time addressing climate change impacts. Trump's attitude to climate means that the globe's worst offender as far as GHG emissions is concerned will not play the game

Biodiversity loss is not being averted and will continue apace unless issues of land use change are averted

The drivers of most of the environmental issues are associated with increases in populations and consumption patterns.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*Professor Iain Gordon, AUSTRALIA, E271*

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For the first time the world is in real danger.

International agreements and all these conferences such as UNFCCC and many other protocols, multiple Conference of Parties, and even the Paris Accord are all useless and likely to be swept away even if anyone was actually adhering to them as there is no policing or adherence and State bodies don't do their jobs, ignoring the devastation.

State administrations are the problem as corruption is rife. NGOs bend the rules to suit themselves even if it's against nature, the environment and the rural peoples security.

[2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 8.Lifestyles]

*UK, E272*

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We are well & truly at the crossroads. As an active conservationist, being in the field for more than 20 years now, I see the time to act, by everyone, is now - right now.

No longer can things be postponed, delayed or another feasibility study to be conducted.

We all must change our lifestyles dramatically. This will not mean that more people will go hungry, but conversely less people will be hungry once the transition to a healthy planet is made.

Ecocide needs to become law. It must be illegal to commit crimes to the environment now. All policies & legislation to all countries's governments must change - now.

[1.Climate Change, 6.Population, 7.Food]

*Jim Thomas, PAPUA NEW GUINEA, E274*

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The violence done to other species, from extinction to diminishment of populations, continues to increase. It is a form of colonialism in which humans reshape the Earth to suit themselves without regard to the needs of others. The destructiveness is largely the result of inertia--human societies are organized around endless growth: more and more people and more and more consumption. The conservation movement is largely engaged in a rearward action and does not take on the causes or drivers of biodiversity decline. They are too wrapped up in the status quo. Reversing growth of the human footprint is an enormous challenge and few are giving battle.

[2.Biosphere Integrity, 3.Land-System Change, 6.Population, 8.Lifestyles]

*David Johns, USA, E275*

Exponential population growth and lack of systemic response from society is allowing accelerated climate change and biodiversity loss.

As the problem is not environmental in nature, also the solution cannot be just about environmental management, but needs to target societal interventions, ie changing human behaviours.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*NETHERLANDS, E276*

Governance is a major issue for consideration in estimating the timing for the environmental doomsday clock. How we (society in any part of the world) engage with each other to share power and decision-making is critical to address as we face increasing complexity, expectations for public involvement, equity in decision-making and respectful engagement.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*CANADA, E277*

The UN has established a comprehensive and positive framework for addressing challenges over the next 15 years with the SDGs, however national governments are not taking serious or urgent action to implement these initiatives to avoid catastrophic climate change and the consequent upheaval this will cause. More needs to be done to sanction national governments who are not meeting their obligations.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 9.Society, Economy and Environment]

*Alistair Henchman, AUSTRALIA, E278*

Climate change seems to continue to be denied despite the evidence of science and the evidence of everyday - erratic weather patterns and more frequent natural disasters - occurring worldwide.

The issue of climate change impacts on all the other issues. With erratic weather and frequent natural disasters the world becomes more complex, more impacts will be felt on biodiversity, on water availability, on energy consumption, on food supply. The integrity of natural systems impacts quality of life and lifestyles and affects everyone, but especially the most vulnerable. This leads to greater instability, irrational and unsustainable behaviours.

It is incumbent on wealthy nations to support and lead all efforts to reduce factors influencing climate change.

[1.Climate Change]

*AUSTRALIA, E280*

Where social injustice meets environmental injustice

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Jeff Black, USA, E282*

Governance: the ability to make informed decisions in a civil fashion as a country, region about any of these issues.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*george wallace, USA, E285*

- Collaboration and network is a must to face nowadays environmental issues

- Expert in behavior change need to work integratively with environmental expert to address behavior change needed in addressing the issues.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 8.Lifestyles, 9.Society, Economy and Environment]

*INDONESIA, E289*

Once climate has changed (by passing a still undefined threshold ) it will take centuries if not many more centuries or millennia to restore the climate to the state of before climate change.

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*Kresimir Mikulic, CROATIA, E291*

IPCC assessments, Millenium assessment for biodiversity, IPBES assessments

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 9.Society, Economy and Environment]

*Ruslan Novitsky, BELARUS, E292*

A synthesis of environmental problems and issues still needs to take place, so that problems are not viewed separately either from each other or from the economy.

A carbon budget for individuals needs to progress so that richer users can buy poorer people's carbon budget to stay within a global threshold, this can be done via money directly or to co-operatives to improve healthcare and education and business prospects in poorer countries.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 8.Lifestyles]

*UK, E293*

Arunachal Pradesh is situated in the north eastern part of India is 83,743 sq km in area. The population density of the state is 13 persons/sq km. It is a land of lush green forests, deep river valley and beautiful plateaus. The land is mostly mountainous with Himalayan ranges.

The climate varies from hot and humid with heavy rainfall. Trees of great size, plentiful climbers and abundance of cane and bamboo make Arunachal evergreen. Tropical rain forests are to be found in the foothills and hills and has also Alpine forests.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*INDIA, E296*

2. Biosphere Integrity. Biodiversity is under threat in Macedonia. Protected areas system is not effective. Ecological networks are identified to a certain degree but the biocorridors are not managed. The economic development relies in high degree to exploitation of natural resources.

3. Land-System Change. The forest coverage of Macedonia (~40%) is steadily increasing. The forestry system is in the process of transformation but the forest are still not managed sustainably (biodiversity is neglected, forests are exploited mainly for firewood, even the protected areas rely exclusively on the incomes from forestry and less to hunting, tourism, etc.). Traditional practices are abandoned which results in the changes of the landscape. Urbanization is increasing and presents significant threat to ecosystems.

5. Water Resources. Use of water in Macedonia is not rational (sustainable). Water supply systems are old, the sewage treatment and water purification is almost not existent (except for few towns), the pollution of rivers is on high level, natural lakes are used for irrigation or part of the system for electricity production, there are plans for hundreds of larger and smaller hydropower electric plants. On the other hand, there are internationally funding projects for improvement of the natural lakes integrity and some river watersheds.

9. Society, Economy and Environment. Public awareness is increasing but still on low level. Economic development objectives are priority while social development and environmental protection receive inappropriate attention.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 9.Society, Economy and Environment]

*MACEDONIA [FYROM], E297*

I am not a climate scientist but as an ecologist I see and quantify the impacts of climate change on the organisms that I study. I recognize that climate change is real, contributed to significantly by humans, and most importantly is dramatically impacted by our continued use of fossil fuels. Regardless, of the cause it is our moral obligation to reduce carbon emissions and take the appropriate safeguards to protect the planet. I also recognize that at the root of most of our environmental problems is the relentless growth of human population growth. All items on your list can be directly traced to exponential growth of human populations and this is not only our biggest scientific challenge but also a humanitarian one. We consume 35-50% of the primary productivity in addition to our relentless consumption of energy with wanton disregard for the other species which we are completely dependent upon. The unabated exploitation, whether for subsistence or luxury must be curtailed to a

reasonable (dare I use the word sustainable) level to insure the health of ll organisms on the planet

[1.Climate Change, 6.Population]

*Willem Roosenburg, USA, E298*

1. I am deeply concerned about the lack of political will on the part of the current U.S. government to address the greatest crisis of our time.

6. Without reducing population growth, on which all other environmental problems are ultimately dependent, nothing else can be achieved.

[1.Climate Change, 6.Population]

*USA, E299*

Self revision, ontology, epistemology, axiological

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*susan g. clark, USA, E300*

While I believe that climate change is also a pressing environmental issue, I did not select it because I feel it is driven by human overpopulation and land use change (which are related). I also think that water resources are the most immediately pressing, especially for those in dry land ecosystems.

[1.Climate Change]

*USA, E301*

I think the water resources is critical for many of the issues in our environment, e.g., land-system change, food production, population movement. Although climate change can affect water resources, the management of the water resources is going to very important for mitigating environmental impact on human civilization. We must evaluate the climate system as a coupled water-landuse-food process. The greenhouse gases emission can only be managed through such a couple system.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food]

*Prabir K. Patra, JAPAN, E305*

The new administration of president Trump is the worst possible news for the environment.

[1.Climate Change, 5.Water Resources, 7.Food]

*USA, E307*

1. Medium term threats are potentially severely destabilizing environmentally, socially and politically.

[1.Climate Change]

*USA, E311*

My view is that the growth of the world's population is the primary driver. The stress of overpopulation and the resulting mean-spirited care-less competition for money and resources is accelerating the problem. Our core-attitudes need to change and I do not know if that is possible.

[1.Climate Change, 4.Biochemical flows, 6.Population]

*Steve Shimek, USA, E313*

I think that much of it comes down to income inequality. If the rich were not accumulating so much of the planet's resources there would be more for the poor and desperate.

The wealthy are manipulating the system to maintain and advance greed.

Dis information is now a much larger concern.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

*USA, E314*

Most people forget the Climate Change and Biodiversity Conventions were signed in the same year and were linked. Somehow the conservation community has decoupled them. While climate change is a big threat...the loss of biodiversity undermines nature's resilient capacity to buffer change. We cannot ignore the loss of biodiversity as we address climate change.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources]

*Gary Tabor, USA, E316*

Integration of the renewable energy into the electric grid and vehicle to grid cars and small trucks using existing technology could power the entire planet with a near zero carbon economy. See David R. Hodas, "Integrating Vehicles and the Electricity Grid to Store and Use Renewable Energy" at file:///Users/david/Downloads/SSRN-id2827890%20(2).pdf.

This would bring CO2 emissions from electricity and motor vehicles to near zero, dramatically reduce ground-level air pollution, improve respiratory health, reduce or eliminate ecological harm from fossil fuel production.

[1.Climate Change]

*David Hodas, USA, E318*

The USA political situation is dire with the dubious election of a person who has surrounded himself with neofascists and business leaders/exploiters who have only one goal in mind and that is to sequester as much wealth as possible at the expense of everyone else in the world (particularly lower and middle class Americans). Thus, they are a massive threat to all biological and geophysical systems in the world because they do not care about the consequences of their actions as long as they have power and sequester the world's wealth for themselves. This group has many enablers throughout the world so it is not solely an American problem. To take an example, "fracking" to facilitate gas and oil production is almost impossible to stop yet it has the potential to poison most of the water aquifers in the USA yet these powerful multinational companies have purchased elections and politicians to prevent this process from becoming illegal as it should be.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 8.Lifestyles]

*USA, E319*

There is no time to waste on these issues. We need to act now!

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*USA, E323*

In responding for my country, I listed #8 (Lifestyles) as biggest problem. I know that this isn't the most pressing issue worldwide, but I responded from the perspective of the USA, an extremely wealthy and overly consumptive country.

[8.Lifestyles]

*USA, E324*

The USA's current administration is of great concern to global instability on many levels.

[9.Society, Economy and Environment]

*USA, E325*

Development continuing in areas unsafe for such due to ocean level increases, storm surges, and storm frequency and severity. The conversion of needed essential biodiversity saving habitat into human developed areas is a monumental problem.

[3.Land-System Change]

*Fern Duvall, HAWAII USA, E327*

Dealing with human-induced climate change is the most pressing environmental problem in human history.

[1.Climate Change]

*Tom Ranker, USA, E331*

Roll back of progress made toward greater energy efficiencies; repeal of commitments made at international forums (various COPS)

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

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For all three environmental doomsday clock issues of 1) lifestyles - especially energy consumption, 2) climate change, and 3) biosphere integrity - particularly because I live in Hawaii where over 400 species of plants alone are federally listed as endangered - I am considerably more concerned than in years past due to the political situation in the United States. Not only do we face a greater lack of funding to address these issues, we even lack the political will to acknowledge the critical importance of issues such as these. We can only hope that the work of state governments, private organizations, and local to international collaborations will be sufficient to avoid the impending environmental doomsday.

[1.Climate Change, 2.Biosphere Integrity, 8.Lifestyles]

USA, E333

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All of the above issues are of vital importance - I am very pessimistic on all of them - it is difficult to rank them. Overall our society seems to be indifferent and the biosphere will deteriorate - in the short term water will be a huge issue

[2.Biosphere Integrity, 5.Water Resources, 9.Society, Economy and Environment]

Jeffrey Sayer, AUSTRALIA, E334

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All humans must eat a plant-based diet. Livestock is destroying our planet and must end.

[7.Food]

Jim Sanderson, USA, E335

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Biodiversity decline in Australia is accelerating. Federal and state governments are concentrating on economic development rather than on sustainability.

[2.Biosphere Integrity]

AUSTRALIA, E336

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I consider, the sources of freshwater are the most serious concern for immediate future. It has started affecting the growing human population, the biodiversity in wetland as well as upland, niche-shifts and the local movement or migration of animals leading to increase in problems out of human-animal interface. Therefore, quick, result-oriented project should be implemented to restore river catchments and underground water reserve.

[5.Water Resources]

LALA ASWINIKUMAR SINGH, INDIA, E337

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With the increase in population and most importantly effluent lifestyle the pressure on the natural resources is increasing. Living traditionally is considered a sign of backwardness. This preference of homogeneous lifestyle is leading to nature's exploitation. Therefore, communities and their representatives are advocating drastic landuse change. This scenario will change if the definition of development which presently is limited to economy and society i.e. people centric, also includes nature.

[3.Land-System Change, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

INDIA, E339

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Water -Resources- Water is source of life. Sustainable supply of water especially of drinking water is dwindling fast. About 40 % of global population depends upon flowing streams for supply of drinking water. These streams are drying, are being polluted & dumped with hazardous chemicals. Major diseases are also water-borne, They are threat to our poor section of population.

2- Biodiversity- Biodiversity[ BD] is base for food not only for man but also for all living creatures. BD is dwindling fast, being over exploited & many species are on the fringe of extinction apart from many which have already extinct.BD is also closely linked to water. BD has to be saved, if human race wants this planet to survive.

3-Climate Change CC]- CC is slowly but definitely becoming threatening challenge for the existence of life on this planet. Though, poor may be hit first but at last nobody would escape its fury. CC is manifested in several forms like draughts, cyclones, land-slides, floods etc. If unchecked, our children would face hell on the planet rather than the salubrious living conditions, which we find now.Man take care of CC.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources]

*DPS VERMA, INDIA, E341*

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All of our problems stem from having too many people on Earth. Human population growth must be slowed, immediate and drastically.

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*Henry R. Mushinsky, USA, E342*

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I believe a complex systems approach is needed, as none of these issues stand in isolation. I have always been extremely concerned, but now have sig. more concern regarding war, justice, and equity. Ultimately we have a population problem which is causing a tipping point, while ecosystem thresholds are being reached and limits met.

[1.Climate Change, 6.Population, 7.Food, 9.Society, Economy and Environment]

*USA, E347*

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This problem in Paraguay is actually more or less related to the Society. There are not good management plans for conservation of biodiversity nor social plans for the welfare of the people in the country. The corruption probably is the bigger problem.

People are forced to rent lands to huge international farms who deforest to crops of soy bean. Also, low-income families in the country side are forced to look for food in the forest, and then they hunt even if it's not allowed.

[3.Land-System Change]

*Pier Cacciali, PARAGUAY, E348*

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The interconnection between all the problems makes a change of civilization necessary and we are unable to design one, let alone tend towards it.

[9.Society, Economy and Environment]

*FRANCE, E350*

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Others: People's awareness on issues relating to the crisis facing human survival.

In my opinion, the most important environmental problem that affects the human survival is climate change. With the rapid increment of human activities for the sake of economy, society and environment (eg. industrialization, mining, deforestation (land use system change), infrastructure developments etc.), the earth system to support sustainability is being damaged while the quality of environment to human, biodiversity and ecosystem (Biosphere integrity) is being degraded. Consequently, the Earth become too warm (climate change), the increment of human disasters, human suffers in health problems, wildlife and plants lost their habitats and being heavily traded, environment is being polluted (biochemical flow) and finally the life extinction.

Similarly, the lacking of human awareness on the importance of protection and conservation of environment to the human survival also further deteriorates the existing situation.

Hence, it is recommended to protect and conserve the environment from these adverse impacts induced by excessive human developments for the sake of better human survival.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 9.Society, Economy and Environment, 10.Others]

*MALAYSIA, E351*

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The rate of development in the Mpumalanga province of South Africa is accelerating at an alarming rate. Mapping of applications for mining and other developments have shown that almost all areas of the province are either being developed or mined or developments / mining are being planned. Protected areas are struggling with decreasing budgets and increasing pressure from neighboring communities for land for housing. The threat of illegal hunting (poaching) of all species but notably rhino and lion are increasing daily and threats from the illegal pet trade on reptiles and amphibians are overwhelming. River systems upstream of protected areas are increasingly being polluted by industries and mining effluent and also agricultural fertilizers and pesticides but the worst pollution comes from non-functioning waste water works (sewage) discharging directly into rivers and streams. The environment is on the brink of being overused and neglected beyond restoration.



[2.Biosphere Integrity, 4.Biochemical flows]

*Hannes Botha, SOUTH AFRICA, E352*

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The question relates to my area whereas I am more concerned about global threats and my answers would be ranked differently in different areas. For example land use would be the biggest issues for me globally.

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*UK, E353*

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Recent data on climate change in Spain shows an increasing loss of rainfall in critical water catchment ecosystems especially in the important cork oak regions of the south west. This process directly affects forest diversity and thus related fauna. The sustainability of forest based land use systems is under threat. Loss of rainfall in forest catchments has a knockon effect for the sustainability of both natural and irrigated landscapes. In the short term diseases of major hardwood species are taking hold as changing climatic conditions increase stress in those species. Thus there is no separation of climate change from biosphere integrity and water resources.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources]

*Nicholas Winer, SPAIN, E354*

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Over the adverse impacts of Climate change is consensus and this issue will remain as the main, real, rapidly advance concern facing human-kind during this century. The main reason why we observe climate change backs to our misunderstanding on ecosystems stability though more times we see our footprints on degradation on fragmentation of natural ecosystems, we would not relate it to our lifestyle. I believe that the growing rate of climate change is relevant to completely anthropological disturbances.

[1.Climate Change]

*IRAN, E356*

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1. Marine pollution by plastics: The existence of micro plastic fibers at sea have been identified at trophic chains levels, including zooplankton and fishes. In few years ingestion of micro plastics by human consumers could be a human health problem to address.

2. Over exploitation of marine resources. As consequence of global market, marine products demand is increasing worldwide. The result is that countries in west, east, north and south are increasing fishing power and fishing overexploitation in detriment of small scale fisheries. International regulations implementation is very weak and management of the fisheries resources by FAO and Regional Fisheries Management Organisations is not as strong as should be mainly due to fails in monitoring and control. Improved the RFOs and FAO capacities in control and surveillance is a necessary step to improve the situation of many stocks or reverse the status. And a strong control of the IUU fleets and the black international fishing markets.

[1.Climate Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Juan A CAMIÑAS, SPAIN, E358*

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Jordan, with its very limited natural resources, is seriously affected by desertification, urbanization and a rapidly growing population. About 80% of the country's territory can be defined as rangeland. Obvious effects of climate change like erosion and land degradation, as well as unsustainable practices like overgrazing, illegal logging and environmental pollution, cause all dramatic pressures on the highly vulnerable ecosystems and threaten their numerous services provided to the people.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*JORDAN, E361*

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Impacting all living things, climate change threatens to fundamentally alter the relationship of all species to their habitat. Fish stocks are at catastrophic levels, due, in part, to changing water temperature. Hot and cold cycles have changed growing seasons. Animals are experiencing extinction at a rate not seen in the historical record.

[1.Climate Change]

*Michael Hill, USA, E362*

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Only deep changes in our lifestyles and social structures, supported by friendly technologies, they can correct course towards a social and environmental collapse.

[8.Lifestyles, 9.Society, Economy and Environment]

*Gabriel Real Ferrer, SPAIN, E363*

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The private sector is targeting the commune natural resources in an attempt to privatize all things. To do so, individuals and groups of interests use violence and corruption to keep the population in poverty and benefit from the outsets of war and catastrophes.

[9.Society, Economy and Environment]

*BURKINA FASO, E364*

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All the issues are directly related with environment as causes modulating the environmental changes, except for food; in that case the relation is inverse (environmental changes can influence on the availability of food crops, etc.) or scarcely direct (in the case that food needs, requiring cultivation of former natural areas, can increase desertification, soil pollution etc.); however, the destruction of natural areas to increase crop surfaces do not use to be inspired in providing food for hungry (millions of) people, but on enriching as few people and multinational enterprises.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*SPAIN, E365*

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Third World War will be because of water resources... climate changes will affect quality and quantity of water resources, with immediate reflex in food production... All this will be strengthened by the increasing population.

[1.Climate Change, 5.Water Resources, 6.Population, 7.Food]

*Roberto E. Reis, BRAZIL, E368*

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If we continue to simply manage issues #1-9 from the effects side of things (i.e. the 'symptoms') and not address the root cause (our ethics and the meaning of being fully human), then we will continue to fight the consequences of our beliefs and values. The roles of faith and beliefs and values are at the heart of why humanity and the earth are facing multiple crises. The role of faith communities and the arts can help humanity dig deep and choose doing what is inconvenient and painful; to choose love.

[10.Others]

*SINGAPORE, E369*

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Climate change is especially important but we do not have to forget that it is a consequence of our common lifestyles and society. Therefore, I did not select it in my doomsday clock, and I put Lifestyles as the cause in the first place! Because it is there where the change could and should start, we could never achieve any change in habits and minds if it is not reflected in our daily lifestyle.

Anyway we are now far of being able to stop Climate change it is a reality, and also the last opportunity of establishing the change.

[1.Climate Change]

*SPAIN, E370*

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The current president of the USA and the cabinet members he has put in place are clearly set to undermine as many environmental regulations as possible, and to prioritize businesses over environmental policy. They will most certainly try to back out of all international efforts to curb climate change. I find this deeply disturbing and frustrating. The USA is a leading contributor to green house gasses and therefore should be a leader in efforts to change our lifestyle habits to help the world. It is extremely arrogant and ignorant to ignore scientific evidence documenting the climate change and to pretend we have no need to work with a global community to attempt to reverse environmental degradation.

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows, 8.Lifestyles, 9.Society, Economy and Environment]

*USA, E372*

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The lack of education and awareness on the systemic view of our planet is huge. The consequence of that is widespread unsustainable lifestyle, consumption and production patterns.

[7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Mirian Vilela, COSTA RICA, E375*

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All in all, I believe that no environmental issue can be taken into consideration solemnly by itself. All are interrelated and dealing with one without considering the others will be insufficient to prevent a doomsday scenario. For instance, for food to remain available to all, climate change impacts on agriculture must be mitigated, temperature levels must not rise above a certain threshold, social systems must allow all people to purchase sufficient food, water availability must be secured through the integrated management of each basin, population growth must be controlled, lifestyles must be changed to promote less meat intensive diets, agricultural practices must not encroach on pristine natural areas and conduce to unsustainable land-system change, agrobiodiversity must be maintained, biochemical flows from agricultural inputs must be controlled and biosphere integrity must not be threatened by agricultural production. There is no way to secure food availability for all, without considering all other variables. And the same is true for all issues in this survey.

Overall, I have chosen, society, economy and environment as the most pressing issue, because in order to solve all the above environmental issues we need a complete change in the entire social, economic and political system. We need to build a circular, steady-state economy, implement participatory models of governance, and rethink our sociocultural ontologies, teleologies and civilizatory models in order to build the foundations of a new just and sustainable society, which operates in harmony with the natural cycles of the earth. In this process further research is much needed, yet many proposals exist in multidisciplinary fields such as political ecology, ecological economics and industrial ecology and ideas and concepts such as ""buen vivir"", ""food sovereignty"", ""degrowth"", ""social metabolism"", ""circular economy"", ""biomimicry"" and many more... I advise to build on those approaches and the insights brought by such ideas for the construction of a better future for all..

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Martin Calisto Friant, ECUADOR, E376*

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Climate change is a real threat to humanity that fortunately man can mitigate the effects.

The lifestyle is a very worrying fact because humanity is currently characterized by unjust, selfish behavior. Those who possess waste and exploit the poorest.

Morality has less and less place in the lives of people and indifference is in full swing.

As for Social, Economy and Environment, they are of concern to the countries of sub-Saharan Africa characterized by wars, bad governance, imbalance in the fixing of raw material costs, corruption, erosion of biodiversity, illegal exploitation of natural resources.

[1.Climate Change, 8.Lifestyles, 9.Society, Economy and Environment]

*ELOMA Ikoleki Henri-Paul, GABON, E377*

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Global Health

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Arturo Curiel, MEXICO, E378*

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I am surprised to see how little (if any) attention is paid to the extinction of species. We know about the disappearance of dinosaurs, and the dodo and new described species regularly fill the front page, but the extinct species receive no attention whatsoever while their numbers are extremely high. A topic related such as the shifting baseline syndrome should get much more attention.

[2.Biosphere Integrity]

*Marc Argeloo, NETHERLANDS, E379*

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I lived and did biology work in Alaska from 1975-2001 and since then have continued my biology interests (marine mammals)

while living in Hawaii. In the past two years I have traveled to four countries in east Africa. My experience in east Africa is what caused me to chose population as the number 1 problem and water as number 3. Impact of drought there on the people, the wildlife, and the landscape are phenomenal and unsurmountable unless population growth is brought under control. Of course climate change is involved there and everywhere else. I checked yes in the box for question 1-2 largely because of the new US administration's position on climate change, but I was quite pessimistic about peoples' willingness and ability to resolve that anyway. Of course all the other topics are of concern also. I almost picked biosphere diversity as one of my three because I expect we will see ecological turmoil and radical shifts in species abundance patterns before long. Who knows what will happen then.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population]

*Lloyd Lowry, USA, E380*

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I worry that we may be too late to do anything about this problem, but we have to try.

[1.Climate Change]

*USA, E384*

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Although we need to think of the future, there is no that future without today. Thus there must be a balance between environmental concerns and the needs of the today's population.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*TANZANIA, E385*

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Tough climate change is the more important midterm issue, water is of immediate concern, water resources have been depleted in many countries and together with population growth and pollution, water will be crucial in the next few years.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Carlos, MEXICO, E386*

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Is necessary to determine rational land use politics, soja crops or cattle ranching are being exploited well over sustainable rates. That land should be converted back to forest patches, not only to replenish the atmosphere gases, but to provide refugia for endangered species.

[1.Climate Change, 3.Land-System Change, 10.Others]

*ECUADOR, E387*

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Kenya is generally a water scarce country. The general water cycle is related to the climate stability. Climate change thus has disrupted the water natural resources and the water service delivery.

[1.Climate Change, 5.Water Resources, 7.Food, 9.Society, Economy and Environment]

*Njeri, KENYA, E392*

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Namibia is in the middle of two deserts, Namib and Karahari. Despite relatively good governance, good environmental policies, the lack of water resources and inequality between people affect the environment of the country. There is an escalation in rhino and elephant hunting and catastrophes related to drought and flooding.

Climate change is quite obvious here and mitigation is what the country is struggling with at least in the mid-term. Long-term strategies need to be discussed so that the country does not only rely on hope that it rains or that the drought does not continue for long period of time. However, Namibia can also serve as an example of sustainable living with its regulations on the usage of water and recycling of used water.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 7.Food, 8.Lifestyles, 10.Others]

*NAMIBIA, E393*

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I regard the 4 ticked issues above as being the key over-riding global concerns facing us as a species

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population]

*Dave Morgan, SOUTH AFRICA, E394*

Climate change is driving the different weather patterns; hottest Summer in Australia, wettest March in my home town (by 3x the average) and other observable anomalies. Nothing we do will have a positive effect on our children's future unless we first address the human-caused changes to the Earth's climate.

Given above, do not give up on attempts to save fauna & flora species and ecological systems under threat. Obviously interaction between these two concerns.

If population growth continues, neither of the above goals will be possible.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*AUSTRALIA, E396*

Climate is already changing and having impacts on both wildlife, plants and people. There is a need for politicians to engage with the reality of what is happening rather than trying to stall because of business interests.

[1.Climate Change]

*UK, E398*

Climate change is a global issue and poor country and indigenous peoples who did not participate to the causes suffer a double injustice as they are more than rich modern countries depending on the environment for basic needs. Our use of power (in France nuclear power) is a non sense. If we do not understand that we cannot continue to consume resources without taking into account the environment and the future, our existence on earth is far from allowing the future generations and the powerless people to survive, and for sure to live well. Our lifestyle has to change, and all the institutions, including the states and international organizations, have the responsibility to warn us and to take consequent action on the effects of our consumptive mode of existence. We need to have access to wealthy food, water resources exempt from pollution, and to avoid consuming all the environment for more development, including urban development. We need wise cities. One of the issue is that we consider each of the consequences of our actions separately when in fact they affect our environment globally. Consequently whenever a new action or project is evaluated, there should be not only an environmental and social impact assessment, but a thorough global assessment of past and other changes.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 7.Food]

*roue Marie, FRANCE, E401*

Land-System use, climate change, Society, Economy and Environment and Water resources are the main issues which affect Africa which are slightly different than what happen in Europe or America. People are poor and their main resources are the natural resources. Every activity which affects the natural coverage however causes degradation of environment, climate change and water cycle.

[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 9.Society, Economy and Environment]

*Rakotoarisoa, MADAGASCAR, E403*

I am concerned about the current rate of natural resource exploitation coming from the lifestyle in industrial countries, but also the increase in living standards in less developed nations increases the demand for natural resources. Increased meat consumption, as well as future security measurements lead by the US concern me as well.

[3.Land-System Change, 4.Biochemical flows, 8.Lifestyles, 9.Society, Economy and Environment]

*ICELAND, E405*

In Pakistan we are suffering most due to climate change our glaciers which are boarder in China are melting fast due to pollution there flash floods r destroying villages thou KPK has started billion tree planting project will take time to have its effect. we have leadership which is least concerned about enviornment as they are building coal plants & ignoring public concerns secondly they are destroying the food baskets by making industrial estates on prime agricultural land .population is exploding with sick people as there is contaminated water for masses abundance of pesticides that too expired are used due to which we have high CANCER rate .shortage of fresh water is a serious concern of which the govt. is oblivious.

[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 8.Lifestyles]

*Amra javed, PAKISTAN, E406*

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The "Lake Chad" is one of the world's largest and most historical Lake located in the Sahel region of Africa which is one of the most vulnerable regions to climate change in the World. It borders North-Eastern Nigeria, North-Western Cameroon, South-Eastern Niger and South Western Chad republics. The lake was around 25,000 km<sup>2</sup> in the 1940s and approximately 560,000 km<sup>2</sup> (Five hundred and Sixty Thousand Kilometers) some thousands of years ago as indicated by some geo-archaeological and historical evidences, the recent of which was the accidental discovery of an ancient Canoe in the desert of Yobe state in Nigeria , in the year 1987 by a peasant farmer in the town of Dufuna village of Yobe state, while digging a well in quest of water for his domestic activities; this Canoe is dating back to over Six thousand years (6000) and it was discovered in a location that about Five hundred kilometers (500 km) away from the present day bank of the Lake which presently stands at Coordinates 13° 0' N 14° 0' E with Surface area of only 1,350 km<sup>2</sup> (520 mi<sup>2</sup>) as at 2010. The Lake Chad sustains the livelihood of approximately Eighteen million people (18, 000, 000) including indigenous peoples from the Kanuri, Tourage, Fulani (Mbororo) as well as other Africans that came settle from Western, Central and the North African regions. Although the presently ongoing unrest in the Lake Chad Area has displaced many of the inhabitants who are now temporarily staying out of the Area.

The drastical drying of this Lake is as a result of the incessant impacts of the ongoing climate change in Africa, due to the fact that people living around its feeder rivers affected by climate change and in trying to adapt to this change in their environment such as low precipitation (rainfall) began and continue to keep damming of water flowing through their territories for irrigational activities as well as for hydroelectric power generations along the courses of some of these feeder rivers since the 1960s when most of the African countries of the Chad Basin region gained their independence which brought about rapid developments in the various neighboring countries including building of Dams to generate Hydroelectricity. There are many feeder rivers of the Lake, but the regular once are the River Yobe and the River Ngadda, but the most important and the most affected feeder river under this scenario is the River Shari (Chari River) which originally supply's about 90 % of the total volume of water coming in to the Lake Chad, originating from the Central African Republic passing through Cameroon, and through Chad then finally empties in to the Lake Chad. Many scientist and physical geographers reached the conclusion that the flowing of the River Shari water in to the Lake Chad was affected as result of the construction of the Lagdo dam in the late 1970s along the Lagdo Reservoir which is a lake located in the Northern Province of Cameroon with an area of 586 km<sup>2</sup> and Coordinates of 8° 53' N 13° 58' E. Furthermore some experts also believed that the drastically drying of this Lake Chad could be attributed to the very high temperature of the Sahara desert and its surrounding Sahelian environments where the Lake Chad is located which has an average of 40 °C (104 ° F) making evaporation of the Lake Chad water faster than normal resulting in the faster drying of the Lake when the feeder rivers are no longer coming like before while some other experts believed that the Lake dries drastically because of the Sahara desert dry hot Wind systems (Storms) such as the annual Wind storms of 100 days originating from the Bodele depression located at 16° 57' 22.4" N 17° 46' 51.2" E blowing over the Lake Chad at speed of 47 km/h 29 mi/h where it peaks the moisture or the waters of the Lack Chad in it later graduating in to a Jet streams that finally showers over the Great Amazon rain-forest of South America.

[1.Climate Change, 5.Water Resources, 9.Society, Economy and Environment]

*Babagana Abubakar, NIGERIA, E407*

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All efforts to make possible a viable long term balance between population and natural renewable resources uses and conservation are inviable as consequence of population growth. No progress in economic development can tackle the growing population real and even less they perceived needs.

All great environmental issues (even global warming, especially biodiversity destruction) are direct consequences of human population non stop growth, despite its evident slowing down. To compensate a lower birth-rate people is living much longer.

[6.Population, 9.Society, Economy and Environment]

*PERU, E408*

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Resource over-exploitation and rapid urban development in most parts of the world. This is coupled with the increasing negative impacts of climate change and lack of political will to tackle these problems.

[1.Climate Change, 3.Land-System Change, 9.Society, Economy and Environment]

*Felix Olorunfemi, NIGERIA, E409*

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Climate change is already redefining coastlines and the weather here in New Zealand.It is likely to impact our agriculture and

other climate-sensitive industries, our native ecosystems, infrastructure, health and biosecurity, as well as having broader social and economic impacts.

New Zealand can expect to see changes in wind patterns, storm tracks, the occurrence of droughts and frosts and the frequency of heavy rainfall events as well as rising temperatures. The impacts of climate change in New Zealand will become more pronounced as time goes on.

[1.Climate Change, 9.Society, Economy and Environment]

*NEW ZEALAND, E412*

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Mankind must solve the climate change problem - unless a weather like on venus will reach earth and end all life. Period.

Below this, it is important to save the oceans. Stop polluting with plastics, and assure the survival of the top predators (sharks esp.).

All other issues are important as well, but more for humankind (living on like before without too many changes) - earth and nature will cope with the other issues without us, if necessary.

[1.Climate Change, 2.Biosphere Integrity, 9.Society, Economy and Environment]

*Heiner Endemann, GERMANY, E414*

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Nuclear power is a threat namely with the emitted radiation and the nuclear waste a threat for generations to come.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Cornelia Hesse-Honegger, SWITZERLAND, E417*

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Everything is interconnected. My primary concern about biochemical flows is affected by over consumption patterns, land use and increasing population. Climate affects it all. I am very concerned about loss of biodiversity, again fueled by the previous causes. Thus it is hard to separate any one environmental problem from others. I am extremely concerned since the US presidential election. The US needs to be a leader in reversing environmental wrongs, and I feel the election has set the US environmental program back 40 years.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Keith Williams, USA, E418*

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All these problems are inextricably linked. There will be major consequences if we don't get our lifestyle/population in sync with our use (and dependence) on the earth's biophysical systems. Mother Nature bats last and the victory for her could be devastating for us and many other species on the planet. Life will prevail but it could look very different than what it does today.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Cliff Wallis, CANADA, E420*

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Atolls are 'living' systems in that there is no part of the atoll that does not derive from a living source. Modern, big-country thinking in terms of development has led to severe problems with the material creation (corals, foraminifera, calcareous algae, shells) and distribution so needed for the islands to retain their integrity. The 3. Land system change concerns alterations to the land, coastlines, beach ridges, beaches, offshore intertidal platforms and offshore reefs that are causing sand/rubble-formers to die and distributions systems (waves, currents, storms) to fail to deliver the materials where needed. There is not much time to correct this as irreversible changes are being made now. In 4. Biochemical flows, we add to that sewage pollution from the land that has killed off corals and foram sand systems, and probably resulted in the on-going ciguatera problems. In 7. Food, there are no extreme stresses caused by reduction in agricultural lands, a shift to imported foods and ciguatera making reef fish risky. This has led to stunting and other developmental issues in children of late.

[3.Land-System Change, 4.Biochemical flows, 7.Food]

*TUVALU, E421*

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The Paris Agreement and its implementation comes too late to keep global warming under 2 degrees C. State Parties are taking the next 5 years to implement the Paris Agreement while the atmosphere keeps getting warmer almost exponentially.

Droughts and flooding occur with greater frequency now, and polar ice caps and glaciers are melting beyond redemption. Land use change, including REDD+ and soil sequestration cannot absorb carbon in sufficient amounts, and their sequestration of greenhouse gasses is really only temporary. these carbon sinks will over time release whatever carbon they sequester. There is no such thing as carbon neutrality.

The UN and FAO definitions of "forest" allow more plantations of non-native species to the detriment not only of forest dwellers as well as humanity in general.

I am concerned about NDC's and the use of offsets to make up significant portions of reductions of emissions as offsets are not reductions but more emissions. Markets of carbon do nothing to reduce emission but are actually a perverse incentive to continue to emit greenhouse gases.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 7.Food]

*Alberto Saldamando, USA, E422*

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In their effects on human wellbeing, many drivers interact. Currently, the role of biodiversity loss is usually negelected, however, when discussing e.g. climate or land use effects, and mitiagtion and adaptation options. This leads to poor conclusions.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 8.Lifestyles, 9.Society, Economy and Environment]

*SWITZERLAND, E423*

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The change in land use, from natural forest, woodland, grassland lands (ecosystems) to cultivated lands, rangelands and urban systems is of high concern, since it is the ecosystem services of the natural ecosystems that considerably and significantly contribute to the sustainability of agriculture and cities, and also provide resilience to climate change, to the agricultural and urban systems. Expansion of agriculture and sealed areas is at the expense of natural areas, thus risking the sustainability of human development. Land-System Change is caused by human population growth and the increase in consumption per capita, and leads to reduced resilience to climate change.

[1.Climate Change, 3.Land-System Change, 6.Population]

*uriel safriel, ISRAEL, E424*

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Human population and climate change go hand-in-hand.

Put simply, there are too many of us for the Biosphere to sustain if we continue to place pressure on the planet's resources as at present.

If each individual made less demands on the earth's esources, it will mean little if the NUMBER of people living on our Planet keeps on rising.

This is a most difficult issue for nations and politicians to address, but if we fail to address it, the future of our Planet Earth is in peril.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*Lorraine Cairnes, AUSTRALIA, E426*

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One of the biggest problems today is that the public and political opinions are so easily manipulated, and actions tend to be p=based on "poll politics" (how many people think what) rather gthan being truly evidence-based - science -based. Even the scientists today have so many vested interests in the processes and problem. This all amounts to a single issue: the public (and through gthem ghe politicuans) need to be be BETTER EDUCATED.

[9.Society, Economy and Environment]

*Grahame Webb, AUSTRALIA, E427*

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Micro-plastics and their entry into the food chain would be one of the key global issues if not overshadowed by the urgency of climate change.

Humans are prograded to respond well to crisis. As our climate and ecological services continue to degrade, there has been a mainstreaming in response from businesses. It may actually be corporate leadership that is required to trigger effective government responses.

[4.Biochemical flows, 9.Society, Economy and Environment]

*Dan Kraus, CANADA, E428*



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Our area is facing development of pipelines through sensitive national forests. Fracking remains popular and constant and endangers the water supplies. Contamination of streams still needs to be improved.

[3.Land-System Change, 4.Biochemical flows, 5.Water Resources]

*USA, E429*

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The population of the Earth is expected to reach ~9.5 billion people by the mid-twenty-first century. Such an explosive rise in population will create the demand for a 70 % increase in food, feed and fiber production. Perhaps one of the greatest challenges is to increase the food production for a rapidly growing population in a sustainable manner. However, land is a limited resource and agricultural use of land will be in competition with land use for habitation, infrastructure and industry. Any modifications to the existing patterns of land use will affect the resilience of ecological and socioeconomic systems. Therefore, the dilemma is to increase the crop production without a significant increase in the use of arable land. Accomplishing these goals will become increasingly difficult under changing climatic conditions and the resulting effects on crop growth, yield and disease susceptibility. The changing climate may also influence the nutritional quality of crops. There is a pressing need to develop suitable strategies for increasing global food production without any additional social, economic or ecological pressures

[1.Climate Change, 3.Land-System Change, 5. Water Resources, 6.Population, 7.Food]

*Vishal Tripathi, INDIA, E432*

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War will damage more biodiversity.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources]

*SOUTH AFRICA, E433*

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Climate change threatens not only many species of plant and animal; it also threatens the long term survival of the human race.

Biosphere integrity is affected by the first issue, but also by increasing human population and destruction of habitat.

Water resources are also threatened by the first issue and the increasing human population, and could lead to mass starvation and conflict over water resources.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources]

*David Edge, SOUTH AFRICA, E434*

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All of these are important issues that need to be addressed. We need to think about sustainability to meet the population's needs for today.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*USA, E436*

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The most pressing challenge of the modern age, heading towards critical, is the exponential increase in the human population. Upon analysis, all other issues are results of this trend. There are changes in the environment which would be occurring independent of humans, but are accelerated or skewed by human influences. Most others would abate should the human population decrease to sustainable levels.

[6.Population]

*Karl Westphal, AUSTRALIA, E437*

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In the United States there is a general hostility toward anything that is not mercantile - business-centric. Business interests are often blind to reconciliation. Political will in this country generally stems from big money. It is disheartening.

[2.Biosphere Integrity]

*USA, E438*

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All of the above are crucial issues that are somehow related with one another.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population,

I would like to mention the inter connection of the environmental issues listed above. The population growth will have an impact on food demand and security.

The population activities are inducing changes in the land use systems. Most of the time, we observe a degradation of several ecosystems and reduction in the services they provide to humans, especially for the poor people (poverty traps).

Water scarcity is already a big issue in several countries in Africa, which is having an impact on the food production and the society. Climate change may induce significant reduction in the amount of precipitations and the availability of water for different uses.

Biochemical flows generate a pollution of different origins, mainly from agriculture and mining.

Urbanization is increasing in several cities in Africa and also where. New lifestyles develop or emerge. This is having an impact on the food demand at some local level but also at the global one.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Mejjati Alami Mohammed, MOROCCO, E444*

Climate change is definitely the most threatening environmental issue at the moment, it is speeding up and the current political situation (USA) is not very promising what comes to gaining better results. Also the huge population growth and the causes of climate change together may lead to masses of climate refugees causing crisis, wars and political setbacks. The risk of diseases and lack of proper food and hygiene will result in massive problems.

[1.Climate Change, 6.Population, 9.Society, Economy and Environment]

*FINLAND, E445*

#### Landscape Connectivity

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 6.Population, 8.Lifestyles, 10.Others]

*Pablo Arturo Lopez Guijosa, MEXICO, E446*

The most crucial climate change issue for Kenya's decision makers at all levels (nationwide and within county), is rainfall, and, in particular, its variability at all timescales. Climate variability is a normal phenomenon in Kenya today, over a specific month, season, or year. Floods, droughts, and other extreme weather conditions have become more common, and they have damaging effects on agriculture, livestock, wildlife, tourism, health, water resources, hydroelectric power generation, and the many other socio-economic sectors that form the core of the society's basic livelihood survival.

#### Climate Change and Water Resources

· Surface water resources for which most of our people depend on are strongly influenced by climatic factors and are rare in dry areas. With this scenario, future water development will focus increasingly on ground water but available information remains largely inaccessible. But limited access in some areas due to poor implementation of laws/policies and/or management. The biggest challenge is managing increasing water demand together with climate variability/change. Frequency of floods/droughts etc) have increased of late and may worsen. Damages and costs are great because of limited focus on disaster preparedness.

· Available Climate information and forecasts not used adequately due to lack of trust on the value of weather forecasting and poor packaging of information and dissemination methods. Empowering vulnerable communities to use climate information should be key.

· Conflicts due to decreasing water availability and inadequacy of current management systems, coupled with customary systems of water management are making things worse. Rainwater water harvesting is hardly practiced in many parts of the county, largely due to high poverty levels.

#### Climate Change and Health

· Climate variability and climate anomalies are key drivers in the increased incidence and spread of climate sensitive diseases such as malaria, dengue, cholera, meningitis, rift valley fever) in my county. Other important factors include poverty, drug resistance, demographic, land use changes among others.

· Assessments of climate impacts are difficult due to high spatial climate variability and lack of long-term data series from

different places in the country.

Addressing the problem

· Incorporation of seasonal forecasts into decision making and developing reliable indicators; down-scaling climate information could be used to address climate change issues. Further, mapping and characterizing worst affected areas and putting in place mitigation and adaptation measures should be started.

· Exploring the Use of Indigenous Knowledge System in Climate Change Adaptation should be considered.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

*KENYA, E447*

What we lack most are effective change management and governance systems that are not only effective in themselves but also enable us to work across all the SDGs. This is one reason I picked 'food' as the first area of concern: it spans all of the SDGs.

Excellent methodologies exist but are often ignored in favour of focusing on 'easier' topics like air pollution: things that can be measured and engineered. But this is not the biggest issue: we can measure a lot of things, we know about planetary boundaries (not everything but enough to take action), we have excellent scientific explanations and technical solutions. And yet we continue on a path of decreasing sustainability. Why?

It would be easy to ascribe this to lack of will: lack of political will, lack of individual insight, lack of corporate commitment. But again: what politician, what individual, what corporate CEO would openly profess to favour extinction of the human race? What is lacking is the 'glue' to bring together all these insights and all this competence in a coherent way: an agreed methodological approach (or approaches) that includes building visions of multiple desirable futures, and participatory tools to realise them. The visions to engage hearts, the tools to engage hands.

A foundation like Asahi could play a key role in highlighting the importance and the potential of shifting our attention from problems and marginal improvements to visions and transformation.

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*Marilyn Mehlmann, SWEDEN, E448*

We live within systems, with all parts affecting other parts, so delineating these separate issues is rather arbitrary---they're inter-related (even those I didn't check). I didn't check biochemical flows because I don't know much about them; and I didn't check land-system change because you asked me to think of my own country---but it's vital in other countries.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Carol Colfer, USA, E449*

(Note :we will keep 99.99% Environmental Protection in all these Refineries and Petrochemical complexes as per UNEP Norms (International Norms)TITLE -My suggestion these 20 nations to start 500-40 New refineries in following christen ,Muslims 20 nations , and each will have 200-20 New Petro chemical complex , plus Many new Modern smart Cities My This Idea will save billions Poor Human s Population of 20 crude oil gas rich Nations those economy main very strong pillar is Trade of crude oil ,gas Now there economic hurt badly ( As Crude oil rate fall down to lowest 20 \$ Per Barrel due to Low cost Shale oil ,gas ( USA), My Idea is from Made in USA Shale Gas -oil USA Scientists CAN NOT Make 99.9% Pure Diesel ,Jet Fuel ,Wax, many Solvents ,Kerosene , Lubricant , LNG,LPG due to very high process cost to make PP,PE, Poly Carbonate +from Shale Gas-oil )My This Idea will give 400 Lacks new jobs to unemployed Mild educated ,graduates , experienced christen ,Muslims of these 20 Nations and Its can provide Trillions +Trillions \$ profit, fortune ,development prospect ,Homes , New Smart cities Jet Fuel, Petrol , Diesel , Wax, many Solvents like CIX , Remex, Kerosene ++ LNG, LPG ,PP, PE, Poly Carbonate , Amine , Glycols , Ethoxylate + ( Billions Kilo liter PY )many shopping malls, KFCs, MacDonald's, Subway shops , (20,000 ) Bukhari Chicken Kabsa restaurants ( by Al-Jubail Industrial City KSA )Noted this Chicken Kabsa is complete food , very health Conscious ( Not fast food ) all with pure meat products of International Norms my idea will save Billions human life's s poor Below poverty line ) (below -below poverty line ) , following Crude Oil gas rich following 20 christen ,Muslims nation s after implementation my this idea they will be live like middle rich , wealthy with fortune ,prospect , zero Poverty many years+ My This Article support complete Human Kind and Environmental as per United Nations (www.un.org)UNGAUNSC,ABD,World Bank,IMFNorms hence 100% on top merit inPublication ( NoteMentions20christen Muslims nations are(1Angola ,2Southern Sudan3Venezuela4Nigeria 5Ghana,6Saudi Arabia 7Abu

Dhabi,8Iraq 9Iran 10Kuwait,11Oman,12Jordan,13Qatar,14Bahrain,15Malaysia 1Brunei17EastTimor18Indonesia19Chad20 Russia)(those economic hurt sharply )(Note(New Refineries =NRs),(NewPetrochemical complex=NPCC)

[1.Climate Change, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Dr Ruhel Chisty FRACI CChem A(Forced Past ) MRSC CChem A, INDIA, E450*

Taiwan is not a member of United Nations. In theory, Taiwan is not bound by United Nations Framework Convention on Climate Change, Kyoto Protocol or even Paris Agreement. Til to date, Taiwan did not build up its own joint implementation, clean development mechanism, carbon market, given that Taiwan has passed its new climate law named GHGs Mitigation and Management Act in 2015. The government has reiterated that it would insist on the non nuclear homes policy and right now the uncertainty for the power supply is very challenging for the government and industries.

It is worthy to continue monitoring the climate policy initiated by the government and to evaluate the performance of the new climate law mentioned above.

[1.Climate Change]

*Ying-Shih Hsieh, CHINA, E451*

The interconnectedness of the all the issues above restrict the identification into specific categories. Thus the links between water resources, biochemical flows, biodiversity, climate change, population and food security are linked with each influencing the other. In a South African context, these are substantial and if not addressed individually and connectively the "environmental doomsday" will have a significant impact on society and economy of the southern African region.

[2.Biosphere Integrity, 4.Biochemical flows, 5.Water Resources, 6.Population, 9.Society, Economy and Environment]

*Janet Snow-Macleod, SOUTH AFRICA, E452*

The fast increase of the human population will affect all the environmental issues and accelerate migration and security. For Europe with the present population growth in Africa there will be an enormous pressure from Africa on the resources and the stability.

[2.Biosphere Integrity, 6.Population]

*NEDERLAND, E454*

I am trying to contain the impulse of indignation with the skeptics, who oppose ""anthropogeny."" Human action is responsible for the physical destruction of the planet and living beings with the premonition of extinction of the human race. I have been following for more than five decades the advance of climate change in Brazil. I have conclusive data that assure me that man is a compulsive predator of ecosystems.

This summer temperatures surpassed 32 degrees Celsius, even in regions that in the same period 30 years ago the maximum did not exceed 20 degrees centigrade. We had records in some regions the temperature in the shade was above 41 degrees Celsius for several weeks. We are in hell and temperatures are still high.

This summer rainfall in addition to irregular rainfall had a decrease in approximately 40% of its volume compared to previous years. Signs of desertification already affect several ecosystems. It is estimated that agricultural, livestock and industrial processes consume 50% of our drinking water.

I am talking about a country of continental dimensions with deep social inequalities. It has more than 8,515,000 square kilometers. East coast of Brazil with more than 7,367 kilometers of seafront, Size two and a half times India. Twenty-three times Japan. Ninety-one times Portugal. Four hundred and seventy-eight times Kuwait. These considerations are to elucidate the size of the environmental damage to the mute with these climatic changes here in Brazil.

Brazil is becoming a bovine country. Herd estimated at 215 million head. While the human population is 204 million people. There are currently more than 20 million unemployed people motivated by government corruption, political and economic crisis installed in the country. The judiciary is hostage to bad guys. Investments in education, health, basic sanitation, public security, urban mobility are lacking. More is killed here in Brazil than in the Syrian war or in all the terrorist attacks registered in the world.

The national territory has more than 25% of its area occupied by the cattle of cut, being the greater part in the Amazon. Deforestation increased by 40% more than in 2008. Only in 2016 were the deforestation of more than 100 square kilometers. Increasing our agricultural frontiers can lead the country over the next 10 years to rates of unsustainable and irreversible environmental degradation. Rising temperatures have been responsible for the proliferation of fungi, viruses and bacteria that

attack plants, birds, animals and even humans.

It does not have to be scientists, experts in the environment, food production, and transgenic, urban mobility, melting in Greenland and Arctic, biology, physics, chemistry, breakthrough technologies, or global warming to realize that the extinction of humanity is next. Here in Brazil small rural producers, also simple people deprived of knowledge who have never read a book, and not, make use of the internet already speak "the world will end". That your children more certain their grandchildren will not survive the rapid change of climate. There will be shortage of food and even water to drink if the earth keeps heating up.

I remember I was worried about 50 years ago with the greenhouse effect. Today it is vulnerable to environmental disasters. I am sorry to be so incisive in my alarming position. In the current situation to maintain life on land and at sea, we need to have a Planet twice its size. Today I think about the extinction of the human race in the coming years.

This is not prophecy. There is evidence in my warnings. In the year 2016 alone, approximately 38.3 gigas tons of CO2 and more other tons of methane were released into the atmosphere. I took the attitude of making this statement for reflections. We are in the most dangerous moment of the development of humanity.

Ricardo Rocha de Sousa. Counselor Nascentes Bela Vista (ANBV) Divinópolis - Mg. Brazil.

[1.Climate Change, 6.Population, 7.Food, 9.Society, Economy and Environment]

*RICARDO ROCHA DE SOUSA, BRAZIL, E455*

I strongly urge our community to shift from "climate change" to "climate impacts". There are multiple historical accounts of the climate changing. We care about the change, but mostly we care about the impacts related to the rate of change because of the difficulty for communities (human and natural) to adapt to more rapid change.

Yet, it is difficult for some people to walk this logic from start to finish. This is why we hear "the climate has always changed", "but it's cold today", etc. Precious time and effort is spent arguing about the cause of the fire and not the fact that the house is burning down.

Words are important. Thus, let's collectively bridge the logic gap and start talking about the impacts: to get people to understand that climate change does indeed impact them.

[1.Climate Change]

*Miranda Foley, USA, E456*

Even though Climate Change leads the news, my experience by living and working in the Tropics is that currently, the Biosphere Integrity problem is more pressing, because the effect of human activities on it are deeper and we have less time to solve them. That is why I rate Climate Change in second place.

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows]

*Julian Monge-Najera, COSTA RICA, E458*

Climate change is seriously affecting my region. Local causes of climate change are deforestation for agriculture, and forest degradation by tree cutting and burning and wetland conversion to agriculture and settlement. Climate change is thus linked to Land use change.

The problem of food insecurity is a direct result of climate change. Extreme droughts and unreliable rainfall have reduced agricultural productivity. Food insecurity in Uganda also results from general food insecurity in our neighbouring countries (especially South Sudan, DRC, Rwanda and Burundi) which has created high demand for agricultural produce.

[1.Climate Change, 3.Land-System Change, 7.Food]

*Agrippinah Namara, UGANDA, E459*

Food industry is de-linking people from their local environment. For many, it seems more easy buy food at the supermarket instead of producing it or buying it to local producers. This creates two dangerous situations. By one hand, people have no clear gauge of the impact of its consumption patterns have over their environment, losing sensitivity to environmental problems. By the other hand, peoples diets are getting more sugar and flour, creating a world wide health problem of overweight and diabetes.

[7.Food]

*MEXICO, E460*

Others include cultural integrity and human habitat loss.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

USA, E461

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Society is now at a critical point in the Anthropocene. The seminal year 2015 with agreements on climate change, SDGs and Disaster risk reduction laid out the basis for collective global action. The actions of governments and the populations that elect them have raised the concern that these targets will not be addressed let alone achieved by many countries. There is need for integrated action to address these issues - not one or parts of one at a time. The decisions must be based on comprehensive evidence based analysis. One cannot address, for example, biosphere integrity without addressing climate change and water resource issues. Others needs to explicitly include disaster risk reduction which is unfortunately often omitted. Since most disasters are related to climate change and to water resources - too much or too little, the intersection of these issues is very important. Unfortunately, within governments and within the international UN and related agencies, these issues are the "responsibility" of different departments and agencies who do not integrate their approaches for solutions. There is also of course considerable variations around the world and within countries and regions as to which issue is the most important. Addressing one issue, such as climate change without addressing the others in an integrated way will lead to more difficulties into the future.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

CANADA, E462

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Albeit Climate Change is the mostly discussed issue at the international level, I did not tick it as for Ukraine it's not yet of uttermost importance. Additionally, solutions offered to resolve the Climate Change, in many cases, are universal and will affect other concerned areas as well. In 2016 Ukraine made evident progress towards better environmental and energy legislation, even though much more were expected from our government and parliament.

On the international scale, as China claims the place in geopolitics, it's efforts for renewable energy and reducing coal burning are encouraging for many other countries. In the same time, another overpopulated country, India, still burns coal and have plan to continue such practice at least for a decade.

[2.Biosphere Integrity, 8.Lifestyles, 9.Society, Economy and Environment]

Illia Yeremenko, UKRAINE, E465

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1 and 5.

The impact of climate change in Sweden is not that severe, but what we can see is that the weather situation is more and more extreme. This winter has been very mild and with less snow/rain than "normal", compared with a winter four years ago with a lot of snow and cold conditions.

Last summer was dry and with this winter in mind there are a major risk for a shortage of ground water coming summer, especially in the south of Sweden.

4.

Since the time during the 60's and 70's when we stop the use of PCB's and DDT, the impact on the environment from new chemicals have increased. My view is that we don't have a proper control of how all the new chemicals affect the environment and the biotops. One example is that we don't know enough about the impact of PFOS and PFOA on mammals metabolism and hormone systems.

[1.Climate Change, 4.Biochemical flows, 5.Water Resources]

SWEDEN, E466

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The water resources are enough for population of Earth, but their distribution around of globe is very irregular and is not coinciding with population density. The population of Earth is growing too fast to provide minimization of stress for biosphere. The most dangerous is current Western lifestyle orientation to increase of consumption - food, goods, resources, energy etc. It is necessary to be more shy in requirements like many great ancient Asian civilizations.

[5.Water Resources, 6.Population, 8.Lifestyles]

Eugene Silow, RUSSIA, E468

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9. We are the problem, the cause of all the other problems is us. We have evolved to live sustainably as Hunter gatherers but not in the world of today which we created by following primitive urges. My book explains this.

See: [http://www.peterseidelbooks.com/?page\\_id=76](http://www.peterseidelbooks.com/?page_id=76)

[9.Society, Economy and Environment]

*Peter Seidel, USA, E470*

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The high human population with pollution (namely greenhouse gases) will have lasting implications on all species and biogeochemical processes across the globe forever. All environmental issues trace back to human populations being too high.

[1.Climate Change, 3.Land-System Change, 6.Population]

*USA, E472*

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All the environmental issues are interlinked and cannot be addressed in isolation. It all emanates from the overpopulation and increasing consumerism. More people to feed, to provide with water, to cloth, to provide with housing, transport, leisure, jobs etc. means the utilization of more natural resources such as land, water, plants and animals and the production of more wastes and pollution. Current changes in lifestyle means that consumption per head is rapidly increasing as the average Asian is trying to imitate the western lifestyle. We are already using more resources (equivalent of 1.4 planet according to our average footprint) than what the planet can actually provide us with. This situation is certainly not sustainable and will get worse as long as we proceed in the same direction. Climate change will become worse with all the negative consequences; Land-system will be deregulated to a point where natural cycles (on which living things depend for survival) will be broken down, water resources will be depleted and polluted, food production will suffer through lack of water, desertification, salination, loss of soil fertility, increase in pests and diseases, soil erosion etc. More people and higher level of consumerism also means the utilization of more raw material for industries and hence the negative impact on the biosphere integrity including destruction of ecosystems and loss of biodiversity as well as increase in biochemical flows.

A paradigm shift is warranted in our production and consumption system. We should show more concern for the biosphere and the ecosystems. We cannot continue with capitalist model where the more we consume the better is the economy. consumption is linked with economic growth no matter how the natural resources are affected and no matter how the biosphere and the ecosystems are being degraded. The only solution is to stabilize and even reduce the population and to consume less. We cannot consume less food but we can consume less clothes, less fossil fuel, less traveling, less cars, less weapons and wars, less electronic gadgets, less luxury goods, less multinationals, less advertisements, less supermarkets etc. Research should be directed towards sustainable production and consumption including green economy, eco-farming or integrated farming systems, bio-agriculture, family farms etc. This will mean a total breakdown of our present economic model and a drastic short term regression. Factories, banks and other financial institutions will close down; people will go out of job; economic activities will slow down; poverty may increase; geopolitical instability and conflicts may increase. But this is the price to pay for a sustainable planet earth where people will again live in harmony with nature for the benefit of future generations.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*MAURITIUS, E477*

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I believe humanity is rapidly approaching a point of no return, where we will see increasingly obvious signs of collapsing support systems. Climate change may be the strongest driver, but uncontrolled population growth, along with uncontrolled exploitation of terrestrial and marine ecosystems, will create strongly diminishing conditions for the maintenance of human society as we know it. Increasing diminishment of food security will likely be the most obvious sign, as ocean fisheries collapse and more violent climate conditions reduce agricultural production.

We have the smallest possible window of opportunity to change this trajectory, but our global leaders appear to be choosing to find anything else to focus on, and distract us from taking action. At root is the concentration of unbelievable wealth and power in the hands of a tiny few. They use tribalism and the fear of war and terrorism to ensure that nothing happens to make our world more just and sustainable.

[1.Climate Change, 2.Biosphere Integrity, 6.Population, 7.Food, 9.Society, Economy and Environment]

*CANADA, E479*

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At the heart of the problem is our increasing presence and demands on the Earth. If population size were to go down, all other problems would also likely ease.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*Sam 'Olu Gon III, USA, E480*

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To achieve the sustainable development goals (SDGs), environmental governance is the prime and challenging issue that need to be addressed and action to be taken for transparent accountable project initiatives. To achieve an implement SDGs, approach, coordination and cooperation between Government, UN agencies, donors and civil societies are one of the prime issues. It needs to be addressed with local and regional prospective.

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Mr. Shahriar Hossain, BANGLADESH, E481*

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1. well.. the netherlands will be drowning. Just like several other less fortunate countries in the pacific.

9. Trump is def not a good thing for this world. But i do feel distance from it when filling in my clock (more focused on the NL).

[1.Climate Change, 9.Society, Economy and Environment]

*NETHERLANDS, E482*

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Capitalism (GREED) and globalization spurs unsustainable economical development encourages and creating artificial needs (incl wasteful needs) that uses too much resources non-renewal resources and contamination of the environment, water & atmosphere. We are using too much resources (ecological footprint way too much than earth can sustain). We are NOW live to eat, NOT eat to live. American capitalist life style has spread worldwide, influencing Asia...now Asia is one of the biggest consumers... we use to be producers.

The poor gets poorer and the rich gets richer. A unjust world.

[9.Society, Economy and Environment]

*MALAYSIA, E484*

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Our planet teeters on the brink of ecological catastrophe. Between and be twist overpopulation, human-caused climate change, loss of critical habitats, extreme reluctance and resistance from the affluent nations to change lifestyles to a smaller carbon footprint, a new administration that is tone-deaf if not deliberately ignoring the clarion call of the entire scientific community, the threat of nuclear or biological warfare and a worldwide shift to nationalism, our home world is in imminent danger.

Being a Native American, my philosophy has always been to look at least seven generations ahead, in order that my own personal choices will have the least impact on them. I also work to be an informed voter, assessing each candidate for his or her stance on how to manage the biosphere and enact policies that promote those stances. I have become very concerned that our generation will be the last ones on Earth. At best, the planet is going to suffer from a 'bottleneck' - a drastic drop in biodiversity and human populations. At worst, a near-extinction event, wiping out nearly all life and plunging the earth back to the last such event some 33 million years ago after the meteor impact in what is now the Gulf of Mexico wiped out the dinosaurs and most other life.

What can be done about this? We must convince our national and international leaders to enact immediate policies to stop, or at least mitigate, this event. First of all, population control is a must. With 7.5 billion people on earth, we have tripled the population in just 50 years. This must stop. All nations must enact a two-child per family rule and make it stick.

Secondly, all nations should embark on a crash research project to develop a sustainable power source that rivals the efficiency of fossil fuels. Without a viable, accessible means of powering civilization, we will continue down the path to destruction, powered and paved by carbon-based fuels.

Next, steps should be taken to rein in rogue nations, North Korea, Yemen and Somalia in particular [with other marked attention paid to failing nations like Iraq, Libya and Syria]. This step would help to stabilize world politics and enable more nations to turn their attention to long-term ecological survival.



Those of us in developed nations should cut back our own power usage in order to reduce our carbon footprint. If it does not happen voluntarily, it will happen, but with drastic consequences.

Species preservation and sustaining biodiversity must also be a hallmark of national policy. And, last but not least, all nations must give up their nuclear, biological and chemical weapons, all of which have the potential to wipe out the biosphere. I believe this will not occur without first stabilizing those rogue and failing nations as mentioned above.

Again, we must take these steps so that our grandchildren and generations to come will have a chance to survive the 21st century and beyond.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Debra Krol, USA, E486*

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In the United States,

1. We are a major contributor to Climate Change, but very few people yet experience the consequences; those states and people that do have ample access to technology and community that helps offset these negative impacts, thereby reducing the concern and responsiveness in the US.

2. Biosphere Integrity-- wildlife populations and endemic species diversity is still declining in the United States. This is a major problem, at least for wildlife populations.

3. The United States is still converting land to unsustainable urban environments that are disconnected from, rather than co-existing with, the natural environment.

8. The people of our country consume too much, which is a major driver of almost all of the planetary boundary problems. Individuals blame it on and put the responsibilities on corporations and the government; corporations put the responsibility onto the government and then act in any way they can to reduce the power of the government; and the government is heavily influenced by the consumer demands of people and the power of corporations. It's a downward spiral. Capitalism and neoliberalism are dark forces that are infrequently used for good reasons.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 8.Lifestyles]

*USA, E487*

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In my area, pollution from the coal industry is of great concern; nearly every fresh water source is touched by the pollution. That goes hand in hand with climate change. Also in my area, poverty and upward mobility is stagnant at best.

[1.Climate Change, 5.Water Resources, 6.Population, 9.Society, Economy and Environment, 10.Others]

*USA, E488*

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You did not list the category I now find to be the most important: (10)POLITICAL INSTABILITY. Previously I had listed Climate Change/Human Over Population as the 2 most important Crisis, with Human Over Population being the ONLY cause of ALL the OTHER problems facing the future of human survival. But with the election of a mentally unstable President Trump of the US, a paranoid vindictive liar, who exhibits a dangerous pathological detachment from reality and who has an arsenal of nuclear weapons at his disposal, and who is now confronting an equally mentally unbalanced Kim Jong-un of North Korea who is eager to destroy the US with nuclear bombs, I find THIS to be our greatest threat. Anthropomorphic Climate Disruption WILL eventually cause the end of the Human Race, most likely well within the next 1,000 years, but a World War III fought with nuclear weapons would certainly bring an end to life as we know it on this Planet much sooner than that. The Human Race is it's own worst enemy, and I don't foresee that we have much time left before we destroy ourselves. Our future is extinction.

[1.Climate Change, 6.Population, 10.Others]

*Jennifer Kirkpatrick, USA, E489*

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The chances that humanity will survive another century on Earth are now extremely remote. The chances that other life any more complex than thermophilic bacteria will survive are only slightly better.

The barriers to solving our dilemma are not technological. We have the solutions and the knowledge of how to employ those. They have been mapped and costed. The barriers are social. We must admit that as a species we simply lack the talent to coordinate a response in the time permitted. It is an evolutionary flaw. It is as if you were to ask a frog to develop a ship to travel to Mars. A frog could not do it.

We have the means to restore the Holocene climate and they are no more complicated than the terra preta soils — the dark earths of the Amazon. We merely lack willingness to act with the haste now required. And so we assure our own extinction, and that of most other species as well.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Albert Bates, USA, E492*

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Population increase unbroken in Africa until the end of the century: I am especially concerned about the population development in Africa. 2 Billion more people by 1050. 40% of the world population by then will be Africans. Huge problems for the continent providing shelter, food security, education, and trying to keep the most valuable treasure off biodiversity at the same time. I am afraid that many of the not well protected areas (paperbarks) will be lost without international support. The impact of climate change is as yet not clear but might be devastating for the natural resources in Africa.

The water resources are already an area of conflict and can have a huge impact on development and conservation in the future. The overuse of the Mara river that is threatening the Serengeti migration is just an example where climate change - on top of other factors as deforestation, water use for agriculture and water for hydro electric schemes - is already manifesting itself leading to possible international crisis no long in the future.

[1.Climate Change, 5.Water Resources, 6.Population]

*Markus Borner, SWITZERLAND, E495*

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Climate change is a slow moving, broadly based disaster that is as complex as it is difficult to pinpoint its progression of dissemblance. All of the environmental issues that have been listed above can be checked off as all of the issues are interrelated and interdependent. Quality of water resources will drive food availability which will affect population growth that directly impacts society's economy and environment. My particular concern lies in asset management, risk and premature shortening of usable life. Climate change is creating expiration dates that are independent from the original intended design. As resources are expiring prematurely, it increases the strain on the remainder of the available resources causing an exponential acceleration of degradation and loss mirroring the same process as climate change. Without conscientious effort from every person, community and nation to address climate change, we will be at midnight in less than 10 years. A very chilling thought.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Valerie J. Amor, USA, E498*

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Biochemical Flow: The increasing inflow of elements, materials containing toxic substances from global south to global north is a wicked environmental problem.

Climate Change- Policies are key as derives of processes of responding to the impacts of climate change but most policies are not domestically driven thus affecting the fundamental right of the people who do not really contributes to emission generation. There is to advocate the integration of domestic climate justice policy to Paris treaty and decisions.

[1.Climate Change, 4.Biochemical flows, 5.Water Resources, 7.Food, 9.Society, Economy and Environment]

*Toyin Oshaniwa, NIGERIA, E499*

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Save environment.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*ADNAN KHAN, PAKISTAN, E500*

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We need much more education and less conspiracy theories. Worldwide! It is extremely concerning how the lack of education results in the denial of our urgent problems, how working in science is much more difficult and less accepted by people (and political voters).

[9.Society, Economy and Environment]

*PARAGUAY, E501*

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Public health issues such as drug use, crime, health care, food and nutrition are critical. Land use conversion via sprawling

suburbs. Farm land and wild life habitats are diminishing.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

USA, E502

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The most pertinent contribution and suggestions are:

1. Iwan.T. Frolov told already 1986 the World Commission on Environment and Development (Brundtland) WCED, (see Our Common Future, Oxford-New York: Oxford University Press 1987, page 39):

„To successfully advance in solving the global problems, we need to develop new methods of thinking, to elaborate new moral and value criteria, and, no doubt, new patterns of behavior. Mankind is on the threshold of a new stage in its development. We should not only promote the expansion of its material, scientific, and technical basis, but, what is most important, the formation of new value and humanistic aspirations in human psychology, since wisdom and humaneness are the ‚eternal truths‘ that make the basis of humanity. We need new social, moral, scientific, and ecological concepts, which should be determined by new conditions in the life of mankind today and in the future“

2. The Encylica LAUDATO SI' by pope Franciscus 2015

[1.Climate Change, 2.Biosphere Integrity, 5. Water Resources, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

Andreas Speich, SWITZERLAND, E503

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Nowadays it is possible to perceive a change in the perception of the political leaderships on the questions raised by the scientific knowledge. It is perceptible that current leaders have as their priority issues related to economic aspects, being increasingly influenced by market lobbying, leaving the warnings raised by science increasingly in the background, or worse, often denying such warnings completely.

In Brazil, it is clear the deconstruction movement of environmental protection legislation and favoring economic policies linked to agribusiness, which disregard ecosystem characteristics when transforming the landscape, leading to enormous losses of biodiversity and environmental services. Such a model has been increasingly intensified with the current rulers and presupposes the search for immediate profits and totally disregards projects related to long-term sustainability.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change]

Alexandre Bahia Gontijo, BRAZIL, E505

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Rapid technological development in biotechnologies (gene editing technologies).

[10.Others]

Todd Kuiken , USA, E506

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I don't know if it is considered an 'environmental' problem, but I now consider the possibility of a nuclear war to be the most urgent threat faced by humanity.

[9.Society, Economy and Environment]

USA, E507

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We are not focusing sufficiently on land issues, especially sound land use planning and management - good land is being lost to non-agricultural and non-biodiversity conservation uses and soil degradation plus soil erosion are taking place at a faster rate than ever before. This is a matter of great concern.

Species continue to be lost at an alarming rate and there is insufficient recognition that this is even happening. Nature is not being accorded the recognition which it deserves - we all depend on nature so much and yet it is being trashed by so many people and corporates, usually for short-term reasons.

Similarly, population increase is occurring at a fast rate and this brings great pressure on natural resources and ecosystems in various ways.

pollution is also a major and growing concern and too few people seem worried about it. Moreover, too many people are living in poverty and this results in increasing the pressure being placed on natural resources.

There has to be a much more committed effort in these areas by more and more people from all levels and all walks of life - if not, life on earth will be seriously threatened, perhaps irreversibly in many areas.

In short, the future of life on earth as we know it is under increasingly serious threat.

[2.Biosphere Integrity, 3.Land-System Change, 6.Population]

*FIJI, E508*

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Quoting from the Stockholm Memorandum:

Science indicates that we are transgressing planetary boundaries that have kept civilization safe for the past 10,000 years. Evidence is growing that human pressures are starting to overwhelm the Earth's buffering capacity. Humans are now the most significant driver of global change, propelling the planet into a new geological epoch, the Anthropocene. We can no longer exclude the possibility that our collective actions will trigger tipping points, risking abrupt and irreversible consequences for human communities and ecological systems.

IUCN engages on the issues centered around climate change from multiple perspectives, from assessing the risks that climate change poses to advancing practical nature-based solutions centered on better conservation, management and restoration of natural ecosystems.

See new comprehensive report by IUCN called "" Adapting to Climate Change "" at the following url:  
<https://www.iucn.org/theme/climate-change>

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Mark McGuffie, USA, E509*

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The environment as a whole unit, with many aspects to take in consideration.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Fernando Jauregui, VENEZUELA, E513*

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We have shown resilience to achieve our present quality of life, but our economies are designed for near term benefits, and do not take the long view.

The possibility of a sustainable planet and economy feels impossibly distant at the moment.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 7.Food, 9.Society, Economy and Environment]

*USA, E517*

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Political instability in surrounding countries, particularly Syria, is putting great stresses on the country's resources and economy growth.

Trends of climate change are adverse and reducing water availability.

[1.Climate Change, 5.Water Resources, 6.Population, 9.Society, Economy and Environment]

*Jawad, JORDAN, E519*

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Without establishing a green economy and focusing on the environmental awareness and impacts of the individual and at societal levels, the progress towards a healthy planet in all other areas cannot be attained. We we must include the public in discussions around positive solutions and put individuals and communities above the interests of shareholders.

[9.Society, Economy and Environment]

*Natasha Milne, AUSTRALIA, E521*

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I am concerned that so many politicians still don't acknowledge the threats to society posed by ongoing climate change, and that there are things they (we) can do to ameliorate the situation.

[1.Climate Change]

*Dr. David W. Inouye, USA, E522*

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FOR IMMEDIATE CLEANING OF GANGA WITHOUT MONEY AND FOREVER, IT IS HIGH TIME, THE PSEUDOS (RETARDERS OF GANGA CLEANING) ARE DEACTIVATED AT ONCE

Some of the severe problems that had been way-laying the efforts to clean India's Ganga river for the past 3 to 4 decades (in 2014, the Hon'ble Supreme court of India judiciously commented that Ganga cannot be cleaned even in 200 years) include (1) safe scientific disposal of the generated organic-manure-rich wasted wastewaters together-with availability of safe drinking

water resources, as also more than half of Indian city's wastewater generated from its unsewered areas and slums goes untapped only to reach the rivers directly, (2) suicide-committing farmers' need for irrigation-waters during drought-periods that are not only devoid of eutrophication-causing synthetic-manure but are rich in currently-fashion-crazy more profit-giving organic manure, (3) non-availability of funds with the state and central government despite numerous individuals or religious/social organizations willing to donate money for causes like public-service (historically, BhamaShah had donated all his wealth to self-exiled ruler MaharanaPratap to raise an Army for country's honour) and Ganga-cleaning, (4) time and manpower mis-management despite an easy availability of huge manpower (skilled as well as unskilled) at all levels, (5) dependence on very expensive foreign expertise despite an easy indigenous availability in abundance, (6) illiteracy amongst the Indian masses especially pilgrims about the water-quality fitness for aachman (direct inhaling of Ganga water as part of the religious rites) and related implications (like the self-purifying abilities of Ganga may decrease with increasingly continuous pollution) enabling them to create a pressure on the government for a quick Ganga-cleaning, (7) apathy of the weak-hindi-speaking cow-looking hindus in objecting to the unaesthetic naked bathing by some unscrupulous non-hindu vulgar ladies on the holy Ganga-ghats (bathing platforms) to create pollution through excretions, (8) government apathy in creating a 'political-will' to clean Ganga as also the leaders know that money will keep coming regularly so long as the Ganga remains polluted, vide the 'child-story' where the foolish boy killed his golden-egg giving goose, (9) government backed intensive-indulgence of pseudo-environmentalists possessing zero knowledge of hydraulics (the engineering and technology of water-flow and mother of public-health or environmental engineering) at decision-making levels in matters of pollution-control as was also amply evident from the mighty MS-Swaminathan's green revolution advocating use of synthetic fertilizers and poisonous insecticides/pesticides only to be used indiscriminatorily by the illiterate Indian farmers in the greed of mega-sized bumper crops with zero damage by insects/pests resulting in the wash-out of their excess-leftover amounts to unabatedly render all Indian water-resources totally unfit for drinking use apart from death of lakes due to their eutrophication (thanks to the invading by the criminally national enemies) such that soon there may be water all-around but not a drop to drink when a proposed "super-green-revolution" is implemented. Another top-positioned Indian scientist admitted mistake in global-warming estimates while yet another at a very high advisory position had to tender apologies for having committed plagiarism despite which he was decorated with the highest Indian honour, the Bharat-Ratna. Even the Indian environmental pollution related courts(Hon'ble) mostly have pseudo-persons as their advisors to advise even on hydraulics-oriented engineering matters/strategies and on top of that they manage to stay on due to their lust for power and money. Indian environmental ministry, full of pseudo-persons, regards the real environmental-engineers as virus and outcasts. Total disregard for merit resulting in right people not being at the right places had thus been the main reason why India is branded as a developing country [such that even smaller neighboring country(ies) defeat India in cricket/sports, diplomacy/cleverness, etc] despite having the highest manpower of qualified personnel in all disciplines.

A one-act solution to all these problems in Indian context, in a symbiosis manner, is to ensure that not a drop of any wastewater is allowed to enter the city stretches of Ganga, and this solution, by constructing a barrier between the river and the city, is easily, quickly and economically possible in the following manner.

Construct a dam-like structure or a retaining wall between the river and the city on one or both sides of the city (depending on the development pattern of the city). Between the dam/wall and the city, a parallel covered canal or a huge sewer can be laid to carry all the wastewaters generated from the city upto some 2/3 km downstream of the city where the entire wastewater is given zero or primary or primary+secondary treatments depending on the finances available with the civic body of the city. A part of the untreated or treated manure-rich wastewater can be pumped to farmers for organic farming, the present craze, and the needy farmers would only be too glad to pay for it and provide some financial support to the civic body apart from desisting from committing suicides, a social menace. The Ganga River due to its extremely high self-purifying abilities will get purified by the time it reaches the next urban centre. The dam-like structure can beautifully be developed and decorated into a very aesthetic river-front, play-recreation spot, picnic-spot with umbrella-cum-chairs, etc. for the city dwellers and the different architecture styles at each city will identify the city aerially. The industries of each city will have their own treatment specific to the character of the industrial waste with an integrated system for segregation, reuse, recycle, metal-recovery, tertiary-treatments, etc. Likewise, the domestic industries housed in city areas such as Mayapuri in Delhi shall have a collective treatment plant managed by the controlling authorities. The construction-manpower costs can easily be met through shramdaan (labour-donation) by retired workers/officials/engineers, political-party-workers/kar-sevaks/citizens/etc. and the material cost can be donated by the numerous religious organizations (akharaas), NGOs, charitable organizations, individual citizens, etc. By employing huge manpower, the entire work can be affected in very short time, say a couple of months.

In conclusion, the various above listed problems get solved as detailed below:

- 1 Prevention of Ganga River pollution in a foolproof manner.
- 2 Safe, scientific and economical disposal of the city's wastewaters.
- 3 Prevent water pollution from toxicants.
- 4 Prevention of suicides by the farmers.
- 5 Provide natural organic manure to the farmers for high profit-giving organic farming.
- 6 Prevent groundwater pollution and eutrophication of lakes.
- 7 Provide almost a free pollution control of Ganga and other Indian rivers.
- 8 Provide a very quick and fast control of Ganga pollution.
- 9 Provide a beautiful picnic-cum-recreation spot to the city dwellers along the river front of the city as a tourist attraction.

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[1.Climate Change, 5.Water Resources, 6.Population, 7.Food]

*PROF. (ER.) DR. DEVENDRA SWAROOP BHARGAVA, INDIA, E523*

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The lack of impetus to take climate change-related action demonstrated by the Trump administration's extractive-industry appointees and the president's disinterest in the topic puts great pressure on other countries to redouble their efforts and resolve to take appropriate action.

[1.Climate Change]

*Todd Neff, USA, E524*

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It is now becoming increasingly difficult to separate different elements of the coming environmental crisis - while governments position to respond, rate of change is non-linear and the hope of an effective response is ever-diminishing. In all of this I am less worried about food and water.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 6.Population, 9.Society, Economy and Environment]

*Prof Ray Wills, AUSTRALIA, E525*

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Your survey mixes causes and effects, which in itself skews the results. The primary drivers are human population and human consumption, with their impacts on the global biosphere multiplied by technology. (I=PAT - Impact = population x affluence (consumption) x technology). So addressing overpopulation/birth rate is critical, and would commonly be considered a developing ("third") world issue, because birth rates in the developed world are falling so precipitously, but our massive consumption in the developed world makes every baby the equivalent - in terms of using up resources and creating waste - of 500 babies in the developing world. So the drivers are both in the developing ("first") world - we need to drastically reduce population and consumption, so as to reduce (for example) CO2 output by up to 95%.

The rest of the items above are symptoms - but climate change in particular is such an existential threat that ameliorating the symptom has taken priority over addressing the root causes, because a) addressing the root causes won't happen fast enough to stop the symptom from killing us and b) our love of the status quo is so high that they may not be changed at all. I put climate change at midnight because it's arguably already too late to stop it - the methane release going on now could make it a vicious cycle that wipes out life on earth above the bacterial level.

That doesn't mean that other symptoms might not disrupt our lives sooner - no fish in the ocean by 2049 would not only be a food crisis, but a food CHAIN crisis, again potentially knocking out our species. Fresh water, extinction of species, peak oil and other resources (silica, soil, etc.), pollution, over-exploitation of the land -- all these are symptoms. I think your survey should separate them from root causes in terms of setting order of priority and what constitutes effective action. Addressing symptoms is always a somewhat pointless task, unless our goal is simply to ease our descent into extinction.

If we DO have time left, we need to spend it finding a way to address root causes equitably, while ameliorating critical symptoms at the same time. Neither will happen by being nice. At a point where human overshoot is at 150% - or maybe 600% - we're in a position where all we have are bad options. The future is going to be ugly, regardless, but it'll be uglier if we don't make proactive choices now.

[10.Others]

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I stand with Pope Francis on the human issues we face. Greed, ignorance, poverty, willful denial of science are symptoms of moral failure of communities, political leaders, corporations and individuals that/who control vast financial resources. Will humanity wake up?

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows, 9.Society, Economy and Environment]

USA, E527

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Our economic system, developed in the West and now global, is no longer fit for purpose in the 21st century. It is based on ever-increasing consumption and profits, with a destructive disregard for the ecosystems that we are totally dependent on, leading to all the challenges listed above.

We need in particular to develop economic systems based on both human and ecosystem welfare. We need to defossilise the global economy over the coming 20 years; in the same period we need to create new carbon sinks by reforesting an area of the planet greater than the size of India; and we must learn the advantages of composting farmland, not relying on fertiliser production, and thus capturing carbon in all farmlands, making them more productive for agriculture; and we need to produce fresh water from sea water by solar desalination.

The linear economy, turning earth's resources into waste, will need to be replaced by a fully circular economy, in which there is no waste - imitating nature as it was before our industrialisation. We will need to re-evaluate ourselves as part of nature, not apart from nature and in opposition to it.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

Sir David King, UK, E530

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1. It is already too late to prevent massive climate disruption, something that is already happening. These changes will accelerate because the warmer temperatures will defrost frozen green house gases in the polar regions and a reduction in the reflective qualities of the perennial snow cover. The enhanced reflections of the resulting increase of global cloud cover will only ameliorate and not prevent climate disruption. This is already producing massive social disruption and that disruption will only increase. We need to begin massive investment around the globe to adapt to the future climate; the consequences of not doing so are unbearable.

2. Americans (and I include myself) live far too extravagantly. This is made even worse given that we waste so much of what we consume. We can arrive at a sustainable future without reigning our levels of consumption. Such a change is tied directly to the climate disruption I've already comment on, and to most other environmental problems.

3. The new administrations moves to eliminate a still unknown number of national monuments, to free up federal lands for fossil fuel extraction, and who knows what else will follow, makes the impending changes in how our land systems are used one of our most central problems in the coming years. Before these changes, I would have put this problem much lower.

4. That we are in a global water crisis has become a cliché, but it is none the less true. We are experiencing water stress both in terms of quantity and quality over wide regions of the United States. These stresses tie back to climate disruption as well as burgeoning economic growth over the past 250 years. The slow-down in economic growth since 2009 should have helped ameliorate these stresses, but the coming changes in environmental policies under the new administration promise that these stresses will increase even if the promised jump in economic growth doesn't materialize.

5. Population growth, at least in industrialized countries, is not a problem. This is in part because, at least in the United States, the problem isn't a population too large for the resource base, it is the extravagantly wasteful consumption of those resources on a per capita basis. In industrialized countries, populations are shrinking, not growing, except to the extent that immigrants are welcomed into the society. The United States used to be an exception to the population decline scenario, but the US population growth was sustained much more (directly and indirectly) by immigration than by births. The indirect support for population growth came from the reality that immigrant women tend to replicate the birth rates of their country of origin, even though their daughters adopt the birth rates of other women born in the US. Since 2009, the birth rate among American-born women has fallen sharply below replacement levels, while immigration (legal and, particularly, illegal has declined sharply. And of course the new administration wants to cut immigration even further. As we will find if this effort succeeds, having a declining (and aging) population produces problems as bad as having a growing population.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 8.Lifestyles]

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The election of Donald Trump has once again cast serious doubt on whether the U.S. will meet its commitment on climate change action. As of this writing in early May 2017, it is still unclear whether Trump will attempt to pull the U.S. out of the Paris Agreement.

At the same time evidence of climate change accelerates; in the Arctic, the oceans, and habitats across the globe.

The disregard and denial in the face of such evidence shows the fundamental disconnect between human organization, nature, and the resources it provides. The overarching issue of climate change is the killing symptom of this disconnect. It is the tragedy of the commons writ large.

Overpopulation, overconsumption, global insecurity, and an economic model that fails to account for "externalities," all conspire to drive the rapid loss of biodiversity and climate change. We push to a tipping point the boundaries of the Holocene. Can we alter an entire planet so as to make it unrecognizable, uninhabitable? The question forces a mental construct that is almost beyond human understanding. It is the question before us.

The scientific debate whether we call our geologic epoch the Anthropocene is yet to be settled.

What is less debatable is the planetary-scale impact of human activity. I posit that we certainly live in an age of man. Our presence is felt in every corner of the Earth. Dominion over the Earth, what was once we imagined, an ageless myth, is our reality. We reap the benefits for a time.

Whatever word we use to characterize our times, or define the geologic epoch, we are responsible. The biblical blessing of "dominion" over the Earth implies stewardship and responsibility. We have taken our myth of creation and turned it into a narrative of plunder and exploitation. We are at the end of the viability of such a narrative; for ourselves and "all the fish in the sea and the birds in the sky and over every living creature that moves on the ground."

Given the facile means with which we choose to divide ourselves, it may seem like our only choice is to accept our situation as hopeless or place false reassurances from ancient worldviews.

There is a better choice. One that, I argue, is the true meaning of our ancient creation myths: our place on this Earth comes with it the responsibility to care for it, all its creatures, the land, the seas, and each other.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

Thomas Schueneman, USA, E533

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In Oceania, most countries do not have a problem with over population as such (not historically and while the small island states are economically very poor, they have usually been able to rely on the ocean for a continuous food supply. With increasing climate change impact, social change in terms of lifestyle and land use change (increasing plantation growth on medium and larger size islands), the increasing salination of fresh water supplies in small and medium size islands, the breakdown of the natural protection of coral reefs and the increasing pressure on the two countries that qualify as economically first world in terms of foreign aid, immigration quotas etc, it is my considered opinion that the region is close to social collapse as a result of the collapse of traditional food sources (overfishing/poaching from countries outside the region of the only until now stable food supply. While the region has always had a problem with overstaying in terms of immigration, the rate of this has increased as awareness of the dangers of climate change has increased. It would be fair to say that the two economic powers within the region feel somewhat abandoned by the rest of the planet (especially those countries who have either ignored their own contribution to creating the problem and who bear a huge ethical debt to the region. When the UN first started discussing the issues, it originally gave hope that maybe we mattered to the rest of the planet. However, as climate change became a major source of foreign aid, the lack of experience with sourcing aid monies from outside our region on the part of smaller nations and in fact the feeling of inevitability in relation to this has shown in an increase in apathy in taking action. If I could do away with the political niceties that are associated with funding, I would present the major economic powers with a bill for the destruction of our region due to their own desire to increase their wealth. I am glad I am 67 now as I will likely not live to see the inevitable result of being ignored in terms of these very real and increasing problems. Yes Asia has bigger problems simply by virtue of the population issues but in terms of the percentage of the populations that are being dramatically impacted there is nowhere that can compare with the devastation happening in and to the smaller and medium size island in our region. Out of 27 odd countries in Oceania, there are 2 that qualify as first world nations and between them they have a population of less than 40 million people to support the problems in the Pacific that I consider are now largely being ignored by the United Nations. I was once a huge fan of taking a "we are one world" view in order to combat the environmental issues



plaguing us but I am no longer convinced that the G8 are at all worried about our region. Please make this public as I know people are aware of how large a fan I was of the UN system and the fact that I am no longer so avid in my beliefs may well make people realise what is happening

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Murray (Sandy) Gauntlett, NEW ZEALAND, E534*

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It seems to me that the main challenge in Europe (and almost everywhere) will be to Change Lifestyles, and acknowledge the Impact of Population in the Environment and the degree resources are used. Europe is a highly populated continent -- with almost no nature, this is a contrasting difference with the Americas, where I come from.

The Thing is that influence by European countries in international policies may not help all the world, and some mechanisms of leverage for those who are in different Situation should be pursued and put in place.

[1.Climate Change, 2.Biosphere Integrity, 8.Lifestyles, 9.Society, Economy and Environment]

*Rodriguez, Lily, GERMANY, E535*

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The rate at which global climate temperature is rising, the target of limiting temperature rise to 2 degree C by end of 21st century appears not achievable if Donald Trump US administration pulls out of Paris climate accord 2015.

[1.Climate Change]

*Sundara Narayana Patro, INDIA, E536*

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While Switzerland is a prosperous country, it is not spared from global decisions that impact our global weather patterns and climate. America's actions will have a great impact on the world's ability to reach targets to limit the impacts of climate change. Switzerland has already seen changes in the snow line, which has not reached the same lower level areas in years. This has a big impact on our tourism industry as well as the ecosystems, wildlife and agriculture in these areas.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 10.Others]

*SWITZERLAND, E539*

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Climate change effect is pretty obvious now, however no substantial international regulation has been made. Voluntary measures will not be effective.

[1.Climate Change, 4.Biochemical flows, 7.Food]

*Chayawee Wangcharoenrung, THAILAND, E540*

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Too many people, too great an in-balance in distribution of resources and too high consumption by the few. A failure of international governance, and individual responsibility to address issues of climate change / SDGs is clear. Human rights / justice / environmental rights are rarely given attention. Failure of an economic system predicated on growth, more growth and use of resources. Re-imaging and designing an economic system that is more just and equitable is a high priority. Yet this issue of steady state economics, natural wealth accounting etc receives limited attention.

Given the increased focus on renewable energy there is some hope that development of people in global south will take place but in-equity seems built into the system in most countries and between countries. Examining how a 'good life' may be lived without prejudicing the lives of other people and the environment is critical. Addressing population along with consumption are not popular but are essential. Does it matter if countries in the global north have rates of live births that doesn't replace the population - perhaps that is part of the overall cycle and enables a restricting of consumption patterns?

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*SCOTLAND, E544*

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Healthy, clean, accessible water resources are crucial for the survival of all living biota on this planet. The climate has been changing around us. The biosphere integrity has been impacted so heavily. Hawai'i has lost so many endemic organisms critical to the ecological diversity. Hawaiian cultural practices are contingent upon the healthy existence of thriving natural environment. Humans need to make extreme adjustments to the current behaviors that are negatively impacting the earth and all its living organisms. We need to change so the earth can thrive, not the other way around where we change the earth to

continue our current unsustainable practices.

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*Ann K Nuuhiwa, USA, E546*

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In my opinion the Land-System Change or changing the land destination is most important treat for all environmental components and are directly affecting of them.

[3.Land-System Change]

*ROMANIA, E547*

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Climate Change is an extremely important problem. Unfortunately, it is commonly misunderstood. Unilateral actions (even though may seem to be ethically justified) are detrimental due to carbon leakage, among other things. In other words, the less carbon I emit, the higher is the global emission, unless caps binding everybody are adopted. The 2015 Paris agreement is the first step in the right direction. However, it will take several years to see its first results. In the meantime adverse climatic events (caused by the past neglect) will continue.

[1.Climate Change]

*Zylicz, POLAND, E549*

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Social, political and economic inequities, the dominance of capitalism and neo-liberalisation.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 7.Food, 9.Society, Economy and Environment]

*INDIA, E550*

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The additional issues are related to each other and need to take in response while addressing SDG issues and in country development issues. The developing countries must think on it and developed countries should think on environment friendly lifestyles.

[6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Yogendra Chitrakar, NEPAL, E552*

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We are seeing threats to our natural resources on daily basis and there seems to be a lack of unified supranational effective policy and enforcement to safeguard our global collective interest. We are the problem and until we acknowledge our destructive impact to nature we are unable to start formulating effective policy. Nation State geopolitical and commercial concerns supersede any common interest. Why have we failed in our efforts? I am afraid we will only change our destructive behaviors only when we have no choice; and then it will be too late. We read reports of our coral reefs bleaching Worldwide and in September 2015 the ocean water temperature was a high of 85 degrees Fahrenheit causing about 45% + of the Hawaii's coral reefs bleach. Some of it did bounce back luckily but this year we are expecting another record ocean water temperature thermal event. The ocean water temperatures in Hawaii will again peak in September. What will happen if the coral reefs die? The coral reef ecosystem will collapse and that will have multitude of negative impacts the least of which is the negative macroeconomic impact to the geographic area in question. We are already seeing the bleaching happening from Australia to Maldives. When corals are gone, then what? Another example of clear and present threat to our environment is the commodification of our natural resource like Papahānaumokuākea which is under severe threat as of this writing. Marine plastic pollution is emerging to become a much bigger problem than we realize; we have not been paying attention to the impact to our marine natural resources and we perceive the ocean as having indefinite capacity to absorb our pollution. We have been stripping the ocean natural resources and polluting the marine environment at the same time thus severely limiting its capacity to renew and recharge itself. Where is the tipping point of no return? Prognosis for our planet is bleak; I am sorry to say.

[1.Climate Change, 4.Biochemical flows, 9.Society, Economy and Environment, 10.Others]

*Tapani Vuori, USA, E553*

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Genetically modified organisms / patterns of unsustainable agriculture  
waste management  
advancement of the renewable sources of energy

[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 9.Society, Economy and Environment, 10.Others]

*Dionysia Theodora Avgerinoopoulou, GREECE, E555*

Politicians and governments are not concerned enough to take realistic steps to mitigate climate change. Some still deny it, others think energy and coal can continue as dominant energy sources for many more years

There is no global plan to tackle huge population growths. A global policy is required

[1.Climate Change, 6.Population]

*SYD SMITH, AUSTRALIA, E557*

There are increasing concern recently regarding to the climate change and the impact on biodiversity and livelihood. Though, there are some emerging environmental management aim to mitigate the impact, it needs to be done via global, or regional, partnership. Policies in country alone is not enough.

[1.Climate Change]

*Suchai Worachananant, THAILAND, E558*

The American political situation is extremely concerning for the environment. President Trump is a climate change denier and appears to be systematically dismantling domestic environmental policy to favor business and has thrown the entire international aid/development/conservation community into chaos with his repeated threats to cut funding. Different from previous years, this situation is not the gravest threat to the environment and life on Earth.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Alex, THAILAND, E559*

Western Europe is oblivious to climate change, but Switzerland is now seeing the effects on its economy: it is snowing less, therefore costing a lot in terms of missed tourism income.

Western Europe is generally oblivious to virtually all the issues I ticked, yet consequences are here and here to stay. Water shortage, climate change, and all other themes I ticked are affecting poorer neighbouring countries, resulting in forced migration and social tensions in Europe.

It is time that we in Western Europe realize a strong connection between biodiversity loss and environmental degradation with human displacement.

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows, 5.Water Resources, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*SWITZERLAND, E561*

The degree of importance of climate change needs the highest priority of government and citizens alike.

[1.Climate Change, 5.Water Resources, 6.Population, 7.Food, 9.Society, Economy and Environment]

*PHILIPPINES, E565*

Oceans

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*SWITZERLAND, E568*

Science should be used to address these environmental issues. Socio-economical considerations should be taken into account.

[1.Climate Change, 2.Biosphere Integrity]

*NETHERLANDS, E569*

Renewable Energy Sources in Transportation (RES-T) covers only 3 % of global transportation energy demand. As a comparison, renewables have well over 20 % share of global energy demand in electricity (RES-E) and thermal energy (RES-H/C) sectors. Only 4 % of global renewable energy supply is consumed in the transportation sector.

Despite continuously increasing political efforts to address environmental problems originating from fossil fuels, progress has been very slow. Shortcomings in both general education and professional technical education have contributed to this failure. The resulting lack of awareness has detrimental effects in policies combating climate change and other environmental problems caused by fossil fuel consumption. Ignoring the opportunities offered by RES-T technologies bears ominous resemblance to the aircraft accident type called Controlled Flight Into Terrain (CFIT). In 2010-2014 it was the second largest fatal aircraft accident category globally, and the most severe type of accident, as 91 % of these accidents involved fatalities. It is an accident, where a functional aircraft crashes unintentionally by pilot control. It is caused by the loss of situational awareness, which means fixation into non-essentials and ignoring essentials. In all these accidents multiple warnings have been given to the pilots by the aircraft electronics and almost always also by crew members. In the analogous case of climate change control, the threat became clear to physicists in the 1960s: they submitted a request for immediate problem solving action to the United Nations, which took the issue in its agenda in 1970. Since the first UN environmental summit in 1972, the pilots of the Earth have received warnings with increasing severity, but situational awareness still has not been achieved. Fixation into fossil fuels blocks warnings and prevents application of correct controls to avert the impending catastrophe. Alerting the United Nations in the 1960s of the impending climate crises was not done lightly by the physicists. This was analogous to alerting fire brigade of a house fire. It was known that fire was burning, human contribution for igniting it was significant, it had potential for complete annihilation, and it could not burn out by itself before total destruction. It was also known how to extinguish it. There was no need for further scientific or technical evolution before action. However, in this case the fire brigade has focused its efforts on studying the properties of the flame, estimating its possible paths of progress and developing new alternative methods for extinguishing it in case some day putting out the flame will be required. Just like in the case of the ozone layer crises, technical solution to the climate change crises has been known as long as the scientific community has been aware of the problem. In both cases political decision making processes have suffered from distorted information inputs. The ozone layer crisis was overcome by successful educational interventions. Overcoming the climate change crisis is possible if educational interventions enhance accurate information and correct distorted inputs into decision processes in all levels from households to organizations, from local to national and international administrations. CRM (Crew Resource Management) curriculum was adopted by the air transportation authorities after large amount of functional aeroplanes had crashed unintentionally by pilot control over timespan of decades. As there is only one Earth, piloting it through the climate crises requires adopting corresponding educational curriculum before the first and the only unintentional crash under pilot control takes place.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change]

*Ari Lampinen, SUOMI (FINLAND), E572*

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Pollution, in my opinion is the biggest problem in developed countries and must be dealt with immediate measures. Many of the developed countries have lost their biodiversity due to increase in population, lifestyles, and over production of food. These issues are important and should be taken care for.

[2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*GREAT BRITAIN, E573*

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The interconnection of social, economical and environmental problems and the inability by political and global institutions (UN agencies) to credibly tackle them and propose (and agree) solutions is of growing concern as a lack of progress on those issues creates increasingly pessimism, inaction and opposition/rejection in the population of developed countries and (unfulfillable) ambitions (and migration) of the population in developing countries.

[5.Water Resources, 6.Population, 9.Society, Economy and Environment]

*SWITZERLAND, E574*

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Failure to convert to renewable energy. Ecosystem over-exploitation and pollution leading to human and animal health impacts. Agro-industrial food production leading to extinction of pollinators and impacts on human health of toxic foods. Inability to control consumer appetites for consumption interacting with unrenewable energy useage and over exploitation of natural resources. Insufficient controls on agro- and industrial toxification of land and water resources deteriorating farmlands, ecosystems, pollinators, and water resources. Land conversion particularly forest conversion increasing the impacts of greenhouse gas production.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Andrew Mittelman, THAILAND, E575*

Climate change is an ongoing phenomenon and threat with a time lag for remediation of ca 40 years (residence time of CO<sub>2</sub> in the atmosphere). It should not be seen as the main focus of environmental action. The contamination of biochemical flows, especially in the oceans is likely to profoundly exacerbate CO<sub>2</sub> levels (plankton productivity, acidification of oceans) in the atmosphere and yet little action is addressed to it. Contamination of biochemical flows also has an immediate effect on ecosystems and human welfare and a well understood path to remediation. Similarly biosphere integrity has a profound effect on ecosystem services and can be contained over a relatively short time period using known actions. So for me the biggest environmental problem is poor decision-making of national and international agencies which prioritizes actions on climate change emissions for which there is no known short-term remediation, over biochemical flows and biosphere integrity for which there are known remedial actions and the former at least is known to significantly exacerbate climate change.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 9.Society, Economy and Environment]

*Alexandre, UK, E576*

All of the items listed are of concern, but perhaps a greater concern is the lack of effectiveness of people and governments to enact change. There is a total disconnect between words and actions. All of these problems are global issues with regional and local variability. There is an emerging inward focus by nations and elected governments to focus inward and remove their priorities away from the global commons. If this trend continues, the environmental movement as we have known it, will be pushed back 50 years and the progress that had been made will be all for naught. These actions will breed further inaction. It is incumbent on all of us who care about the environment to turn this around. Our current institutions are stuck in doing business in a paradigm that no longer exists, organizations like the Asahi Glass Foundation and others need to focus on change paradigms of environmental governance action structures before we can dive into solutions of each of the areas listed. We have altered the arc of environmental history in the past, it is now time to step up and invest in this is a single focus way again, before it is too late.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Keith A. Wheeler, USA, E577*

The main drivers of change in Australia are population change and economic activity and the associated main pressures on the environment are climate change, invasive species and land use change/habitat fragmentation

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change]

*William JACKSON, AUSTRALIA, E578*

The ambient air quality has been monitored in Delhi since 1984 by the Central Pollution Control Board formerly known Delhi Pollution Control Committee. The collected data and analysis shows there is deterioration in air quality of Delhi. The air pollution has been a matter of concern because it is impacting environment and health. To combat the air quality problem it is important to understand the reason of problem to implement successful robust action plan in time frame. Engaging different stakeholders and increasing awareness is very important to get the best results to implement action plan. Central Pollution Control Board along with State Pollution Control Boards has been conducting National Air Monitoring Program covering 240 cities of the country to understand the status of air quality and working on new policies and recommendations for improving the air quality.

Conventionally the air quality status has been reported through voluminous data which is bit complex to understand and one should need knowledge of basic science to correlate different pollutant impact on air quality and health. In recent past concern rose about the air quality so Government has taken initiative to provide information on air quality and put up in public domain in simple numbers that is easily understood by a common person. The Air Quality Index (AQI) is one such tool for effective dissemination of air quality information to people. AQI is a scale designed to help public understand what the air quality around them means to their health. AQI act as 'One Number-One Color-One Description' to judge the Air Quality for common masses. The AQI has six categories of air quality rating as Good, Satisfactory, Moderately, Poor, Very Poor and

Severe polluted air with different color code. Each of this class is associated with expected health impacts. AQI considers eight pollutants viz., PM10, PM 2.5, SO2, NO2, CO, O3, NH3 and Pb.

Several studies were conducted and it was found that air pollution in Delhi caused because of vehicular exhaust emission and re-suspension of roadside dust. The introduction of compressed natural gas (CNG) vehicles in Delhi began gradually from the year 1999. By 2003, plying of diesel, petrol for public transport has stopped completely. The change in ambient air quality was pre and post CNG implementation is attributed to implementation of CNG in Delhi. A decreasing trend had been observed in SO2 levels in ambient air during 1995-2010 because of various interventions that have taken place in previous years such as reduction of Sulphur in diesel and use of cleaner fuel such as CNG. Various measures such as implementation of Bharat Stage-II/III/IV norms have been taken to mitigation ambient NO2 and PM10 levels but increasing number of vehicles which contributed NO and PM10 levels exceeds the prescribed norms in Delhi.

At present, air quality monitoring in Delhi is being monitored by three different agencies to meet specific requirements of their operations. To provide uniform information it was decided by Government that all the monitoring systems will follow a uniform scientific calibration protocol and confirmation process. Data for advised monitored parameters from all the monitoring stations sent to Central Pollution Control Board for their analysis and authenticated air quality information communicated on daily basis to public at large. The annual average concentration of PM10 in ambient air in Delhi is much above the prescribed limits during last three years due to uncontrolled construction activities and vehicular pollution. The other reason of high levels of PM10 in Delhi is due to geo-climatic conditions and its juxtaposition to Thar Desert. Burning of agriculture waste and polluted uncontrolled industries around National Capital Region are also contributing air pollution in Delhi. There is need to get help from Uttar Pradesh and Haryana Government to improve air quality by controlling the agriculture waste burning and implementation of Air and Water Act through respective Regional Pollution Control Board. Delhi Government has taken action to stop burning of dry leaves and waste and promoting composting of green waste to reduce particulate pollution.

The annual average levels of Lead ( $0.50 \mu\text{g}/\text{m}^3$ ) and Sulphur Dioxide ( $50 \mu\text{g}/\text{m}^3$ ) are well within the limits and levels of NO2 ( $40 \mu\text{g}/\text{m}^3$ ) are slightly exceeding the standards. There is change trend for Lead, Sulphur Dioxide and PM10. Nitrogen Dioxide is an emerging air pollutant in Delhi. The level of PM 2.5 particle remained three-four times higher than the safety standard. The records showed that three winter months (November, December and January) recorded as "severely polluted" for over 65% of the days in Delhi. Last year National Green Tribunal banned on vehicles more than 15 years old from plying in Delhi which significantly contribute in deteriorating air quality.

To improve air quality includes, tightening of industrial emission norms, hazardous and biomedical wastes, management of municipal, source distribution studies for particulate matter in ambient air, strengthening public transport, preparation and implementation of action plans for critically polluted areas and public awareness. The other steps are also urgent, from monitoring air quality to smog alerts to take precautions because of poor air quality. But most critical is the need to massively augment our public transportation systems, from vehicles to footpaths and cycle tracks, so that we can reduce our carbon foot print.

The Government has taken various measures to contain air pollution in Delhi, which include supply of cleaner fuels as per Auto Fuel Policy, use of gaseous fuel for public transport, pollution under control certificate system for in use vehicles, rigorous source specific standards emission and their obedience, use of beneficiated coal in thermal power plants, closure of coal based Indraprastha Thermal Power Plant, use of beneficiated coal at Badarpur and Rajghat thermal power plants, expansion of metro train system, strengthening public transport, revised emission norms for gensets etc. The initiatives undertaken by the Ministry of Environment, Forest and Climate Change aimed to balance environment, conservation and development.

Establishing green cover is also very important to improve the air quality of Delhi. Green belts provide dust mitigation by reducing air velocity resulting of heavy dust particles and fine particulates are adsorbed to vegetation surfaces. Green belt traps some of the dust by adsorption and greater settling following reduced air velocity. We need to keep ourselves vigilant and motivated to improve the air quality in Delhi by adopting public transport and committed to reduce our carbon foot print.

[4.Biochemical flows]

*Dr Hishmi Jamil Husain, INDIA, E579*

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The concern for the actual threats to the biodiversity is an global issue, for sure. Some of the threats are connected to the climate change, but unfortunately some of the damages or threats could/can be hindered by better decision making by policymakers or authorities.

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Whilst climate change acts as a massive drag net, capturing almost all other environmental problems in its irresistible wake, the question above did ask about our specific locations. Here in Scotland climate change, poor land use and biodiversity loss are all important issues, but it seems that lifestyles and consumption are particularly appropriate when considering our place in global ecology. Scotland has notoriously poor health and welfare outcomes given its GDP. Much of this is driven by unhealthy patterns of behaviour, locked in by infrastructures that favour unsustainable transport, poor diets and over-consumption of material goods. All of these issues contribute towards climate change and the other environmental pressures. We do have options for tackling these problems and the Scottish government is making good headway on, for example, renewable energy. However we can learn much from our Scandinavian neighbours and need to move faster towards lifestyles that emphasise quality rather than quantity.

[8.Lifestyles]

Mark Huxham, UK, E587

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All environmental problems are interrelated. Each problem overlaps another deepening it /making it more serious/. Climate change influences biosphere integrity. Land-system change and emissions influence climate change. We cannot analyze them separately and search for separate solutions. We need to search for synergy between solutions because it is already certain that there is synergy between problems and feedback loops between them are making them worse. It is therefore hard to choose one problem or couple of them as most important.

What I'm least convinced of is population issue - I think that without basic flaws in our economic system and lifestyles population would not be such a big problem.

Climate change seems to be the most all-encompassing difficult because even if we manage to reduce emissions of greenhouse gases fast /not very likely/ we will still have to deal with the consequences till at least end of the century and we may have already crossed some tipping points that may cause the problem to deepen without our farther input. With multiple complex changes in all Earth systems climate change is most likely to enforce violent civilization's shifts and possibly even collapse of the civilization as we know it in ""developed"" countries.

Policy in a number of countries is turning in the in the wrong direction. While environmental problems are getting worse many politicians are getting more determined to ignore them. It is even more problematic combined with growing nationalistic tendencies - not helping others, choosing selfishness and searching for ways to grant safety and prosperity to just citizens of our region, country, neighborhood at the cost of other regions and nations. Even if we ignore ethical side of such choices they signal a very short term thinking. We cannot save ourselves by hiding on a highest point of a sinking ship and living others to drown. We have to fix the ship together.

To fix it I believe we need to share freely the solutions we already have - not blocking dissemination and transfer of clean technologies. We need to reshape our lifestyles and economy. We need to build circular economy that uses minimum resources and produces minimum pollution. it needs to be based on renewable energy sources and localized as much as possible to reduce transport needs. We need to stop using fossil fuels as fuels and start thinking about coal and oil in terms of valuable resources (for chemical industry and new materials we can use for clean technologies, like carbon fibers or graphene) that we can use without adding more emissions to the atmosphere.

On a more positive note there is a trend of introducing smart, clean, low-carbon economy solutions (in spatial planning, transport, energy, water and waste management etc.) in many major cities around the globe and I believe this trend is a part of the solution we need.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

Urszula Stefanowicz, POLAND, E589

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The ever growing population is a major concern for climate and biodiversity due to conflicts over resources, overexploitation of resources, extreme decrease in areas without human habitation, production and consumption patterns. Viewed from the human angle, climate changes will have much larger effects on people if too many people live in the wrong places as millions do. The only way to cope with climate and biodiversity crisis is to direct international and national policies, politics and public awareness against population growth and do away with the myth of perpetual growth which make ignorant governments and

people around the world preach the benefits of population growth for economic growth as the precondition for human wellbeing

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*charlotte mathiassen, DENMARK, E591*

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The way the "global north" uses up resources is alarming and is highly threatening to the environment we live in. Society, economy and politics have to find a way urgently to act more sustainable - it's important to get that information out, educate the society in which way they should act to save the environment, and get effective political measures out.

[7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*GERMANY, E592*

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The fundamental problem is commitment to growth as solution to problems. Must move to a steady state economy at an ecologically sustainable level of resource throughput. Seek qualitative improvement in technology and ethics, without quantitative increase in matter-energy throughput.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 9.Society, Economy and Environment]

*USA, E593*

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My opinions on everything related to environmental and human issues have been severely negatively affected by the current US political situation since the presidential inauguration.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 9.Society, Economy and Environment]

*USA, E596*

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Increasing human numbers exacerbates the other 8 items, inevitably, but they are all interrelated. Women's status deserves a special category. So do worldviews, many of which (including most religions traditions or their mainstreams) treat humans as exceptional and somehow separate from nature, and do not understand that all creatures evolved from a common ancestor. Therefore, we do not have ethics of biological kinship with other lifeforms. Without dramatic changes in worldviews prioritizing environmental crises appears to be unlikely.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Bron Taylor, USA, E597*

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A major issue for resolving environmental issues is the issue of Society, Economy and Environment. Strengthened mechanisms of Society and the economy will contribute essentially to the mitigation environmental threats and damages and to capitalizing on environmental opportunities. Whereas strong democratic processes will provide a sound basis for environmental care and protection, enlarged knowledge basis on the environmental interactions with livelihoods as well as on all the global conventions including the Sound Management of chemicals and wastes will provide opportunities for a better living. From the point of view of the economics, an integrated footprint should be taken into account in trade and economical policies. Zero Hunger and reduced poverty and inequality as a priority should go hand in hand with finding efficient solutions for environmental problems. The effects of macroeconomic policies including energy policies or monetary policies should be better assessed. At least 10% of all investments should go directly to tackling environmental problems, to prevention and preparedness programmes and to fair trade upgrading. Connectivity and digitalization should be paid a special attention, for instance professional remarketing of multimedia.

[9.Society, Economy and Environment]

*SWITZERLAND, E598*

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The connection energy and environment is essential. Integration of environment in all the policies.

[1.Climate Change, 4.Biochemical flows, 5.Water Resources, 10.Others]

*Sancy, SWITZERLAND, E599*



Governance is very important specially in the third world where regulations and the rule of law is the root cause of many environmental, social and economic problems.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Carlos Garcia-Saez, MEXICO, E601*

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The issues of climate change, population, and biosphere integrity all link to the same fundamental issue: too many people using too many resources. As a wildlife ecologist, I am witnessing first hand the decline of species with climate change. The Arctic is changing incredibly fast yet people seem to feel that there is still time to act. We are in a period of rapid change. Human concern with wildlife has a limited window until we shift our attention to issues of famine, drought, and mass migration. When the serious impacts of climate change come, we may no longer have the resources to save species at risk from our actions.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*Andrew Derocher, CANADA, E602*

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In my travels outside of the USA, CLIMATE AND WATER RESOURCES are the most concerned topics by people who live in indigenous societies. They are also concerned about the longevity of their cultural norms in association with their environment and social conditions.

[1.Climate Change, 5.Water Resources]

*USA, E603*

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Humanity must deal more effectively with climate change by changing individual life styles and abolishing collective or corporate negative behaviors. Humanity must also face the reality that our numbers are beyond the carrying capacity of earth as a biosphere, and therefore begin to reduce our numbers, as China has done in the past. With regard to other environmental issues, people must adopt the development of sustainability as our mantra, rather than sustainable development. Immediate steps to right the world include establishing an effective World Environmental Organization, more empowered to deal with global environmental problems than the WHO or the WTO in their domains. An ultimate goal would be to have all people consider themselves global citizens, with responsibilities for the quality and integrity of environments worldwide. The current situation, with rampant narrow nationalism and a UN hardly united in pursuit of a sane and sustainable existence for our species, augurs the collapse of civilization sooner than has been imagined.

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*George Rabb, USA, E606*

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Water is my top priority and concern because it is essential to all life. As such, all of the other Planetary Boundaries play into the equation of protection and will impact the quality and quantity of available resources. That is why a holistic approach toward management must be developed, guided by sound public policies that promote sustainable practices that protect our natural resources for generations to come. Decisions made today must be based upon the impact they will have on the seventh generation, not on political expedience.

[5.Water Resources]

*USA, E607*

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Too little is being done to meet the Paris Agreement goals. Poverty is increasing, while the cost on the environment soars. This reduces the biosphere integrity. Overpopulation is much of the cause.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 6.Population, 9.Society, Economy and Environment]

*Douglas B Trent, BRAZIL, E609*

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With majority of species gone extinct and habitats being enclosed and destroyed, there is little hope for a diverse planet going into the future. With the current political systems and nationalized countries, divided by resources, religion and war, there is little hint of humans creating a solution. With climate change giving us the most extreme weather we've ever experienced on record and the trend of human pollution getting worse, we are beyond the tipping point. We are at a rare moment on this universe where humanity is conscious enough to observe the destruction around them but not conscious enough to act.

The strongest truth we have available is science, and science paints a grim picture for the human race and all other species on this planet.

[1.Climate Change, 2.Biosphere Integrity]

*Bunker Seyfert, USA, E610*

Climate Change is not part of the great environmental problems in Brazil. The results of Climate Change are not felt in the Brazilian's routine. Besides that, in some cities of the coast the level of the sea is getting higher.

Land use is a problem, mainly in regions of the Rain Forest. But also in cities of Southeast and South there are problems with invasions of environmentally preserved areas by populations without land that in the past lived in farms. Nowadays the farms are mechanized and don't need the human work.

Water resources are a problem in Northeastern of Brazil, but nowadays it is also a problem in the Federal Capital (Brasília) and in the States of São Paulo and Minas Gerais. Brazil is well served by rivers and subterranean water, but the use is distant from the ideal.

Social and economic problems are involved with environmental problems. At this moment, for example, miners are trying to explore indian lands. The economic crisis influences the importance of the economy (more jobs). However, the Judicial Power has a good number of decisions establishing limits to the development.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 9.Society, Economy and Environment]

*VLADIMIR PASSOS DE FREITAS, BRAZIL, E611*

Climate change impacts severely affect my atoll. High seawater temperatures in the lagoon (38 Celsius) and outer reef (32 Celsius) caused massive coral bleaching in 2016. At the same time most (95%) of the giant clams died from the same cause. As the sea water got hotter oxygen availability reduced and many of the fish species left for cooler sea areas, or deeper water. This also caused the seabirds to leave: presumably following their food supply. Cyanobacteria and various algae then overgrew the coral habitats.

An as-yet-unquantified problem is increased ocean acidification impacts. It is likely to heavily affect Tongareva's basic coralline geology, as well as the various shellfish species that need calcium to grow.

Thirdly, our lagoon and reefs are covered in plastic pollution arriving from the outside consumer world: their shopping habits are our environmental disaster! Discarded industrial fishing gear causes a similar problem ~ even stranding in the forests at high tide.

Lastly, many of our trees fell down from elevated levels of windborne salt and limited rainfall: they were unable to flush out excess salt and died. The soil then dried out and eroded in the wind. We have an extensive replanting effort already underway, which appears successful so far.

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows]

*Dr Michael White, COOK ISLANDS, E613*

Our education systems are focusing on an ever narrowing curriculum. It is imperative that all phases of education, from early years to post-graduate levels, help learners grasp the inter-connected nature of these concerns in a way that stimulates positive, hopeful action rather than despair or boredom. The SDGs could provide a useful content base but it is equally important that our educators have the relevant competences to offer positive education for sustainable development.

[9.Society, Economy and Environment]

*Paul Vare, UK, E614*

While the question posits environmental issues as stand-alone issues, I believe that many of these are intricately intertwined (e.g. climate change and access or excess of water resources, contamination of these water resources and impact on food production and security, to mention a few), and the synergies between them have received relatively little attention. Although this is understandable, given the difficulty of tackling single issues and more so the complexities of added effects from different threat drivers, understanding and educating decision-makers and the public in general about the linkages between the different issues is critical to inform appropriate action. In addition, concrete and viable alternatives urgently need to be developed for those whose livelihoods depend on on are compromised by the issues involved.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles]

Global climate change seems now unstoppable – especially since the accession of a denier to the US presidency. It will not only shift climatic zones in a not-entirely-predictable way, but will bring about the sort of extreme climate events that have been very rare in the past. Meanwhile, the human population, especially in much of Africa, the Middle East, and some Asian countries (particularly Vietnam), is still growing – eventually, with full development and the emancipation and empowerment of women, it will presumably stop and start to reverse as has been the case in some western European countries and in Japan, but this will come far too late. In the meantime, biomass will be more and more concentrated in the one species, Homo sapiens, leaving less and less means for other species to subsist. Not only is the living world an inexhaustible source of scientific knowledge, and of sheer fascination and beauty, but intact ecosystems are necessary for providing human beings with ecosystem services, such as assured, regular water supply.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population]

*Colin Groves, AUSTRALIA, E616*

Climate Change: In India various ecosystems are vulnerable to climate change due to global warming. The most prominent of them are Himalayas and Coastal ecosystems which are very important for the long term survival and meeting the SDGs.

Biosphere integrity: Due to unsustainable extraction, increase of land demand due to increasing human population natural resources are getting degraded at an faster rate which was never before. There is a need to take-up stringent action so that we can stop or minimize the species extinction rate in this part of world. As biological resources in a complex ecosystem are vital for the smooth flow of ecosystem services and goods. Hence, immediate actions pertaining to reducing such loss should be the top priority. I believe international cooperation and international environmental governance through multilateral, bilateral engagements will be helpful.

Land-System Change: In India Land Use change is a serious problem impacting biological richness and contributing towards climate change. Also land degradation and desertification is seriously impacting about 105Mha of land area in India. Hence efforts should be made towards using land resources in sustainable manner and the best practices with respect to Sustainable Land and Ecosystem Management should be adopted and mainstreamed.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change]

*Kailash Chandra, INDIA, E617*

The implementation of COP21/Paris Agreement is crucial. The Greenhouse Gas Budget is limited. It is encouraging to see that many countries undertake considerable efforts to mitigate the problems. On the other side, many of the "rich" countries still seem to lack the necessary seriousness and do not attempt even basic changes.

[1.Climate Change]

*SWITZERLAND, E619*

If we want to live in a better world, then it is urgent that we value nature in all of our decision-making. Too often nature degradation has an impact on our society, escalating global crises from conflicts to food security. Better decisions are possible to develop a more resilient and prosperous world. They have to be taken urgently and to involve all categories of stakeholders : governments, citizens, business, NGO, cities, etc.

[9.Society, Economy and Environment]

*SWITZERLAND, E620*

Since the last survey, the UK departure from the EU runs the risk of significantly weakening environmental legislation and protection in the UK, across Europe, and by extension, weakening the positive environmental influence the EU has played globally.

[9.Society, Economy and Environment]

*UK, E621*

All of the environmental problems relate back to overpopulation. simple formula: the most straight-forward way to turn back the doomsday clock is to reduce the number of people inhabiting earth

[6.Population]

Excerpts from:

S. Zunić, Lj. Rakić. Depleted Uranium Induced Petkau Effect – Challenge for the Future. Nova Science Publishers, Inc. New York USA, 2016

""As a naturally occurring, ubiquitous heavy metal, uranium is incorporated in the Earth's crust and it is a part of all natural resources. Natural and man-made products, including depleted uranium, differ in their isotopic composition, but all of them are  $\alpha$ ,  $\beta$ , and  $\gamma$  emitters, with a dominant alpha radiation emitted during their radioactive decay. Uranium remains radioactive for more than 4 billion years, exhibiting hard metal radiotoxic effects by an emission of alpha, beta, and gamma radiation. Depleted uranium has a unique potential to pose a threat to all natural resources including human society because of its radiotoxicity and its fissile properties including Thorium and Plutonium as well.

The Petkau effect has been observed since 1972. as an inverse dose-rate effect in vitro. This study proposed possible mechanisms leading to the Petkau effect in vivo, taking into account the overall body integrative system's regulation.....

The Petkau effect was proposed as a wave phenomenon which can target all living structures, including cell membrane system or DNA molecules. On the other hand, one of the basic characteristics of living matter is its adaptability to the incident influence, up to the moment when the influence is powered enough to change the basic properties of a target, inducing its change to a different quality.

Genetic susceptibility is one of the key connecting links between adaptability and tissue damage with the possible evolution of the neoplastic change. We discussed the importance of an individual approach to the diagnosis and selection of appropriate therapy, based not only on the results of the expression analysis, but also on the metabolic and apoptotic tissue properties. ""

""Depleted uranium has been repeatedly used by the military, approximately every four years since 1991 (Iraq 1991, Bosnia 1994-1995, Kosovo, Serbia, and Montenegro 1999, Afghanistan 2001-2003, Iraq 2003-2011), which has induced the low dose radiation (air pollution easily transferable to the remote distances from the place of explosion), slow doses (the DU ammunition remnants can be fully oxidized into corrosion products twenty-five to thirty-five years after impact) (Burger, 2012) and its further prolonged contribution to the maintenance of alpha particles radiation (Zunic and Rakic, 2013).

Civilians have limited access to information concerning the exact amount of missiles used, the number of fragments and unexploded ordnance, or the people exposed, as well as the exact contamination levels. Depending on aerosol speciation, inhalation may lead to a protracted exposure of the lung and other organs (Bleise, 2003). One 120mm DU tank round impacting against a hard target will create about 950 grams of DU dust, while one burst of 30 mm shells, fired by an A-10 aircraft, might create 960 grams. In some cases, the amount of dust created may be much higher. When a DU shell hits a hard target DU burns. About 20% of DU vaporizes into a fine dust that can travel long distances, and be inhaled by people in the immediate vicinity (up to 400 meters) or up to thousands of miles away (Military Toxics Project Information Sheet, 2003). The firing of DU munitions can immediately contaminate air, soil, and water with the ingestible radio-chemotoxic DU particles (Military Toxics Project Information Sheet, 2003). Gatti and Montanari (2004) report that the combustion processes create a form of particulate pollution that can be released into the environment. The size of the particles inversely relates to the temperature of the process. In case of DU, the temperature is higher than 3,000 °C. Consequently, inorganic micro- and nano-particles have been generated, which could pollute the environment after the explosion of DU missiles. There are three major uranium oxides produced by burning. These are  $UO_3$ ,  $U_3O_8$ , and, known as uranium trioxide, triuranium octoxide and uranium dioxide,  $UO_2$ . Although uranium is one of the densest metals known, the uranium oxides in the smoke and dust are not so dense and remain suspended in the air for a long time. These aerosols can contain very small particles of uranium oxide of between 0.1 and 10 microns in diameter, which can be inhaled and deposited in the lungs (Al-Muqdad and Al-Ansari, 2009).

Unless shells and fragments are removed from the areas of use, they will continue to release DU into the environment for years or decades. The corrosion of the spent shells adds to the amounts of the mobile DU dust in the environment (Military Toxics Project Information Sheet, 2003). The depleted uranium oxide dust, produced when DU munitions burn, is composed of two oxides: one insoluble and the other sparingly soluble. Their particle size and distribution is not typical as for particles normally encountered in radiological protection (Baverstock, 2006). ""

""Military uses of DU may have a significant impact on the environmental equilibrium of the uranium isotopes. Every change that is high enough to modify the ionic, magnetic, or temperature Earth's equilibriums, depends on the natural default globe properties and tends to reach this equilibrium again. It has been reported recently that a thousand tons of DU that have been used since its first military use in the Persian Gulf in 1991 to date, have changed sufficiently the Earth's natural equilibrium

in terms of default activity of natural uranium in the Earth's crust and have triggered the visible output(s) (Zunic and Rakic, 2013). The authors have estimated that the output retains its value until the input changes sufficiently to trigger a change. Every new use of DU in military campaigns, or a discharge of radioactivity in civil nuclear disasters, may intensify the output. The repeated use of depleted uranium can produce ionizing radiation that, above a certain (unexplored) threshold, may trigger the disproportionately high response to the level where it becomes unpredictable and gives empirically unknown consequences. When the input is below a hypothetical preset threshold (natural properties of Earth), the output is absent to low, and the records can be confusing, or misinterpreted (according to Stein, 2013). In the environment, radiation hormesis is feasible, sometimes with concomitant catastrophic natural phenomena (Zunic and Rakic, 2013). The uncontrolled military use of high amounts of DU has coincided with numerous unusual environmental physical manifestations that have been recorded in the last 20 years. Simultaneous monitoring of natural phenomena on Earth and in the atmosphere has revealed an exceptional parallelism between the phenomena in the environment and in the living world: increased number of earthquakes (Ellsworth, 2013), elevated humidity in the environment (IGMASS, 2012), increased number of forest fires (Jovanovic and Oldja, 2007; Rekecewicz, 2007), and increased extreme weather events during the last 20 years (EEA, 2012).

The climate changes directed the focus of our thinking to the question whether periodical, artificial discharge of the large amounts of ionizing alpha particles emitted from the decay of DU that was used for military purposes, can seriously imbalance the nature equilibrium conditions. There is a remarkable parallelism between the use of DU ammunition and the physical phenomena described by the sources cited above. A number of reported extreme weather events and wildfire in EEA member and collaborating countries (1980–2011) (EM-DAT, 2012) showed that extreme weather events were mostly frequent in 1990, around 2000 and later, which was going on in parallel with the frequent use of DU in military actions since 1990. The reported extreme weather events were mostly frequent in the period 2000-2010, which coincided with the excessive use of DU for military purposes during the Second Gulf War.

These data support our hypothesis that after the local military conflicts during which DU ammunition was used, an unpredictably wide territory has been contaminated by aerosols, and later water and ground natural resources. From the air, the particles fall very slowly and contaminate the ground and grass, vegetables, fruit, entering the alimentary chain. From the rain, those particles could penetrate the earth and enter springs and subterranean waters (WHO, 2001).

More precisely, the entire territory of Europe was exposed to DU contamination at the time of military operations during which radioactive ammunition was used. Numerous other studies support this claim. Forest fires in the Balkans were the most frequent exactly during the bombing of targets in Serbia and Bosnia. ....

Uranium is pyrophoric (i.e., the reaction of the metal with oxygen in the air causes it to ignite spontaneously) (Burger, 2012). It is possible that forest fires may be caused by the friable remnants of exploded armaments with DU, or by unexploded items in that region. For example, from 1990 to 2005 there were more than 1,700 forest fires in the Republic of Serbia. The total burnt area of forests was about 40,000 ha (Jovanovic and Oldja, 2007).

Every flaming of contaminated land or plants, can re-suspend the absorbed radioactive particles and burn them up into the air. There is a prolonged and increasing risk of re-contamination of areas that were contaminated in peace time or war. Some of the materials that were contaminating that area would have been incorporated into the woods. In other words, they landed on the ground in 1986 and got absorbed into the trees and the entire biosphere (Busby and Morgan, 2006). When they burned, they just became re-suspended. "All of that material which fell on the ground will now be burned up into the air and will become available for people to breathe" (Zinets and Prentice, 2015).

#### ""DU AND CLIMATE FORCING

There are many natural climate forcings inducing changes to the Earth's climate system. Besides natural climate forcings, like large volcanic eruptions that inject light-reflecting particles as high as the stratosphere, man-made climate forcings relate mainly to particle pollution (aerosols) (Lindsey, 2009).

The repeated military use of depleted uranium nuclear weapons caused contamination both at the local and global scales, because of the movement of air masses from the location of uranium missiles explosion all around the Earth (Zunic, 2013, 2013-1, Zunic and Rakic, 2015). The firing of DU munitions can immediately contaminate air, soil, and water with ingestible toxic and radioactive DU particles. Unless shells and fragments are removed from the areas of use, their remnants will continue to release DU into the environment for years or decades. The corrosion of spent shells adds to the amounts of the mobile DU dust in the environment (Military Toxics Project Information Sheet, 2003).

A forcing can trigger feedbacks that intensify (positive feedback) or weaken (negative feedback) the original forcing. For example, loss of ice at the poles, which makes them less reflective, is an example of a positive feedback (Trenberth, Fasullo and Kiehl, 2009). The atmosphere heating effects of military used DU could be better clarified by the fact that 1 gram of

uranium gives energy that is equal to ~3 tons of coal (Robinson, 1987). If about 3,000 tones of depleted uranium were used in the military campaigns during the last 20 years (1991-2011), then, approximately 3x10<sup>6</sup> grams of uranium have the equivalent heating effect as if about 9x10<sup>9</sup> tones of coal have burnt at the Earth's surface (Zunic and Rakic, 2013)!

This may be one of the reasons why during the 20th century and the last two decades, the global mean sea level rose at rates of 1.7 mm/yr and 3.2 mm/yr respectively, as a result of both increase of ocean thermal expansion and land ice loss. For the period 1993–2010, glaciers and ice caps have accounted for ~30% of sea level rise (Allison et al., 2009)."

Repeated abrupt release of ionizing particles in the atmosphere (military or peacetime disasters) may induce increased air ionization with a consequent increase in the atmosphere heating (Zunic and Rakic, 2013). One of the possible effects of the use of uranium weapons is a multi-photon absorption, i.e., direct heating is a result (Krasin and Wagner, 1988), what adds an additional burden on the atmosphere heating.

Alpha particles from natural sources, nuclear disasters in peace-time and after military use of several tons of depleted uranium, are emitted during uranium decay. A rapid increase of DU, and consequently positively charged  $\alpha$ -particles in the atmosphere, may induce changes in the electromagnetic field and in the coupling mechanism in the lithosphere, atmosphere and ionosphere, as presented in Figure 4.

Traveling at approximately one-twentieth the speed of light, alpha particles strike air molecules and eject electrons. Positively charged ions and negatively charged electrons are the products of air ionization induced by alpha particles. Due to their electric charge and large mass, alpha particles lose energy rapidly along the path of only a few centimeters in the air. After losing The Lithosphere-Atmosphere-Ionosphere Coupling (LAIC) Model, given by Sergey Pulinets, highlights the strong influence of radon decay generated alpha particles and its ionization onto the atmosphere heating, as well as their importance in the earthquake clouds formation. The atmosphere above Japan heated rapidly before an earthquake. Infrared emissions above the epicenter increased dramatically, which was in relation to the releases of large amounts of radon in the days before the devastating earthquake in Japan (MIT Technology Review, 2011).

Based on the simultaneous occurrence of physical phenomena and health effects that could be monitored during and after the artificial use of depleted uranium for military purposes in the Persian Gulf and the Balkans (Zunic, 2013; Zunic, 2013-1), conclusion is that it is impossible to distinguish the environmental effects in terms of the origin of alpha particles (from natural sources or man-made isotopes, including nuclear weapons)."

"A new model of generation of electric field on the basis of injection of the charged aerosols into the atmosphere has been discussed in order to provide better insight into the mechanism of lithosphere-atmosphere-ionosphere coupling (Sorokin and Hayakawa, 2013). The authors have found that seismic activity is accompanied by an injection of radioactive substances into the atmosphere, which leads to the changes of the state of the ionospheric plasma and electromagnetic field. These changes in the electromagnetic properties of the Earth's mantle could be detected a few days before an earthquake, as we have hypothesized in our recent publication (Zunic and Rakic, 2013)."

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Svetlana Zunic, SERBIA, E624*

Developing countries need to focus on organised development. There is a need to infuse discipline in the lives of inhabitants. Presently even the educated people have least concern for the environment.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 9.Society, Economy and Environment]

*A.K.Thukral, INDIA, E625*

Acting for a sustainable world is a great challenge for us today. Economic and technological solutions, political regulations or financial incentives are not enough. It's important that we change our thinking and acting fundamentally and get awareness of our lifestyles. Global justice, responsibility for the future generation is what we need. I think education plays an essential part for this. Bringing people together, empowering them sharing knowledge, skills and values is a good way to create a sustainable life. It is useful to exchange the experiences of education activities and projects, to learn from each other and build new global alliances and partnerships.

[1.Climate Change, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*GERMANY, E628*

US population growth is lower than that in many developing countries, and most of it is driven by in-migration. But the total

number of American-style consumers on the planet is a worldwide issue. The consumption of food, water and other resources by the American public is threatening the maintenance of biodiversity that makes the planet habitable. US population growth is likely to increase as population pressures in other countries worsen. And recent cuts to family planning assistance for poor women in the US is likely to dramatically increase teenage birth rates and to increase maternal death rates, as has been seen in Texas since most of the Planned Parenthood clinics in that state were forced to close through unnecessary regulation. In the last four years, the maternal death rate in Texas as doubled.

[6.Population]

USA, E629

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This year the Global Peace Initiative of Women is working closely with Dharma Drum Mountain Buddhist Association and the Earth Charter International in Costa Rica to host a series of retreats for young environmental leaders. These are young people under 40 who are on the front lines of environmental issues, activists and lobbyists, social change makers. It is imperative that we now support younger leaders in the ecology movement. We noticed than many are extremely sad by what they see, know all data and facts far better than their counter part adults and are very very committed and concerned. Many are beginning to live much simpler lifestyles, shifting their values and they have much to teach us. We need to help them get a greater voice on the global arena.

Some of the problems we are being made aware of is the contribution of meat eating to climate change. This is hidden by some of the big environmental organizations and can be heard more about in the chilling documentary ""Cowspiracy"". I am extremely concerned about the CAFO (Concentrated Animal Feeding Operation). I mean what has happened the values of humanity? How do we treat animals this way so that we can eat an excess of meat. This needs to stop. As does the over fishing of the oceans. If we could decide to only eat meat 2-3 times a week it would greatly improve our health and that of the planet. The waste from the animals has contaminated thousands of lakes in Michigan (and many other places) so much so that these once clear clean lakes are now toxic to swim in. Let's bring a greater awareness about the food choices we can make.

Let's begin to support small farms, give land and money to young people interested in farming practices that are good for the soil and earth. In America we pour millions of pounds of poison (glyphosate - Roundup) on our crops and then we eat them and wonder why so many people have cancer and why so many old people suffer alzheimers and dementia earlier than ever before.

I am concerned about the bio diversity. So many species are dying, beautiful birds that once were common are now rare to see. The same goes with our trees. Geo-engineering or ""chem trail"" spraying has greatly increased over major cities around the world. We need to understand what this is and what is being sprayed over cities and farmlands. I have noticed many trees, especially pine trees, in upstate New York are dying. They are turning brown and huge trees, 60-80 feet tall are now looking like grey skeletons. Could it be the spraying from planes that is poisoning our waters and land in addition to all our regular toxic outputs?

There is much that humans can do to amend their lifestyles, but now I have come to see it is bigger powers that are at play destroying our beautiful planet. Where are all the countries that need to come to the aid of Japan in addressing Fukushima? Why is this not happening on a massive scale? There are technologies in South Korea for example 'called Brown's Gas' invented by the late Professor Yull Brown that can completely destroy nuclear waste but the technology is not being utilized as far as I know. <http://nottaughtinschools.com/Yull-Brown/Free-Energy-Interview.html>

Fukushima and the dumping of plastic in the oceans mainly by China is of great concern to me. Let's support young people who are giving up plastic as a lifestyle choice. We must learn to live with a minimum of plastic.

We also need to address the many wonderful options for new economies to develop. The work of Charles Eisenstein in this field is so impressive, in his book Sacred Economics and that of Rob Hopkins of the Transition Town movement and the work of Satish Kumar at the Schumacher Institute.

with warm respects,

Marianne Marstrand

[2.Biosphere Integrity, 4.Biochemical flows, 7.Food, 9.Society, Economy and Environment]

USA, E630

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I believe population and our human over use of resources are critical issues which are being compounded by climate change. I just returned from a year in Southeast Asia where I saw excessive over use of raw materials following in the foot steps of Americans and Europeans. It is truly unfortunate that we Americans cannot set a better example to the rest of the world.

[1.Climate Change, 6.Population, 9.Society, Economy and Environment]

*David Wm. Owens, USA, E632*

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For me the most pressing issue not only here but as well as to other areas is the climate change. This issue is the most felt thru severe typhoon, frequent occurrence of earthquake, abnormalities in seasons/weather which resulted to many casualties. However, no concrete solution is made to address this phenomenon and i'm not sure it will be address in this time or in the near future.

[1.Climate Change, 4.Biochemical flows, 6.Population, 7.Food]

*PHILIPPINES, E634*

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3. Land-System Change: in the Philippines there is still the unfinished land reform program. Corruption in the Department of Agrarian Reform under the previous administration resulted in conversion of lands for subdivisions, cemeteries, mines and others. I believe that proper implemented land reform will result in small farmers owning their land. I also believe that many of the small farmers are open minded towards new techniques (including diversified farming, organic farming) and technologies (water saving irrigation etc). The other big problem which is at present in the Philippines a big issue, are the big mines which violate the environmental laws are some even not following the laws at all. This was also caused by corruption inside the Department of Environment and Natural Resources under the previous administration. There is a struggle in the present government between those concerned about the economy and those on the environmental effects of the dirty mines. Basically short term gains of a few against the long term environmental damage for generations.

6. Population: the exploding population growth is putting pressure on all resources (land, water, energy, food) in the Philippines and therefore the environment. The issue is more on survival than on quality life. When I arrived in the Philippines in 1985 there were something like 55 million Filipino's and now we are already at 104 million, nearly doubled in the time I lived in the Philippines.

7. Food: the average age of the farmer is 54 years and hardly any younger person is willing to become farmer. Young people go to the urban areas searching for greener pastures. This stream of young people from the agricultural areas to the cities is threatening the food security. Already now there is shortage of most kind of foods (including rice, vegetables, pork, chicken meat and so on). On top of that there is the land conversion problem and the unfinished land reform. The urbanization is also very much an environmental problem with waste and pollution issues.

[3.Land-System Change, 6.Population, 7.Food]

*Auke Idzenga, PHILIPPINES, E635*

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I think the political situation around the world and the associated media manipulation and spreading of disinformation online has demonstrated to us that individual will and actions of concerned citizens on environmental and social issues can be over ridden by the ALT right agenda. This has to be one of the most dangerous periods of history as significant achievements to this point are systematically dismantled and undermined by big business interests; lack of political will and leadership; and short-sightedness. My fear is that even if we manage to turn back the tide, climate skepticism and general environmental issue skepticism will become normalised from this point onwards.

[9.Society, Economy and Environment, 10.Others]

*Hilary Macleod, AUSTRALIA, E637*

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To me, these three issues are interlinked - as they are to many other issues. All of them need to be tackled in order to reverse the deterioration of the planet.

[1.Climate Change, 5.Water Resources, 6.Population]

*Peter S Maitland, SCOTLAND, E639*

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Reducing fossil fuel consumption.

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows, 6.Population, 9.Society, Economy and Environment]

*Ning Chao, USA, E641*

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The above selected ones are inter related. Changes in the land use (loss, fragmentation and degradation) affect the integrity of the biosphere, its contiguity and biodiversity. The Ecosystem services provided by the natural systems are crucial for the



society, economy and Environment. Sustainability of the resource utilisation is also crucial since this is important for a stable economy leading to the happiness and well being of the people.

[2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 9.Society, Economy and Environment]

*P. S. Easa, INDIA, E642*

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All these things are so interconnected it is hard to chose one without inevitably seeing how it links to another. Unchecked population growth is a major problem that contributes to all the other issues listed here, followed closely by how much of this population growth is in developing nations while developed nations are selfishly living unsustainable lifestyles. This leads to an issue of resource distribution, which is inextricably linked to land-use management, water scarcity (or, in many cases, availability of unpotable water or even excess water where it is anthropocentrically unwanted but perhaps ecologically desirable) and economic factors. These problems are just the tip of the (melting) iceberg, so to speak, but they speak to how deeply rooted and convoluted these issues are.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Casandia Bellevue, USA, E643*

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Population remains the biggest concern to me because it makes all other problems worse. While population numbers are stabilising in many parts of the world, they are increasing rapidly in the Middle East and most of Africa, creating and exacerbating economic, environmental and social problems.

Climate change is the more immediate existential threat because it is happening much faster than we thought it would and is already wreaking havoc. The prospect of a two metre sea-level rise by the end of the century is extremely worrying as it will remove many food-producing regions of the world and cause huge displacement of people.

Biodiversity loss - the sixth mass extinction - is the worst symptomn of overpopulation. Habitat loss is the major driver and this is caused by too many humans encroaching on natural forests for food production or logging for timber to build shelter. Many ecosystems will be at risk as key species are driven to extinction.

These three problems all impact on food production. Reports just in suggest there will be a loss of more than a quarter of staple crops as temperatures increase, yet we are trying to feed ever-growing numbers of people. Hans Joachim Schellnhuber of the Potsdam Institute suggests a four degree warmer world may only be able to support one billion people, not seven and a half or more. "

[6.Population]

*Jenny Goldie, AUSTRALIA, E644*

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Climate Change is the main concern in developing world now a days. Since, developing nations don't have access to adequate resourcses to face the dooms day thus they will be more effected . Moreover, half of the people of the world live in Asia , thus the problem has higher effect on Asia.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food]

*Mahboob Elahi Akhter, BANGLADESH, E645*

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I am concerned about the failure in this survey to distinguish between symptoms and causes or to recognize the layering of complex issues.

For example, while society sees climate change, land degradation, biodiversity loses as 'problems' these and related trends are actually better described as symptoms of higher order causes, particularly material economic growth and human population growth. That is, the relentless expansion of the human enterprise within a finite ecosphere necessarily alters large-scale biophysical systems such as climate, necessarily leads to over exploitation of valuable 'target' species (e.g., many open access fisheries), and necessarily displaces non-human species from their habitats.

In short,persistent growth of the human enterprise has resulted in a world in ecological 'overshoot'-- the consumption of bio-resources to satisfy human demand now exceeds the regenerative capacity of ecosystems.

Moreover, the sheer scale of human activities has made human beings the single greatest geological force changing the face of the planet. More bulk material is transported by, or results from, construction, mining agriculture, etc., than is moved by natural forces; more manufactured nitrogen has been injected into ecosystems by human activities than by all natural processes

combined.

Bottom line: As a result of continuous material/population growth, we are breaching planetary limits.

I should also point out that while economic and population growth should be seen as the 'proximate' drivers of global change, these are themselves the result of innate human tendencies (genetically determined propensities). Like all species, humans have: a) a biological potential for exponential population growth; b) a natural tendency to expand to occupy all accessible suitable habitats; c) a predisposition to use up available resources.

These are the 'distal' causes of our overshoot dilemma, and, unfortunately, they are currently being reinforced by a global cultural mythology (narrative) of continuous technological progress and perpetual economic growth.

Indeed, humans differ from other species, in that technology has all but removed many of the natural 'negative feedbacks' (pandemic diseases, starvation, etc.) that would normally check population growth. Technology also continually redefines what is 'available' -- e.g., we now mine minerals and catch fish that were unavailable to earlier technologies. This enables the continuous destructive expansion of the human enterprise and worsens all the 'symptoms' we falsely treat as isolated 'problems'. None of the latter 'symptoms/problems' can be satisfactorily addressed until the world community acknowledges both the proximal and distal causes and deliberately writes a new cultural narrative designed to a) counteract humanity's natural expansionist tendencies and; b) share the limited biocapacity of Earth.

H.sapiens must transition to a materially simpler, more equitable steady-state economy that will enable us to live sustainably within the regenerative capacity of Earth.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*William E. Rees, CANADA, E646*

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Climate Change is an urgent issue globally, which the Paris Conference of Dec 2015 acknowledged but didn't fully commit to address satisfactorily. Biodiversity loss is a very serious problem in most countries, including New Zealand where both predation by introduced mammals, as well as loss of habitat through land use changes are main contributors.

Intensive agriculture, particularly for dairy production, has accelerated in the last two decades and is now seriously degrading fresh water quality.

Water resources are seriously over-allocated in many regions of New Zealand to sustain intensive agriculture.

Population: there is no government policy for human population and current immigration is essentially unconstrained, centred in our largest city, Auckland where housing is now a major problem, both in terms of insufficient supply and mean cost about 10 times average salary, and so unaffordable by young or deprived couples. Many people are living in substandard accommodation: even cars and on the street.

Environmental/ecological quality is being seriously sacrificed at the expense of maximising economic growth.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Alan Francis Mark, NEW ZEALAND, E647*

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Egypt has many environmental problems, and some of them complicate efforts to promote economic and social development. The primary issues are water quality and quantity, soil loss, urban growth, air pollution, and the environmental effects of tourism. Egypt gets almost all of its water from the Nile. The quality of the river water is seriously threatened by untreated industrial and agricultural wastes, sewage, and municipal wastewater. In addition, the Aswan High Dam, which was completed in 1970, has reduced the flow of the Nile and trapped the nutrient-rich silt, which once fertilized the country's farmland, behind it. To compensate for the loss of the silt, farmers make more use of chemical fertilizers, which add to the water pollution. To increase crop yields they use modern herbicides and pesticides, which also contribute to the pollution. Furthermore, the reduced flow of the river increases the concentration of pollutants in the remaining river water. The reduced amount of silt deposited in the Nile Delta has caused the delta to shrink, resulting in coastal erosion that threatens the lagoons that are important sources of fish. Finally, year-round irrigation, using the water impounded behind the Aswan High Dam, causes salts to accumulate in the soil, leading to the loss of some agricultural land.

The size and rapid growth of Egypt's population have caused additional environmental problems. The expansion of urban areas into nearby farming areas infringes on the already limited agricultural land in the Nile Delta and Valley. Efforts to relieve this pressure by establishing satellite cities in the desert away from the Nile have been only partially successful because it is difficult to attract people and industries to these bleak environments. Dense urban areas such as Cairo, Alexandria, Al Minya,

and Aswan have poor air quality, worsened by lax enforcement of measures to reduce emissions from industrial plants and motor vehicles. In these overcrowded cities, streets are filled with pollution-spewing cars and trucks, public transportation is poorly developed, and factories contaminate the air.

Tourism provides an important source of revenue for economic growth. However, poorly controlled construction and waste disposal in new tourist centers along the eastern coast have seriously degraded the water quality of the Red Sea. In addition, large concentrations of tourists threaten the fragile desert areas and the marine corals along the coast.

None of Egypt's environmental difficulties is impossible to solve. However, in an economy that is short on financial resources, it is often hard to find the political will and money to invest in long-term environmental protection. Some attempts are being made to address these issues; for example, a proposal has been made to create nature parks in the Sinai region."

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 9.Society, Economy and Environment]

*EGYPT, E649*

Climate change is already leading to unpredictable seasonal patterns. In the last few years there are horrific weather extremes in many parts of Kenya and Africa, which affect the traditional and well-known livelihood patterns; especially agriculture and livestock production. Sudden torrential and heavy rains that fall out of season usually cause deaths and are a source of both old and new types of diseases and epidemics. Many accidents have occurred while extended droughts have led to severe famine and the deaths of both humans and animals in the extremes of cases. In a peculiar way, the apparent take-over by humans of certain natural animal habitats (forests and game reserves), usually due to greed for land to be used either for agriculture; industrial construction or plain real estate speculation has driven scores of animals into unfamiliar territories sometimes causing major human-animal conflicts and the entire Eco-system integrity affected in ways previously unknown. Tourism as a major economic sector is severely endangered as a result of this invasion of the animal habitats. The wanton destruction of certain forests have affected water catchment areas and remain high potential risks for major transboundary conflicts. The invasion of a major regional lake such as Victoria by a strange (hyacinth) weed has severely hampered both navigation and fishing livelihoods...

[1.Climate Change, 2.Biosphere Integrity, 9.Society, Economy and Environment]

*George Outa, KENYA, E652*

The change in land system in today's world is a major concern when it comes to environmental sustainability. The most productive land is being converted to urban areas. In most of cases, these urban expansion are unplanned posing a great threat to our environment. Today, 54 per cent of the world's population lives in urban areas. According to the projection, about 66% of the world population will live in the city by 2050. Therefore, urban expansion should be considered carefully and effective measures should be taken for proper planning and implementation until it is too late.

The world population is also growing at an unprecedented level. This creates a pressure on agricultural land. To feed the ever growing population, forests are being cleared and are used for agriculture. This results in loss of forest areas. Forest deforestation and degradation is also another outcome of this phenomenon. All these things also affect the other natural system like water retention, climate regulation, nutrient cycling and so on. The diversity of species is also at stake. In fact, the change in land system is affecting many other natural systems on which our life is dependent to survive. If concerted measures are not taken, we may face a great threat for our life and livelihood in the long run. Naturally, a nexus approach is a must now to solve the environmental problems we are facing these days.

[3.Land-System Change]

*Mst Karimon Nesha, GERMANY, E655*

Land -System changes is directly related to water resources and society, economy and environment. A change from forest areas into plantation or other land use adversely affect water resources and the ability of the local population who depends on the forest to continue their livelihood. Changes in land use affects lifestyle, can cause pollution and resulted in changes to the micro climate of the area. Ultimately, the multiple impact is the global climate changes, ultimately the survival of human.

[3.Land-System Change, 5.Water Resources, 9.Society, Economy and Environment]

*MALAYSIA, E658*

The difficulty with expressing priorities for concern is that the listed issues are so interrelated. My key concern is biodiversity conservation, the threats to this are all listed above. The biggest threats in Australia are land use and land clearing, over-

consuming lifestyles, pollution and . Most of this is driven by greed and ignorance, a complete lack of acknowledgement about just how crucial biodiversity is. I also think people see the problem as too big to fix, so just give up. If our government was a better role model, it might be more optimistic; however they are currently still trying to approve the biggest coal mine in the southern hemisphere and actively destroying the Great Barrier Reef. This is all against the wishes of the UN and most Australians. Overall, there is a big fight for biodiversity left in us, but right now we are fighting big industries and an irresponsible government.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

*Liz Drury, AUSTRALIA, E659*

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Pakistan, where I live is beset by all of the above environmental issues. Of particular concern are the climate change, water resources, land-system changes, population growth and biosphere integrity. Unless something is done in an urgent manner, the country will face severe environmental problems in the near future.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Alamgir+Khan Gandapur, PAKISTAN, E660*

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In Argentina only national parks, provincial parks and a few private properties protect most of the country's biodiversity. Intensive agriculture and cattle-raising affect the natural grasslands and the forest cover. Water pollution increases.

[2.Biosphere Integrity, 3.Land-System Change]

*Rosendo M. Fraga, ARGENTINA, E662*

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Climate Change is a very hot issue nowadays. Due to the climate change, storms, droughts and other unusual weather events are occurring. Indirectly, this affect the quality of life of the people. Drought means water resources are becoming poor in quality and amount. People are prone to diseases, less crops are harvested or may result a harvest failure. Food may become a scarce. All of this lead to the changes of people's lifestyle, society, economy and the quality of environment. There will land conversion aiming to have a (return) benefit in a short time, which actually can damage the environment. Yet, Government and society and everyone else should work together to decrease the impact of climate change. People should actively involved in local actions for the global benefits

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles]

*INDONESIA, E664*

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Climate change is the most important environmental challenge. It involves the future of the planet and the survival of all species. All other environmental issues are subordinate and affected by climate change.

[1.Climate Change]

*Justice Paul Stein, AUSTRALIA, E666*

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Increased urbanization, increased traffic (based on fossil-fuels), nuclear waste, too much residential waste, low recycling rate,unsustainable consumption patterns, food waste, too little space for wildlife to thrive, too much human activity in remote alpine regions, too much air traffic and air tickets that do not reflect the environmental damages and effects on health of humans and flora/fauna.

[3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 9.Society, Economy and Environment, 10.Others]

*giulietta, SWITZERLAND, E667*

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There are so many environmental issue in Indonesia as under-development countries. Global warming is the global issue and Indonesia also faces this condition, but there are so many environmental problem threatened Indonesia and it's peoples. In the last decades land-system change had been give negative impact for the peoples in this country. Since 1970-an natural forest of Indonesia had been converted to cultivated land and every single year the intensity of this change was increased continuously. The change is resulted from the un controlled population density and the changes of their life style. Land-system

change and land use mostly was not consider the impact for the environment and in the end of the process this is will caused natural disaster such as landslide, flood, if the rainfall increased as an impact of global warming. This condition is suffering Indonesia in the last decades. In the rainy season Indonesian peoples suffered by landslide and flood, otherwise in dry season Indonesia suffered by forest fire as a result of drained of peat swamp forest for the oil palm plantation. Conservation of flora and fauna sometimes neglected in those conditions.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 8.Lifestyles]

*INDONESIA, E669*

Climate change is caused by two groups of causes:

The group of objective causes (due to the transformation of nature) include: changes in solar activity, changes in orbit of the earth, changes in the location and size of continents, Change of ocean currents, and internal circulation of the atmosphere. Subjective causes (caused by human impacts) result from changes in land use and water use and the increase in CO<sub>2</sub> and other greenhouse gas emissions from human activities. .

Thus, climate change is not just a consequence of the greenhouse effect (warming of the earth), but also for many other reasons. However, there is a lot of scientific evidence that there is a relationship between the rise of the Earth's temperature and the increase in the concentration of CO<sub>2</sub> and other atmospheric gases in the atmosphere, especially in the industrial era. . During the nearly 1 million years before the Industrial Revolution, atmospheric CO<sub>2</sub> concentrations ranged from 170 to 280 parts per million (ppm). Currently, this number has risen much higher and at 387 ppm and will continue to grow at a faster rate. As a result, the increase in atmospheric CO<sub>2</sub> levels will cause global temperatures to rise, and the cause of climate change is that the earth is unable to absorb CO<sub>2</sub> and gaseous emissions. Other greenhouse gases are abundant in the atmosphere.

In my country, Vietnam, according to the National Strategy on Climate Change, which has been promulgated by the Prime Minister, in order to respond to climate change, the Government has put forward 10 strategic missions.

Firstly, actively respond to natural disasters and monitor climate with the modernization of the meteorological monitoring and meteorological forecasting technology to ensure early warning and forecast of weather phenomena and extreme weather. group; To review and elaborate development plannings and construction norms in areas frequently hit by natural disasters suited to conditions of natural disasters due to climate change; To consolidate and build key and emergency natural disaster prevention works.

Secondly, ensure food security and water resources with the rational and sustainable maintenance of the land fund for agriculture in regions and localities to ensure food security in the context of climate change.

Third, respond positively to sea level rise in vulnerability areas: Research, assessment, forecasting levels, impacts and vulnerability of sea level rise to areas and regions. And community; To protect and develop the islands to cope with climate change, especially sea level rise.

Fourthly, to protect and develop forests sustainably, to increase greenhouse gas absorption and to conserve biodiversity: To speed up the afforestation projects, to encourage enterprises to invest in economic forest plantation; To conserve biodiversity, to focus on the protection and development of ecosystems, species and species that are well tolerated with climate change; Protect and preserve genetic resources and species that are likely to become extinct due to climate change.

Fifth, mitigating greenhouse gas emissions contributes to protecting the Earth's climate system: developing renewable energy sources; Use thrift, energy efficiency ...

Sixth, strengthening the state's key role in responding to climate change.

Saturday, building communities to respond effectively to climate change.

Eighth, development of advanced science and technology in response to climate change.

Ninth, strengthening international cooperation and integration to enhance national standing in climate change issues. In particular, focus on strengthening cooperation with countries and international organizations in the implementation of the United Nations Framework Convention on Climate Change and related international treaties; Actively, actively and creatively building bilateral and multilateral agreements and agreements on climate change.

Tenth, diversify financial resources and focus investment effectively ...

[1.Climate Change]

*VIETNAM, E672*

Climate Change is an general problems.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 9.Society, Economy and Environment]

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 In Western Australia, as across most of Australian society, there remains a huge disjunct between the capitalist/free market objectives and commodification of natural resources and the degree of actual incentive for ecosystem / biome protection.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Chris Curnow, AUSTRALIA, E676*

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 Global awareness of environmental issues is growing but traditional economic theory does not adequately value ecosystem services.

Political leaders are not aware of the damage growth economics is doing and population control needs to be urgently applied across the planet in conjunction with better natural resource management.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*AUSTRALIA, E677*

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 The current Lifestyle ideals are the main driver of environmental problems: the need for cheap food, clothes and Equipment drives inhuman life conditions and environmental pollution on the whole planet. Solving these problems will only be possible through changing peoples' value-systems. This will be extremely difficult.

[2.Biosphere Integrity, 8.Lifestyles]

*SWITZERLAND, E678*

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 Population in an area is responsible for any changes in an area. The biosphere integrity is required to identify the bioresources availability and their uses. The most important requirement is water resources. Without water survival is not there.

[2.Biosphere Integrity, 5.Water Resources, 6.Population]

*R J Rao, INDIA, E684*

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 The processes above are connected. I believe human population growth is the major driver of all environmental problems related. In theory, it might be possible to sustain such a large human population on Earth. However, in practical terms, it seems impossible to avoid a collapse of our current life-style caused by the processes above.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population]

*Luciano M. Verdade, BRAZIL, E686*

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 I have been working for environmental issues for many years. However, sometimes I have the feeling that to really care about environment would mean to deal with the simple fact we are too many, and we like to consume too much. "Unsustainable" is a word that is far too soft for the extremely risky situation we are living in.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 8.Lifestyles]

*Alberto Arroyo Schnell, BELGIUM, E688*

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 More efficient ways to control population growth are urgently needed, together with serious investment in clean energy technology and water management.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 8.Lifestyles]

*AUSTRALIA, E689*

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 Food waste is a big problem in the first world. One third is thrown away. Not to forget the packaging of all the food - everything is packed into plastic what ends in the garbage or in a lot of ways in nature and the waters.

[7.Food]

*SWITZERLAND, E691*

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 Our political Systems are not made for improvement.

[1.Climate Change, 2.Biosphere Integrity]

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 The biggest problem that Earth and mankind are facing is the growth of the human populations which in many parts of the world is out of control. Any progress we make to improve sustainability of livelihoods is undermined by the fact that the demand on the natural resources is increasing much faster.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population]

*Anders S. Barfod, DENMARK, E694*

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 I'm based in Hong Kong and as such, I'm stressing the issues that are more closely related to this region and the Greater China area. Obviously population growth and the resultant pollution and various demands on wildlife are of the greatest negative impact. At this time, I feel the most urgent actions needed are those that educate the population quickly enough to minimise any further destruction to the environment and biodiversity.

[3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Sharon Kwok Pong, HONG KONG, E696*

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 We need to model a new society and re-define topics as transport, employment, energy, food security, consumption. All these matters should be based on reciprocity with the other people and with nature. I have a strong hope that we will be smart enough to see this is not only an "environmental problem", but an economic and a social problem; and most important and issue to re-think how wrongly we shaped things in the past and we created a model that is clearly not working, so we need to develop a different model. We are capable, we did it before, let's move forward.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

*pedro solano, PERU, E698*

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 The environmental issues are all interconnected they started because of population boom resulting in massive industrialization having no or very little knowledge of the consequences of the so called modernization

The excessive industrialization has caused the a fast shift in climate change the natural process has been altered on the other hand the excessive consumption of limited natural resources and mismanaged waste streams have caused serious pollution issues thereby contaminating the water bodies through absorption in soil or by entering the water bodies rivers, seas, and oceans.

The only possible option left to be taken on war footing basis is the awareness building of those in decision making positions and the children as combined they can make a difference.

We have to take all the countries on board big or small rich or poor and the people across the globe. its time we show the correct picture and spread knowledge on the subject as concerted effort.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Ghazala, CANADA, E699*

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 Although 25% of Ecuador's land is protected, the country's policies have changed dramatically during the last few years due to a drastic fall of the oil prices. Oil has been the main source of Ecuador's economy since the sixties; therefore, to compensate the decrease of that important income, the Government is changing the environmental and natural resources law in order to allow mining exploitation even inside the protected areas, with the consequences of land and water resources contamination as well as a foreseeable change in land use.

During the first semester of 2017, the country has been experiencing the effects of climate change; with heavy and persistent rains (not seen since 1970) in the three regions, Coast, Highlands and the Amazon which have caused floodings that have destroyed houses and roads as well as important areas of agricultural production. The weather forecasts foresee major negative impacts in the near future and my belief is that the country is not and will not be, prepared to face those impacts.

A new presidential four-year period will start on May 24th, 2017, but the fact that both the new government and the National Assembly belong to the same political party of the present regime, I have little hope regarding a hypothetical policy making to prevent major impacts or to improve environmental, land and water use, as well as to improve or recover the country's natural resources' protection.

[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 9.Society, Economy and Environment]  
*ECUADOR, E700*

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Since most of these problems are inter-related, it is difficult to select among them. I would say that most of us in the eastern United States are fortunate in regards to food, although the poor continue to suffer in this money oriented society. The recent governmental change in the USA will certainly exacerbate both the pace and scope of environmental and climate degradation. This is obvious from the proposed 2018 U.S. government budget which attacks both environmental considerations as well as support for the poor, or even middle class. Although all proposed funding changes may not be approved by our Congress, even without those reductions, changes in policy emphasis and regulations (e.g., enforcement of pollution and land/species protection laws, increased support for use of fossil fuels, withdrawal or reduced participation in global climate initiatives, etc.) our path to a more sustainable world will be set back.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 9.Society, Economy and Environment]

*Joseph A Uravitch, USA, E701*

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6. Population growth (including but not limited to biodiversity hotspot areas) is our planet's primary unresolved problem. It is at the root of environmental pressure an degradation, of contamination, and of inherent socio-economic Problems. A Change of attitude of the Catholic Church toward birth control would be a welcome (if in itself insufficient) contribution to hedging the problem.

4. Air and water pollution (including waste mismanagement, particularly mistreating the Oceans as [plastic] waste repositories), whereas causally dependent on (9), can be tackled by independent measures such as education, recycling and filtering strategies, shift in consumer habits (away from plastic greenhouse culture of out-of season crops).

2.Biodiverity loss is an irreversible process with unknown (and largely unexplored) negative consequences for the future of Mankind on our planet. In-situ monitoring and safeguarding of biodiversity hotspots in general and, whenever feasible, of individual threatened species individually deserves to become a top priority in any global strategy toward safeguarding the future existence of human kind (human survival, in a global context, being perhaps biologically undesirable).

[2.Biosphere Integrity, 4.Biochemical flows, 6.Population]

ITALY, E704

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Although many of these environmental issues are challenges in other locations, I feel that the ones I selected are probably the most important on the island where I live. Rising water levels is a real concern as well as the integrity of the Ocean. Other challenges are very urgent and important but are not as wide scale at this locale.

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows]

*USA, E705*

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Impact of US policy re Great Lakes

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 9.Society, Economy and Environment]

*CANADA, E707*

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Climate change is one of the largest problem humanity has faced. The global effort to mitigate greenhouse gas (GHG) emission has been evident, but stalemates continue in decarbonisation of business-as-usual carbon intensive economies and it does not appear to by changing quickly enough. This will then see increase problems in the other issues above.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Stephen Wearing, AUSTRALIA, E708*

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All the issues are interconnected - and different things like climate change or biosphere integrity all are more threatened if there are more people as well as if these people consume in excess of their countries' biocapacity. The Agenda 2030, if properly implemented, can help to get humanity on a sustainable path; but for this, peace needs to prevail and the SDGs really need to be implemented everywhere. Then you look at reality, look at Syria, Turkey, or the US- and wonder if the US Government has ever made any commitment to make the Agenda 2030 come true.



[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 9.Society, Economy and Environment]

SWITZERLAND, E709

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Pollution I believe is a major problem...Pollution effects every thing in this earth...every other environmental issue is minor to Pollution. Once pollution in every environment sense is sorted every other environment issues should be resolved.

[10.Others]

FIJI, E711

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In the Pacific Islands region the most pressing issue is climate change. It affects ability to function on a daily basis due to changes in weather patterns and increasing flooding events. However the damage is also due to poor land use management including destruction of forests, mangroves and mining of rivers and land. Biodiversity is threatened by poor appreciation of biocultural diversity and changes in lifestyle. There is a lack of consideration for the importance of looking after the environment generally.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

FIJI, E713

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For the Philippines, over population is already taking a heavy toll on food supply as well as the the biosphere integrity. Add in the impacts of climate change and pollution, and you have a recipe for a disaster waiting to happen.

[1.Climate Change, 2.Biosphere Integrity, 6.Population, 7.Food]

PHILIPPINES, E716

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The Trump administration is very likely to reverse progress made on all of these issues over the last two decades, thus creating even greater global crises than we were already facing with these important issues.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population]

Hartwell Welsh, USA, E717

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Continuous loss of biodiversity around the world especially in developing regions such as Southeast Asia is a serious cause for concern.

[2.Biosphere Integrity]

SINGAPORE, E719

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As a member of the global community, we are concerned in New Zealand about that part of climate change attributable to human impacts, but because of our oceanic location in the Southern Hemisphere we will be less affected by its impacts than many other places. Sea level rise is certainly a serious local concern, because it affects our neighbours in the Pacific and will affect coastal communities in New Zealand.

Within New Zealand, intensification of land use is of major concern because of its associated deleterious effects on water quality and aquatic ecosystems. At national level we have become very aware of the problem, and the government is being forced to take effective remedial action.

Loss of biodiversity has been an ongoing problem for more than a century, and unfortunately continues. Steps are being taken to arrest the problem but too little too late.

Marine resources around the country are seriously depleted, and while efforts are being made to manage the problem and to restore fish populations, we are still in the early days of learning how to do it. Political will is a major issue.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources]

Paul Williams, NEW ZEALAND, E722

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These issues are all part and parcel and deeply connected to each other, and thus are all equally critical. Lifestyles as a general term is the leading cause in the degradation of all the other issues. We simply can NOT continue to live and use as we do - everything is based on consumerism, including the very foundations of our economy.

These issues have been around for decades and yet no significant action has been taken by the offenders such as large polluting

corporations, or resulted in large-scale change - climate change is real and weather patterns are continuing to change, species loss is at an all time high, etc. I think the average person feels hopeless that they can make a change as one person because the scale of the problems is so incredible and the root causes are not being addressed or held accountable that this leads the average person to abandon their own individual efforts because they feel they have no impact. Alternative energies, healthier food sources, cleaner industries etc exist yet politics, lobbying, and big business fight (and win) to prevent these from becoming mainstream. How breathing clean air, drinking clean water, and eating pesticide-free food is NOT in big business interests is beyond me. The rates of species loss in just the last 10 years is mind-blowing and it does make the news and yet the powers that be are simply not doing enough. I personally do not feel these issues have really registered in the general public's mind nor made the connection that the very existence of humans is directly linked to the survival of other species, of water resources, of food production methods. I also feel that the economic foundations are such that they are not conducive to supporting the public to take a more environmentally friendly approach to how and what they buy and that consumerism will continue to reign. Examples of this are the high cost of organic, chemical-free, clean energy, non-fossil fuel engines/cars etc versus the status quo. For most it is not possible economically to "do the right thing". It is incredibly sad that these issues have become "issues" and treated with mirth by some leaders and influential people. Is it that humanity is more interested in reality television and the sensational and they do not want to hear about problems? Or that we are overwhelmed by negativity in the news that it falls on deaf ears? Or is it that people feel so far removed from the extinction of a species on another continent, the loss of faraway islands due to rising sea levels, civil unrest due to dwindling water resources and water being used as a political bargaining chip, famine in Africa etc and thus do not pay these concepts any mind? Speaking as someone in the environmental sector as well as just one individual, I can say I experience all of the above. I feel overwhelmed and despondent about the state of the world and wonder if the choices I make - sometimes at hardship for myself - are making a difference; I rescue animals, I educate about wildlife protection/anti-trafficking, I am vegan (no meat for 25 years) and do not support or buy any products that conduct animal testing, I ride a bicycle or walk, etc and in Southeast Asia these actions can be very difficult to keep up but I am committed even if it is the harder way. I know many other people who also try to live consciously and make informed decisions and feel despair when they see water being wasted, trash thrown in the waterways etc. I think it needs to be brought home to the individual about the power they have. The individual has the power to change the economy and change the products on the market by changing their demand. Then I think real change will come since it is clearly NOT coming from governments or big business. But I fear that we are well past the tipping point and recent changes in regulations by the US government are reversing any progress made and will only expedite further degradation.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Amy Van Nice, CAMBODIA, E723*

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The political changes in the US are part of a wider tide of nationalism in the world, all of it involves anti-environment attitudes that will reverse decades of effort to protect the environment.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources]

*AUSTRALIA, E724*

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Urgent action required to reduce the impact of global carbon emissions, improve biodiversity protection, reduce pollutants esp plastics, protect and improve freshwater resources, protect and improve food production and innovation, and introduce greater global fisheries management, and reduce the increasing human population, and improve human rights, responsibilities and conditions across the world.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 9.Society, Economy and Environment]

*NEW ZEALAND, E727*

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All aspects of the environment, society and economy listed above (except population) are impacting together to cause significant threats to New Zealand's Biodiversity. Biodiversity is a very good measure of how global environmental degradation, over population and over exploitation of resources is impacting at the national level in New Zealand E.g. Water pollution is affecting freshwater biodiversity, intensified land use is reducing AgroEcology and biodiversity, reducing wetland protection (land use change from wetlands to dairy farms, urban or blueberry farms especially)

[2.Biosphere Integrity]

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In the region where I live, all emphasis is on consumption, having and getting. This is reflected on the TV, at all educational levels, in the family, shops, marketing. There is zero interest in looking after, maintaining, mending or improving upon what you have managed to get. The area is in ruins, despite the fact that Mexico, even the humble state of Chiapas has SO many resources and ways of generating income and wellbeing. Everything is being sacrificed for the sake of valueless consumption, and there is little or no counter current to balance that, few campaigns, no law, no vigilance, no interest. Behind that is the tremendous corruption that affects everything, and again, is based upon the desire to consume more, and imitate what you imagine the rich have. NOBODY SEEMS TO WANT TO CONTRIBUTE TO THE FUTURE OF HUMAN SOCIETY. The saddest thing is the wave of obesity and ill health simply because of over consumption of junk food and ignorance - the doctors and pharmacists are happy. Obesity, being ill, waiting to see the doctor and taking lots of pills is the new normal and an important part of conversation. Parties and how to make money complete the conversation repertoire. There is a major trend amongst the younger generations to avoid ""el campo"" (the field, rural áreas, agriculture, nature etc.) at all costs, its dirty, primitive and undeveloped, according to them. Nobody has reacted as the incredibly fertile Soconusco coastal plain and coffee zone have become decimated.

[3.Land-System Change, 6.Population, 8.Lifestyles]

MEXICO, E729

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Forest destruction (FD) for mono agriculture in Thailand and neighboring countries is extremely high. This type of agriculture is not only destroy natural habitat but it destroy biodiversity of wildlife (wild flora & fauna). It also increase number of chemical flows (pollution and contamination in the air, water & soil).

Since land-system (LS) has changed due to forest destruction, flash flood always occurs during raining season and fire after crop harvesting occurs in dry season. Overall temperature is increasing and it induces number of electricity consumption for fans and air conditioners.

Due to FD and LS, water shortage occurs and getting worse year by year. People killed each other to compete for water for their rice-field and longan orchard.

Pesticide, insecticide, herbicide, chemical fertilizers and hormones are used without proper management. They are discarded and contaminated in air, soil, water and food products. They are drained to stream, rivers & ocean!! People get sick due to this pollution and people need to pay more for their medical treatment (10. others).

Actually, population of Thai people is not highly increasing but number of latent population from neighboring countries is increasing. It induces competition for resources.

Due to changing of simple Thai people life styles to modern ones, people have to earn more to cover their expenses hence many of them are in debt. This pressure leads to aggression in society. Increasing of fighting, robbers, gambling, prostitution, cheating and corruption impact Thai society.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

Nantiya Aggimarangsee, THAILAND, E732

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I feel the looming biodiversity crisis is the greatest environmental issue. This issue is driven by habitat loss (land system changes) and in the future by climate change and land system changes. The changes in the USA due to the recent election have greatly how the USA will protect endangered species and their habitats. It also seems that efforts to combat climate change will be rolled back for at least the next four years. Overall, the situation is not good for environmental protection.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change]

USA, E733

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Climate change threatens the ecological security of low-lying islands in Oceania. Climate change refugees are emerging.

Marine debris and micro-plastic pollution is a key issue for the planet's oceans and marine ecological webs.

'Food' also concerns access and equity issues and public health crises like obesity that divert health resources from other activities like ecological restoration.

[4.Biochemical flows]

AUSTRALIA, E737

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Humankind will survive almost all of the abuses we are heaping upon the planet. The question must be more about what this survival will look like.

We should also remember that we have already changed so much, and committed ourselves to so much more. There isn't a "midnight" point at which everything ends. Anthropogenic impacts already wiped out megafauna on every continent: their midnight was 5 or 10,000 years ago. But now we are accelerating change. Midnight will happen today for many patches of once wonderful nature. And it will happen today for people who die of starvation or through illness driven by pollution. so much change.

Climate change for me comes first on the list. Other threats we can halt if or when we develop the wit and intelligence to do so, but with the climate our decisions today, and those we made even 20 and 30 years ago, will play out for decades to come. That is why we have so little time left - not because we're going to suffer immediately from climate change, but because our children will. And their children.

[1.Climate Change]

*Mark D Spalding, ITALY, E740*

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Climate change is the mother of all challenges so it takes first place then comes changes in ecosystems mostly terrestrial and marine, that affects our livelihoods. Humans on the other hand are not acknowledging these threats instead they continue with their bad consumption habits. In Africa carbon dioxide emissions double every time due to the metamorphosis of consumption habits

[1.Climate Change, 3.Land-System Change, 8.Lifestyles]

*SARAH ANUPI KUTAHI, KENYA, E741*

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These issues are all interlinked, which makes it difficult to judge one as more important than another. Whatever the issue, awareness-raising and education deserve special attention because they help to intervene in the destructive cycles that we are engaged in. Empowerment of individuals and communities to work locally towards the greater global good is also critical. Policy is essential, but not only at the national level. Often much more can be achieved collectively at the local level, where the link between policy and action is typically more direct. At the same time, the world is becoming increasingly connected. The tools that have enabled that - especially information tools - can be used to good or bad effect, so we should constantly strive to use them as constructively as possible. Lastly, under "others": belief systems, especially religion, might be useful to consider also. Religion requires the surrender of logic, and we are in dire need of logic and honest discourse at this point in history.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Andre Mader, SWITZERLAND, E743*

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We have an extreme water crisis right now which was predicted years ago but nothing was done - now it is panic stations. Politicians have no inkling of the importance of basic resource conservation (both biotic and abiotic).

Nothing is being done regarding population stabilization and education is poor and getting worse - as are health and safety (policing); particularly violence against women.

Finally our conservation agencies are depleted of appropriately trained and qualified people, and our policies and actions involving local communities and conservation are pitiful.

Nationally we are on a spiraling downward trend because of corruption at the highest level. Our only hope is that there are some people in some communities, in some NGOs and some corporates that are bucking the trend BUT these inputs are really minimal on a national scale. Poverty is a huge factor in all of this as the majority are just happy to survive and so ignore the basic issues that longer term would be beneficial to their circumstances. This is a common third world trend and the so-called first world is not helping because their economic policies still plunder the poor and vulnerable.

[2.Biosphere Integrity, 5.Water Resources, 6.Population]

*Eugene MOLL, SOUTH AFRICA, E744*

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Finding the right balance between economic development and environment protection is still the main challenge for sustainable development. Nature and biodiversity values need to be preserved but at the same time they should be managed

to fulfill the needs of people and development. However, it is of out most importance to recognize and valorize the real value of biodiversity elements and this is the first step toward sustainable development. Nature conservationists should not limit themselves into observing and trying to control what happens. they should anticipate and influence development.

[2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Genti Kromidha, ALBANIA, E745*

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I am very concerned about changes in land use, leading to drainage of small wetlands (wet meadows, wet forests), especially on a very small scale (single pieces of land, single landowners actions) which, taken globally, add up to a very large loss of wet areas, loss of freshwater resources, and which are an overlooked, but highly significant contribution to climate change. Fewer wet areas = less evaporation = higher temperatures as evaporation cools the atmosphere and adds humidity to the air. At the same time, draining those small wet areas means a higher water runoff during rainfall, which increases the risk of floods downstream and which reduces water retention and increases the risks of water shortage during periods of drought. Yet, single landowners tend to see only their personal benefit (easier access to the land all year round) and with the current number of digging machines, a wet meadow can be drained forever in a matter of hours. As a symptom, wetland animal and plant species become increasingly rare. Biologists (like me) tend to focus on these biodiversity aspects while the big picture remains unknown to the public.

That said, I am also concerned that attention to global aspects can potentially reduce funding possibilities for local actions. In my opinion, work in the field should be the basis for sustainability. Local, small scale actions are the key to raising awareness as well as to maintaining global biodiversity.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 10.Others]

*Paul Veenliet, SLOVENIA, E746*

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Consumption patterns in Western Europe continue to undermine sustainability through over-reliance on unsustainable resources and continued demand for consumer products that require long-haul transport and negatively impact local production/distribution.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 6.Population, 7.Food, 9.Society, Economy and Environment]

*UK, E747*

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Competing landuses coupled with lack of landuse and land zonation plans are the major driver to human-wildlife conflict in many parts of Africa. This has led to decline in many species of fauna and flora and loss of biological diversity. The situation have been made worse by climate change with extreme droughts and occasional floods in many parts of the continent. With growing human population, and need for infrastructure development there is tricky balance between development & conservation.

[1.Climate Change, 3.Land-System Change, 6.Population, 9.Society, Economy and Environment]

*PATRICK OMONDI, KENYA, E749*

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Climate change and freshwater resources are closely connected problems for Central Asia in general, and Kazakhstan, as a part of the last region, particularly.

Warming and aridization of the climate will lead among other to freshwater deficiency soon.

A presence of a number of transboundary rivers in Kazakhstan (common with China and KLyrgyzstan)visibly complicates the problem of possible freshwater deficiency in future.

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*Tatjana Dujsebayeva, KAZAKHSTAN, E752*

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We are currently facing a highly accelerated species extinction rate on a global scale. In Germany with its smaller biodiversity, population declines in many different species are a profound problem regarding not only vertebrates (that indeed may recover in some species) but especially in many insects (as the most important part of the biomass) that are the base and central component in local food webs etc. Climate change with extreme wheather events will increase also in Germany, such as heavy

local rains or prolonged periods with summer drought, although this climate change will probably not have the same impact as in many tropical countries. In the densely populated region of central Europe it will be very important to establish in the future a "Green Economy" that includes environmental education at the individual level and helps to avoid excessive consumption of natural resources.

[1.Climate Change, 2.Biosphere Integrity, 8.Lifestyles, 9.Society, Economy and Environment]

*GERMANY, E753*

Without controlling human population growth our actions only become more difficult and biologists and conservationists are not equipped to deal with this problem.

[6.Population]

*Colin Chapman, CANADA, E755*

My community in the Philippines is characterised by high dependence on environmental resources, low economic status and high population growth. Consequently it is unsurprising that environmental goods and services are strained and the regions rich biodiversity is degraded and threatened.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*PHILIPPINES, E758*

Societal problems in the region (as well as all over the World), including decreasing of education quality and the poor lifestyles, are followed by poor awareness of the environmental issues in general. The latter is naturally connected with deepening all environmental problems hence bringing the Environmental Doomsday Clock closer to 12:00.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*BULGARIA, E759*

Climate change: I think the planet has had that before and it will adapt

Water resources: there is plenty of water on earth, be it salty and far away from where it is needed most: those are just financial and logistic problems

Lifestyle/Society, Economy and Environment: rich against poor will be devastating;...(the last part is edited)

[1.Climate Change, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

*Norbert De Munnik, THE NETHERLANDS, E760*

I travel the world visiting agricultural projects and all farmers and collectors have information to share about the impacts of more extreme weather conditions and changing patterns due to climate change. This has a knock on effect on price and availability of food and other goods.

[1.Climate Change]

*Susan Curtis, UK, E761*

Consumption and sustainability are serious issues, including awareness of the impact of personal consumption on a global scale. We need to address our food consumption in terms of the waste, the consumption of plastics and other waste that go with food transportation, production, availability and expectation of what we can eat and when. The same goes for technology and other items such as clothing. We need to be made aware of the resources that are needed to produce everything we consume on a daily basis and what a far reach this has across the globe.

[6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Nida Alfulaij, UK, E762*

The environmental problems are integrated and cannot be solved as separate. The increase of consumer markets and purchasing power act as drivers of many issues we have at hand, such as climate change, pollution, resource depletion, etc. However, the well being of people cannot be rejected on any level of the discourse, therefore, a rather technocratic focus on technological breakthroughs should be made, a la the Environmental Kuznets Curve.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

*GEORGIA, E763*

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As Georgia is developing Country government is mostly focused on economical development. During last years environment protection became a priority due to adopting EU directives so now the government pays more attention to nature. Still the awareness about environmental protection is really low which causes unsustainable lifestyle of population. Another problem is biodiversity loss which is caused by habitat degradation low awareness and other. But it need to be mentioned that Georgia has made very important steps towards improvement of this situation.

[2.Biosphere Integrity, 3.Land-System Change, 8.Lifestyles]

*GEORGIA, E764*

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The biggest immediate issues facing most people and most societies is the loss of biodiversity, the availability of clean water, sufficient and sustainable food and clean energy to make life possible. Above and beyond these factors is climate change which is likely to exacerbate each of these issues as time moves on. Acting locally on the immediate concerns must go hand in hand with action globally to halt warming, thus taming climate and its monster like potential.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*USA, E765*

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I think a lot of people have problems with the environment. We have environmental standards, but this is not enough. All these problems that I noted above are a consequence of the fact that not yet fully formed ecological thinking, has not grown a generation of people who love the nature. We have one of the largest territories in the world, so we have obligations to other countries and their environment. We must work with developed countries. We must to learn from their experience, adapt successful solutions developed and implemented in our country advanced technology.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*RUSSIA, E766*

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Clearly environmental warming due to climate change caused by human activities is a critical problem. The Paris accord is a good beginning but much more must be done and reasonably quickly to alleviate the problem. In the US, the current administration has no sense of the urgency of the issue and no understanding of the situation and is busily rolling back legislation that addressed the issue.

At the same time, human population is growing, especially in underdeveloped countries posing a long term threat to human well being. This is likely to lead to future conflict and a continued degradation of the environment.

[1.Climate Change, 6.Population, 9.Society, Economy and Environment]

*Charles Walcott, USA, E768*

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I will make this short as it all comes down to the issue of development as held by most political regimes and economical philosophies: Development is conceived a system of more growth/more consumption/more population growth. Even if we slow down the development rates of our societies, eventually every square inch of the planet will be developed one way or the other, with consequent damage to ecosystems and species extinctions. It may sound simplistic and extremist, but there is no such thing as "sustainable development". We must leave nature alone, when and wherever possible: national parks, biosphere reserves, etc. I am a plant macroevolutionist, accustomed to think in terms of millions of years. From my perspective, the last great extinction is currently under way in front of everybody's eyes and nobody seem to notice or care. From my perspective, again, most of Earth biota is already extinct or about to become extinct (in geological time, a couple of tens of years are negligible!). The great enemy is the lack of conscience and the ignorance of our society and our leaders , in whose interest is to preserve the status quo.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 6.Population]

*Germán Carnevali Fernández-Concha, MEXICO, E769*

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In North America, climate change impacts are increasingly being felt from the Arctic (e.g. change in ice pattern and season,

observations of change in species composition, etc.), to south of 60 (more violent storms, more extreme droughts and floods, migration of various species incl. disease spreading insects, etc.). Such impacts in addition to the forever growing expansion of land-use change are leading to a reduction of biodiversity resulting in the crisis we are facing right now. I strongly believe that a major shift in our consumption pattern is the only long-term solution to lessen the stress we are putting on our environment. Until all nations work seriously and commit to attain a sustainable level of development (e.g. elimination of non-biodegradable materials to the limit possible, only relying on renewable energy sources, relying mostly on local products for our source of food and to eliminate our footprint, more sustainable extraction processes and methods for all resources, etc.), I don't have much hope we will ever be a just, peaceful and equal society. A major shift need to happen , one where a new type of capitalism is shaped in order to meet the meet and address successfully the challenges of the 21st century and beyond.

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*CANADA, E771*

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In my view, the single largest driver across the globe is our population size - it is linked to and or causing other environmental problems. There will be serious ramifications if we cannot live in harmony with other life within our biosphere. I fear that there could be a total collapse of our society within my lifetime and certainly within my son's lifetime (he's 13), yet most people here in the States are not only not concerned, they do not even realize the potential for catastrophe that could occur. Water and food are becoming scarce in certain parts of the world and this is already driving regional conflicts or tension (e.g., South China Sea). Such anxiety will only increase. And now in my country we have a leader who believes climate change is a hoax! How we got to this situation is clear, there are too many people in this country who are ignorant, they simply lack the wherewithal to comprehend what is going on to the ecology of our Earth and who is responsible. All societies collapse, all life will eventually go extinct, and 4.5 billion years from now when the Sun swells and incinerates the Earth who will notice? The problem is few realize these eventualities.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 7.Food, 9.Society, Economy and Environment]

*USA, E775*

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All of the issues above are related to simply too many people. Our planet is reaching its capacity and ability to support people with the type of consumption patterns in the developed world.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*USA, E776*

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Climate change reduces land areas, affects agriculture and makes us more vulnerable to extreme weather events. For Cuba, in its condition of archipelago, it is of vital importance, the occupation of our government with the task life

[1.Climate Change]

*José Manuel Guzmán Menéndez, CUBA, E778*

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Economical interests are the reason of all environmental problems in my country

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

*BRAZIL, E779*

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First & foremost, coming from and living in one of the most consumptive countries in the world influences my perception. The contributory history of the US to post WWII environmental degradation has been profound; particularly in the promotion of consumption based on the 1950's marketing ploy of planned obsolescence of durable goods. This ploy ushered in an unprecedented amount of excessive consumption that eventually pervaded nearly every market of manufactured goods. Excessive consumption through the deliberate creation of perceived need is one of the root causes of environmental degradation that must be addressed.

[2.Biosphere Integrity, 3.Land-System Change, 8.Lifestyles]

*Nicholas Bruno, USA, E780*



Preservation and sustainability use of water resources is of the utmost importance, conservation of this resource is dependent of the way we manage all the other problems listed. All of the problems listed exercise pressures on this resource. Some of the listing problems are beyond our scope as individuals (Climate Change, Biosphere integrity)but our demeanor can influence and make a change in the rest of them.

The planet was undergone many changes throughout its existence, some catastrophic for some species, allowing others to thrive, some very subtle allowing for a misconception of balance to develop. Change and evolution are the only constants. We can influence some of that change on our behalf, collectively through the establishment sound policies and economic measures but in order for any change to be significant they should start at the individual level, changing our lifestyles, our consumption patterns, our waste of resources and our disregard for future generations, that will have to inherit these resources.  
[5.Water Resources]

*Roy Phillipps, PANAMA, E781*

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Lack of education, I think is the first problem to take into account.

With a higher level of education societies will understand the importance of keeping natural areas in good condition. Good environmental education will enable people to make better sustainable uses of natural resources.

[2.Biosphere Integrity, 3.Land-System Change, 8.Lifestyles, 9.Society, Economy and Environment]

*Cristian F. Marte Pimentel, DOMINICANA, E783*

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Comments: impacts of Brexit on UK and EU environmental issues

2 (Biosphere Integrity) & 9 (Society, Economy, Environment):

The United Kingdom's Brexit decision raises severe environmental concerns pertaining to loss of EU sustainable use regulations and biodiversity protections (e.g. Birds and Habitats Directive).

Additionally, in seeking to restrict movement of EU citizens into the UK, Brexit will disadvantage environmental research institutions (loss of staff and students).

3 (Climate Change): Brexit may ultimately lead to insular climate policies, lack of collaboration or failure to recognise and accept the UK's environmental and research roles and responsibilities towards Europe and the rest of the world.

[1.Climate Change, 2.Biosphere Integrity, 9.Society, Economy and Environment]

*UK, E785*

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These are my personal opinions and do not reflect those of my employer. I'm a wildlife population ecologist and have also read extensively about human demographic trends as well. Many countries are facing a growing demographic crisis due to a \*lack\* of population growth that cannot support their welfare state. Examples include the US, many countries in Europe, Japan, China, and Russia. Additionally, other statistics show that birth rates in highly reproductive countries (e.g. Middle Eastern region, Africa) are also slowing. I feel like these facts are underappreciated by the media and the general public. Despite political difficulties this may bring, I think that this is good news, yet the media and other well-meaning organizations instead focus on catastrophizing. I think that what we have is a \*current\* consumption and lifestyle problem that the environment cannot sustain, not a looming population bomb (given projections). We need to focus on the current problem (consumption) and re-double our efforts to reduce waste/pollution and promote sustainable energy or other consumer products. Again, these are my personal opinions.

[6.Population, 8.Lifestyles]

*USA, E786*

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Urbanization is consuming good farm land worldwide.

The largest intervention individuals can make to lessening the impact of environmental degradation is to have fewer children. Food production requires availability of favorable inputs (water, land, technologies), and skilled farmers, both of which appear to be declining precipitously.

[3.Land-System Change, 6.Population, 7.Food]

*Thomas Payne, MEXICO, E788*

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As a global community, we need to address population growth and impacts, including education of girls, access to health care, etc. to slow all the other cascading impacts in the future. We also need to address critical affects such as climate change and

pollution, water contamination and land changes in the meantime, but slow the inertia of human population growth and consumption.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

USA, E789

Population growth and its impact on all other factors is not being emphasized enough. Yet even a lower population would be more detrimental if consumption patterns continue to accelerate. Those with higher incomes must learn to consume less and set better examples for all.

As one who voluntarily moved from the USA to live for three years without electricity, computer, and no running water in a thatched roof hut in the forests of Belize, I can attest that such a life can be most rewarding.

That said, all human rights (including freedom of or no religion) and equal access to healthcare would be a requirement for a successful transition to any simpler lives.

[6.Population]

Hank Hammatt, USA, E790

Awareness of the problem of human population growth is old and therefore less trendy than other issues, especially climate change, in the news today. However, human population growth remains the most fundamental problem. Many of the other issues would be much less severe if the human population was not so large.

[6.Population]

USA, E792

Growing inequity represents the single greatest challenge of today and serves as the seed for most of our most pressing problems.

[9.Society, Economy and Environment]

USA, E793

The three most pressing issues in my opinion are the loss of water resources which in turn results in the loss of biodiversity. While Climate Change certainly plays a part there are far greater, more pressing issues (mountaintop mining, human induced alteration of waterways, point and non-point pollution, channelization, exotic species) to name a few.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources]

Kevin Cummings, USA, E796

I think the reality is that from far we have passed the Earth sustainable population, once it is against market and economic driven culture, we are treating the issue with much less seriously we should.

So we start find reasons that are actually effects of human population explosion.

Restrictions and threat to biodiversity are show and discussed, but no one points the needing to down the pressure.

It's hard time ahead, and as soon this reality comes to the top of the table, better and effectively it will be.

[2.Biosphere Integrity, 6.Population, 9.Society, Economy and Environment]

BRAZIL, E797

1. While the Paris Accord shows good intentions, it is far from adequate in meeting its aspirations to limit global warming to 1.5 to 2 C, and those levels are already too high. The momentum created by improving renewable technologies is hopeful, but needs to be accelerated. The world is taking nearly no look at carbon and climate intervention strategies (i.e., geoengineering) and climate intervention needs to be started as soon as possible to shave off the peak global warming--and, if we'd do the research, perhaps shave off peak impacts. The world really needs to mobilize, and new US Administration is a disaster.

2. With climate change above sea level and ocean acidification added to temperature change below added as stressors to terrestrial and marine life, the rapid pace of climate change is greatly increasing the risks to ecosystems and biodiversity. Then add land cover change and urban/suburban spread, there will be very serious risks to the ecological services that we depend on.

7. Something like 90% of the major grains in world trade come from roughly a half dozen countries and are needed by the

populations of 100-plus countries. With climate change increasing risks of extreme weather, the potential for simultaneous crop failures in more than one of the half dozen grain-exporting nations is rising, and such an occurrence would likely sharply raise grain prices around the world as the reserve level is very low. With higher prices, more of the income of many nations will go to food, triggering serious problems for the business sector and even an economic downturn, even collapse even more serious than the recent bank crisis, creating very serious societal discontent and even social conflict.

8. We need to convert from a consuming society to a service and restoration society, improving and sustaining the natural environment on which we depend. There are plenty of jobs out there if we can shift away from the notion of more things, leaving most manufacturing to robots while finding meaningful and societally sustaining jobs for the growing population.

[1.Climate Change, 2.Biosphere Integrity, 7.Food, 8.Lifestyles]

*Michael MacCracken, USA, E798*

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The climate change problem is acute but it is unfortunately politicized in USA, there does not seem to be any hope that this change anytime soon with the republican led government in power.

[1.Climate Change]

*USA, E800*

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Well even though I have ranked the environmental issues all items listed are important and real problems. But there are way to address solutions in a integrated approach rather case by case. This means addressing the economic failure and political failures. Information is abundant on the fact the our economic model is unable to assess the value and loss of our natural capital. Dealing with negative externalities, perverse incentives, national accounting and domestic mobilization of resources are key to address this economic relates issues which will help creating the enabling condition to address all global environmental problems. Similar is the fact that the political and institutional frameworks are not design to resolve this issues on the contrary have proven to be part of the problem. the way we organize the government operation, on silos, on sub-sectors is not helping. (having environment, agriculture, energy, minning agencies working in the same landscapes with different agenda and plans)

[2.Biosphere Integrity, 4.Biochemical flows, 6.Population]

*CARLOS MANUEL RODRIGUEZ, COSTA RICA , E801*

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Global human population will continue to put excessive demand on the resources of the world and cheapest and easiest resources and extraction will always win when considering economics both profit of first world and availability in third world. When countries with means are unwilling to change there behavior to better Renewability because of politics and bottom line, will never move forward, and as long as people doubt the science

and ignore the signs for monitory gain will continue to loss the health of the world. Through the last century consumption has not slowed but only the availability of resources to far reaches of the globe putting higher demand on global environments.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population]

*Ian Cole, USA , E803*

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Biodiversity of our planet, both terrestrial and marine, is in a serious crisis due to habitat loss from human disturbance, spread of invasive alien organisms, and climate change. Time is running out to reverse these alarming trends, so we must act quickly and decisively to address these problems.

[2.Biosphere Integrity]

*USA, E804*

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All three chosen categories are intrinsically linked on the island and we are loosing biodiversity as land use is rapidly changing. Major financial players are toying with the remains of pristine land while invasive species are rampant as a direct result of unsustainable development. Unless we further individual and commercial understanding of environmental issues, there will soon be little need for conservationists.

[2.Biosphere Integrity, 3.Land-System Change, 9.Society, Economy and Environment]

*Jane Haakonsson, CAYMAN ISLANDS, E807*

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Habitat destruction is in my opinion far worse than climate change. Climate has changed and will change, and systems,

populations and species can cope. But if their habitat is gone, they will face extinction. That is what I am worried about biosphere integrity - not so much in Europe, but especially in the Tropics. The exploding human population, and its increased economic prosperity, put heavier and heavier demands on the World. At the expense of our fellow-beasts and off plants. I am extremely worried that the single-focus on the climate change discussion will take away the focus of the human population explosion and associated biodiversity loss. Indeed, lions have been living in Alaska or hippos in the Thames - animals (and plants) have to a large extent survived the last very warm interglacial (the Eemien) but cannot survive if land and sea is lost to them. If overharvesting continues. When future people have to find a living in the slums of Africa, or India, one cannot forbid them to burn firewood or use electricity - but we have to find ways to set aside sufficient land and sea to allow wild animals, and plants, to survive. Not in paper parks, but in reality. Perhaps we need only 10% of strictly protected land; perhaps we need as much as 30%. But we HAVE to find a way to safeguard the survival of wild animals and plants so future generations can enjoy. Perhaps we will never find a proper 'business plan' - but do we need a business plan for keeping your mother alive? Of course not: we need the political will of our politicians, and we need harnessing of people's greed. Greed is NOT good. It destroys my world. And yours.

[2.Biosphere Integrity, 3.Land-System Change, 6.Population]

*HHT Prins, NETHERLANDS, E808*

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Hawaii, specifically, will be unable to support its current population during wartime when/if mainland goods are no longer transported to the islands. Without proper ecological regeneration, nutrient flows, soil rejuvenation, control of invasive harmful species, population control, and resource conservation in management, then Hawaii is unprepared for inevitable future shortages.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*Galen Reid, USA, E810*

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All of these items are of concern, but in my location, some more than others. Biosphere integrity is the most pressing thing here (Hawaii), at least in my eyes, but as an oceanic island will be significantly impacted by climate change. Also the concern of how our society is not very concerned with environmental issues (very non-knowledgeable...I think children in elementary school have a better understanding than many of their parents!), and thus the economic decisions are trending away from our environmental necessities. Of course, the recent presidential elections is creating more of a sense of urgency in this case as government agencies are being forced to shut down programs that have been holding the consequences at bay and creating an aura of anti-environmentalists.

[10.Others]

*USA, E811*

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Climate change is the most serious problem and must be the subject of attention N1 in each country.

[1.Climate Change, 5.Water Resources, 7.Food]

*Tamara Smekalova, RUSSIA, E814*

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We are living in the States since 2014 now. I am shocked about the low level of environmental awareness even here in the Pacific Northwest. Household water consumption and household energy consumption is not much of a concern. There is very little public effort to use alternative energies, use public transport or reduce water consumption. In South West Germany entire cities can meanwhile cover their own energy consumption and become independent from the large energy providers by using alternative energies and energy saving systems. The government requires new houses to have certain energy saving measures. There are passive houses, houses that do not use external energy, and houses, that actually produce energy, however little to feed back into the grid. These technologies are all there and well established. Why they do not translate into the US I do not know.

The waste avoidance system is the same. Recycling is a good effort but the government must strive to encourage not producing waste instead of that. Awareness must grow at all levels. It must be more present and there must be more governmental incentives to do something at even the household level to reduce energy consumption and waste production. The responsibility for the change on the planet can not be deferred to elsewhere - it is in everybody's hand.

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows, 8.Lifestyles]

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 The government is too interested in economic development and does not take enough consideration of the environmental impact of this development.

[9.Society, Economy and Environment]

*Kelvin Passfield, COOK ISLANDS, E820*

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 Unsure about the relation between the question and proposed answer. I think every element is important, however, population is a factor impacting environment issues..so off course it needs to be tackle but differently.

[3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

*NEW CALEDONIA, E822*

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 The equity in distribution of benefits from natural resources and a suitable income for farmers in all Countries may link food systems and security for population (then, involving less migration, less conflicts around land uses).

[3.Land-System Change, 7.Food, 9.Society, Economy and Environment]

*ITALY, E823*

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 Energy should be taken into consideration

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Mervat, JORDAN, E824*

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 General awareness within government on the likely impacts of climate change is somewhat limited to those departments directly involved with the issues. In order to adapt to climate change, and to prepare adequately for the likely impacts, capacity has to be built. This will ensure that the policies formulated will adequately address climate change adaptation. Further, it is important that the available skills and competencies within government are efficiently harnessed.

Officials in other departments, within all spheres of government, often do not see climate change as a priority and some even see it as working against national development priorities. They are concerned that South Africa has a huge backlog of service delivery where the performance of each department is measured by how effective and efficient it is on service delivery. Therefore climate change needs to be addressed in such a way as to assist these departments to achieve their service delivery objectives i.e. through so-called "win-win" or "no regrets" measures

Some of the challenges faced to meet these mandates at the municipality level include:

#### WATER RESOURCES!

The highest rate and impacts of deforestation, inappropriate land use, climatic change and diseases are currently felt and experienced mostly in the continent of Africa. The human population is increasing at rates exceeding 4% per annum and the requirement for new lands to support agricultural production, fresh water, unpredictable weather patterns and diseases are the greatest threats to biological diversity in the sub-region and the continent.

The tragedy of this process is that all sub-region countries share at least one of the 15 major trans-boundary rivers in the region. These shared basins represent approximately 70% of available surface water and territory of southern Africa and water scarcity is a growing concern throughout the region. Water scarcity coupled with inadequate planning, poor distribution, losses, diversions and contamination threatens to limit economic growth, deprive access to safe drinking water, and undermine efforts to alleviate poverty and conserve biodiversity in the region.

Climate change may also exacerbate all of these issues with an increased frequency and intensity of extreme meteorological events (droughts, floods, fires). Water resources, biodiversity, human health and livelihoods are inextricably interconnected. For example we have the Limpopo River Basin and the Cubango-Okavango River Basin. In these areas natural resources are being extracted at unregulated rate. Deforestation, agriculture and grazing land has a direct negative impact on biodiversity. As much as wildlife tourism brings in employment, resources and an alternative to land conversion in a long run it will against the dwindling water resources and climate change prove to be of less use.

In addition to these challenges the communities are facing there are day to day direct drivers that need to be addressed properly such as deforestation, alien invasive species, poaching, human wildlife conflict and unregulated extraction of natural resources. [1.Climate Change, 3.Land-System Change, 5.Water Resources, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

Environmental problems are increasing due to colonization, population pressure and industrialisation. This is a global phenomenon and no part of the planet is unaffected. However the intensity of environmental problems varies from continent to continent. There is need to make awareness campaigns to save the environment for future generations. Biodiversity is also a major concern as there numerous species of plants and animal kingdoms which are under threat due one or the other reason. The principle "Live and Let Live" should be followed in true and spirit for environmental , social and economic stability of the people.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

M. TAHIRSIDDIQUI, PAKISTAN, E828

The problems of society, economy and environment are linked to all the other environmental issues listed. So climate change for example is just one environmental effect arising from wider issues. The disappointment is that despite the technological and social advances of the modern age mankind appears no closer to solving the fundamental question of living comfortably in peace with itself.

[-]

UK, E829

Bangladesh is one of a few highly populated countries in the world and land man ratio are in critical stage. In recent past Bangladesh remained a developing country, but now a days the government has declared the country as a middle income group country. It is also revealed from the Bangladesh Bureau of Statistics survey that per capita income of Bangladesh is about 1106 US Dollar (May 2017).

As an effect of global climate change, the temperature of the country has been increasing gradually. Erratic rainfall and significant changes of land use system, urbanization and human settlement affected the water resources of Bangladesh along with siltation in the major rivers. Due to climate change agricultural crop production is highly affected. Both intensive and extensive agriculture and aquaculture farming groundwater has been deceeding day by day. The water resources have been gradually reducing in Bangladesh.

The Boro rice-paddy culture and fisheries resources in Haor wetland of north-east Bangladesh are extremely influenced by early flash flood from Indian Water during middle of the April each year. This year flash flood destroyed 90% of the growing paddy of Haor during early of the May.

Bangladesh stands 6th in the world fish production.

South-west part of Bangladesh is highly affected by siltation in the river and salinity and also coastal super cyclones like SIDR and AILA, that destroyed millions of croplands and freshwater ecosystem and human settlement.

Bangladesh is the signatory of CBD and has been implementing different biodiversity conservation projects in different potential and hotspot sites. The government has declared some conservation area along with five ecologically critical rivers that are supported by globally significant biodiversity.

The overall development of the country is supported by few development partners, donors and NGO/INGOs. Bangladesh has introduced Climate Change Trust fund and many climate change awareness, adaptation and mitigation activities are carried out by government.

The level of water, air and land pollution are within in permissible limit, instead of Buriganga, Turag and Sitalakhya rivers.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population]

BANGLADESH, E831

The problem of climate change is becoming serious in our country. Climate change has exposed farmers to a variety of hazards. Increasingly, erratic rainfall patterns had created difficulties for farmers who rely on seasonal cues to plant their crops. Maize production has decreased each year because planting normally are delayed. Droughts had put higher pressure on our natural resources, finding that deforestation have also increased due to increased charcoal production. Now days natural disasters like floods are becoming frequent and have a huge impact on peoples lives such as increased food insecurity etc.

[1.Climate Change]

TANZANIA, E835

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Water resources in the Basin of River Nile, particularly the down-stream part (Sudan and Egypt), are subjected to severe fluctuation. The problem of El-Nahdda Dam, at the Blue Nile in Ethiopia, will lead to decrease the amount of water which will reach Egypt, a country of urgent need to increase its water demands due to dramatic increase of its population size.

[5. Water Resources]

*Kamal Hussien Shaltout, EGYPT, E836*

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Since the majority of population live in urban areas, one of the most important actions should be towards sustainable cities and communities. Food and energy should be produced in vicinity of city centers and be supportive to city environmental conditions. Urban gardens are important for public awareness on nature, environment and brings benefit for health and social cohesion.

[5. Water Resources, 7. Food, 9. Society, Economy and Environment]

*CROATIA, E839*

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The greatest environmental challenge currently facing the world is climate change. Unprecedented increases in temperatures are experienced in different parts of the globe. The South, especially Africa South of the Sahara, still has opportunities which can be utilized to address the problem. These include existence of forests in countries such as Tanzania, Democratic Republic of Congo and Uganda and availability of fertile lands in several countries. Fertile lands mean that there is an opportunity for developing tree plantations for purposes of taking care of poisonous gases produced by the industrialized world!

[1. Climate Change, 3. Land-System Change, 4. Biochemical flows, 5. Water Resources, 8. Lifestyles]

*TANZANIA, E841*

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We need to recognise and encourage efforts to conserve nature in the areas where we live and work.

[2. Biosphere Integrity, 3. Land-System Change]

*Francis Vorhies, FRANCE, E842*

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The challenge is to find a mutual sustainable balance in an environment in which decision making power is very one sided.

[5. Water Resources, 8. Lifestyles, 9. Society, Economy and Environment]

*SWITZERLAND, E843*

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I think every point above is inter-connected, probably also correlated. But the most important thing, for me, to decrease the doomsday clock time would be for people to select what they consume thinking on the planet and the people around them, like buy locally.

[1. Climate Change, 2. Biosphere Integrity, 3. Land-System Change, 4. Biochemical flows, 5. Water Resources, 6. Population, 7. Food, 8. Lifestyles, 9. Society, Economy and Environment]

*PORTUGAL, E844*

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I was under the impression that the phenomena of global warming is now accepted by almost by everybody and by Governments all over the world. However, the recent election of Donald Trump as president of the United States, who is a vocal global warming denier, has strengthen all those who make everything possible to stop all actions to limit the phenomena. Indeed, in his few months in office, Trump has already taken steps to stop USA activities within the framework of the UNFCCC, as he has threatened he will do. Without the active support of the USA, moreover, with its active resistance, it will be very difficult for the global community to move forward putting in place measures to control climate change.

All environmental problems in our world are the result of rapid population growth. In many countries, population size has stabilized, and in some countries population is even shrinking. However, in other countries (mainly in Africa) the population is growing extremely rapidly. This will hinder humankind efforts to combat environmental problems.

The global spread of synthetic substances made by man in the atmosphere, in water systems and oceans, mainly carcinogens and teratogens, should be a major cause of concern.

[1. Climate Change, 2. Biosphere Integrity, 6. Population]

*Michael Graber, ISRAEL, E847*

There are some facts that influence on the environment of Russia.

On one hand, such problems connect with pollution of soil, water, air. There are a lot of fabric, which produce toxins and people can feel it, but after it they have some problems with health, especially with reproductive system.

On the other hand, people can't understand that they should clean the place where they live and care for nature and non-renewable resources.

[1.Climate Change, 4.Biochemical flows, 6.Population, 9.Society, Economy and Environment]

*RUSSIA, E850*

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In my country the environmental problem is mainly linked to poverty. This causes people to ignore the importance and threats caused by these environmental problems. Moreover, only a small amount of aid from the rich countries is destined for the environmental problems on the ground, that is to say, there is little funds to solve the problems of local populations. In my opinion, it is this policy that puts us out of trouble.

[1.Climate Change, 3.Land-System Change, 6.Population]

*MADAGASCAR, E852*

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In Brazil the most problem that we have, are poverty alleviation and economy problems linked by climate change and land-system changed. So, all the five boxes that I selected certainly represent our environmental challenge in wetlands, Cerrados and Brazil.

[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 5. Water Resources, 9.Society, Economy and Environment]

*André Luiz Siqueira, BRAZIL, E854*

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Climate change has led increasingly to unpredictable weather conditions, excessively stormy rains, rainfalls when not expected and lack of rains when rains are expected. Overall, however, average rainfall has been falling steadily over the years. The flow of rivers has been dwindling over the years. The growth of cities at the expense of forests has been causing rapid loss of arable lands to support food production, while rendering access to land for agriculture increasingly difficult, leading to ever rise in food prices. The situation also leads to loss of forest and therefore the loss of natural capacity to absorb green house gases. Population increase has been compounding the scarcity of resources and abetting the rise in cost of living while providing challenges in the care of elderly, non-working population. Environmental pollution from waste disposal without treatment has been adding to the emission of green house gases and land degradation both of which add to global warming.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 9.Society, Economy and Environment]

*GHANA, E856*

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The government must have a strong stand in protecting the environment. There is a need to intensify environmental law enforcement to nurture the environment, and in doing so, the purpose should not be politically motivated that suited businesses.

[3.Land-System Change]

*PHILIPPINES, E860*

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The frequency of drought is increasing due to climate change and land degradation is also another big problem in the region.

[1.Climate Change, 5.Water Resources, 6.Population, 7.Food]

*Osman Gedow Amir, SOMALIA, E863*

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Hawaii is part of the United States, but it is also a chain of small islands in the middle of the Pacific ocean. We are already feeling the effects of climate change and making adjustments in our civil planning for the future.

Hawaii also holds the dubious distinction of being the endangered species capital of the world. More than 90% of the plants and animals inhabiting Hawaii are endemic. We make up less than 0.2% of the U.S. land mass, yet over 25% of the species on the nation's endangered species list are found here.

The current president and his appointees are not just oblivious to climate change, they actively deny it and have attempted to stifle peer-reviewed scientific evidence supporting it. This is, quite frankly, terrifying.

[1.Climate Change]



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Mozambique is a low-level country with the coast of nearly 3000 km long. With the ongoing sea level rise resulting from climate change, Mozambique is among the 10 countries that are experiencing impacts of climate change. The change of climate is also causing impact to rivers that are major source of fresh water. The rivers dry out resulting in its scarcity for the needs of human being, vegetation and wildlife. The shortage of water also has impact on food production. High number of kids die in Mozambique before age of five due to malnutrition. This brings serious problems to economy and environment.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Hermenegildo Matimele, MOZAMBIQUE, E866*

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Any of the aforementioned all linked with sovereignty. Unfortunately, sovereignty is been used against the protection of the global environment. Therefore, the role of International environmental law is crucial.

[1.Climate Change, 5.Water Resources, 7.Food]

*SPAIN, E867*

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I am a little surprised that SDG16 is not included in your Table 1, particularly under Item 9. Societal institutions are currently unable to respond to global or even regional/local environmental challenges. I think in particular of corruption in many areas. As long as global society is unable to tackle issues of corruption in key areas, including natural resource use, the progress made in all other areas will be of little use. Corruption leads also to conflicts, which result in displacement and migration. These in turn disrupt long-standing stable systems regarding, e.g., food and water distribution or access to resources. Ultimately, greater understanding and awareness of consequences, changes in lifestyles to take demand-driven corruption out of the system, are needed to move towards a more sustainable future.

[3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Stephen Stec, HUNGARY, E868*

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Until there's a working population policy, none of the other issues can be fixed, though amelioration is possible.

[6.Population]

*ENGLAND, E872*

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It is necessary for people to change their lifestyles, which are currently generating negative effects (placing a burden on the environment). These changes can focus on people's perception of the relationship between human beings and nature. Changes like this will alter what we identify as "needs" and in turn will encourage changes in our financial systems and production needs.

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*COSTA RICA, E875*

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Biosphere integrity. Biodiversity loss continues at a very high level and the rate of loss appears to be accelerating. it is true that the rate of loss would be much higher were it not for current conservation measures. But we are not succeeding in reversing biodiversity loss and species continue to go extinct at alarming rates. This is an ethical as well as a scientific challenge for all of us. The current investment in biodiversity conservation is probably about 1% of what it needs to be. We also need to remove perverse incentives and subsidies that make it profitable to people to destroy biodiversity. We also need a revolution in values so that it becomes morally unacceptable for humans to treat the rest of life on earth as if it has no rights. This will require working with major religions. There are several drivers of biodiversity loss for which we have no solutions in the time-scale that biodiversity requires. These include climate change (including the warming of the ocean surface and the loss of summer sea ice), ocean acidification, invasive species on large land masses, invasive species in the sea, and novel diseases (such as amphibian chytridiomycosis). Urgent research is needed to identify practical solutions for these and other emerging challenges. Saving biodiversity needs to be done in partnership with local human communities. They will become more effective in conservation if they are given secure rights and tenure of their lands. Biodiversity conservation also requires the rule of law and independent judiciaries, partly to combat illegal wildlife trade and unsustainable use, but also to combat most other threats. Corporations need tighter regulation regarding their environmental standards. The International Finance Corporation's

performance standards should become mandatory for all lenders and for all companies above a certain size. These standards need to be enforceable in law worldwide.

Food. The food production system is the largest driver of biodiversity loss and is severely unsustainable. We need to find ways to produce more food on less land, and with fewer water and chemical inputs. To do this, we may need to investigate novel technologies, carefully assessing them for possible risks and benefits. There needs to be a move away from certain types of meat production, especially involving cows, sheep and goats. If we cannot fix the food production system, then practical solutions for climate change, biodiversity loss, water security, land-system change and biochemical flows will elude us.

[2.Biosphere Integrity, 7.Food]

*UK, E876*

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I do think that technology and the economics of renewable energy being more favorable will help alleviate this environmental issue, although the climate change that is already locked in will have serious impacts.

[1.Climate Change]

*USA, E877*

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Until the political will of the people dominates that of corporations--capitalism--environmental are not going to be seriously addressed, neither in the U.S.A. nor elsewhere in the world. That's the no.1 challenge of our time.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 10.Others]

*James D. Morgan, USA, E878*

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Although people might assume that a northern country like Canada might benefit from climate change if it were simply a case of the world's average temperature rising a few degrees, in fact the cycles of more severe weather, drying of our grain belt, northward spread of crop pests and diseases, and melting of the permafrost in the far north will all have very major negative effects on our ecology, economy and health. Pollution has become pervasive -- there is nowhere in Canada that you can find plants, soil or water free of pesticides -- non-point-source residues are found even in the most remote areas. We enjoy the benefits of nuclear power but have no truly suitable locations to store nuclear waste. Body burdens of chemicals associated with an affluent lifestyle, such as bisphenol A and phthalates from plastic and flame retardants from fabrics are widespread. Canada is seen as an affluent country but most of our northern communities where the majority of inhabitants are aboriginal populations, are located on land subject to flooding in some seasons, fire in other seasons. They have substandard housing, schools struggle to keep highly qualified teachers and teaching resources, graduation rates and progression to universities are low, unemployment is above 50%, teenage pregnancies are high, substance abuse is high, suicide rates are far above the national average, the water is contaminated with coliform bacteria, the fish are contaminated with methyl mercury, and the cost of food in stores is ten times more than the same commodities in the major cities to the south. Thus, the affluence is not equitably distributed. There are no easy solutions but even basic steps such as functioning water purification plants and all-weather roads for access are extremely slow to be implemented. All of these problems, which I saw first hand during my original scientific research in the north in the 1980s and 1990s, persist today. Good nutrition, clean water, adequate housing, and reasonable access to education and employment do not seem to be impossible or unreasonable goals. Unfortunately, degradation of the environment will only make all of these matters worse.

[1.Climate Change, 4.Biochemical flows, 8.Lifestyles]

*CANADA, E881*

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The most pressing problems of humanity are extreme wealth, economic and social inequality, fake-news and misinformation, lack of empathy and connection with nature and our fellow human beings

[8.Lifestyles, 9.Society, Economy and Environment]

*Maria Constanza Rios, COLOMBIA, E884*

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I have made similar comments in previous questionnaires. The issues that ASahi has chosen are clearly all valid and important, when considering the state of the global and local environment. I see no sense in giving any other time than 12.00, for the Environmental Doomsday Clock, the situation is critical and has been for a long time. This is despite the uncertain attitude of the new American administration, though this may have served as a reminder and warning for those people who

have become complacent. It will not do to leave our environment to be rescued by governments, especially not by the corporate sector. It is, after all, our environment, for which we are responsible and it will continue to deteriorate if we defer our responsibility to others. Governments and corporations function in terms of vested interests, the reason why the social and natural environment is in such a deplorable condition. Our vested interest is in preserving and protecting the local and global environments, the ónus is on us as individuals to take this responsibility seriously and act accordingly.

To plagiarise President Kennedy: 'Ask not what your country can do for your environment, ask what YOU can do to protect and preserve it.

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*DAVID BLACK, PORTUGAL, E888*

Bad news bears these days, all around. But not to panic; we must focus on what can be done and we cannot afford to waste time being depressed. This is where we are, the glass is not entirely empty - let's roll up our sleeves.

We in the global environmental community need to stop focusing on talking to each other in echo chambers of super-intellectual reports and conferences about pure policy/technical responses, and focus more on educating and enlightening citizens. As important as they may be, multilateral environmental agreements can do nothing without strong political will. Public education and awareness of all citizens (especially those in conservative 'heartland' areas) is especially needed in countries like the USA where ignorance is astounding and drives the election of willfully ignorant, big corporation-friendly politicians only focused on short-term profits. We need to frame the conversation in terms other than the 'environment' or 'climate change' though - instead speak in appropriate vocabularies - e.g., energy independence, new financial opportunities, resilience, security, God, country, etc.

On another note though, I'm not entirely sure I understand, e.g., what is the point of this survey, how this survey is helping, and whom? It would be good to state those points clearly upfront I think.

Thanks & best wishes.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*John Costenbader, USA, E889*

Biosphere integrity;- They are basic to support any life on earth including human . They are a source of water, food and oxygen. They have ecological, economical and social benefits. Any country known and basically seen by others how it composed from biological resources. basically physical diversity is also emanated from biological resources the country has. Conservation and sustainable utilization of biological resources are basic to any political, scientific, educational, human health, technological developments of the nations. as well as well being of the people.

land System:- Every development, activities as well as decisions implemented in certain territory of the land portion or requires space can be categorized as land and its system. Unless the land system is kept well any development in any aspect and all resources including human are living on the land. The land resource has to be protected from disaster emanated from climate change, water and food scarcity.

Water resources; It is a very indispensable deterring of any physical and biological resources. Nothing is without water. No life without water. It is very precious resource but made from two atoms but not made by combining or chemical reaction of separated elements of H and O.

The three resources are highly and haphazardly affected by climate change, human induced pressure unwise utilization and pollution from wastes of human use. Existing industrial developments are seriously affecting these resources and on time mitigation and reduction of carbon emission are a question of to day. Conservation and protection of biological resources at natural level is also on gray important intervention.

[2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources]

*Abraham Marye Desse, ETHIOPIA, E890*

As an island community, Hawaii is very susceptible to the impacts of a changing climate. We rely on our native forests to provide us with fresh, clean drinking water. However, as the climate changes, resulting in less rainfall, more severe storms, and drier conditions, we will likely see our water supplies shrink. Hawaii cannot import water from another state. We must rely on what we have. That's why protecting the source of our water - our native forests - is critical. We must also consider the carrying capacity of our island home and recognize the limits to growth and the investments that must be made

in water infrastructure - both physical and natural.  
[1.Climate Change, 5.Water Resources, 8.Lifestyles]

*Katie Erbak, USA, E891*

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The marginalization of science in the U.S., and the associated problems with false ideologies replacing realities is setting the stage for serious problems today and for future generations. The scientific community needs to do a better job of engaging and communicating across traditional boundaries.  
[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows]

*Robert Richmond, USA, E892*

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Freshwater conservation is my single greatest concern, because that's where all humanity's great crises --resource limitation, climate change and biodiversity loss-- collide.  
[2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population]

*Klaas-Douwe B. Dijkstra, NETHERLANDS, E894*

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The environmental issue is very worrisome, especially in relation to vegetation. Several hectares are destroyed monthly, consequently we have problems with rivers and slopes. Air pollution in some cities has become irreversible, we do not have reforestation and recovery of rivers at the same speed as attempts at environmental recovery. Chaos is coming.  
[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 9.Society, Economy and Environment]

*Marcus Nadruz, BRAZIL, E895*

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Land systems are the result of human interactions with the natural environment. Understanding the drivers, state, trends and impacts of different land systems on social and natural processes helps to reveal how changes in the land system affect the functioning of the socio-ecological system as a whole and the trade-off these changes may represent. The Global Land Project has led advances by synthesizing land systems research across different scales and providing concepts to further understand the feed backs between social-and environmental systems, between urban and rural environments and between distant world regions. Land system science has moved from a focus on observation of change and understanding the drivers of these changes to a focus on using this understanding to design sustainable transformations through stakeholder engagement and through the concept of land governance. As land use can be seen as the largest geo-engineering project in which mankind has engaged, land system science can act as a platform for integration of insights from different disciplines and for translation of knowledge into action.  
[3.Land-System Change]

*Dr Laxmi Kant Dadhich, INDIA, E896*

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The essence of the problem is too many people, "overconsumption", ignorance of ecology, tendency of political systems to encourage corruption, and increased militarization.  
[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

*ronald brooks, CANADA, E899*

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Since recent years I have become much more concerned about water scarcity and continuous contamination of inland water resources and seas due to agriculture and industrial waste. Contamination does not only take the form of chemicals and heavy metals carried out by water or embedded in the soil, but also of small plastic particles that settle throughout the trophic chain. In my view, this plastic particles will yield major health problems in the next years as they are eaten by all sorts of seafood that later on is consumed by humans.  
Modern lifestyle patterns, convenience foods and the upsurge of a phenomenal middle class in China and to a lesser extent in India, will increase the use of plastic packing and bottles that will later on be disposed of, but not always recycled. The ever growing Pacific trash vortex in North Pacific is an upsetting example of uncontrolled plastic contamination, which will seriously affect sea life, marine streams, and eventually climate.  
As regards chemical contamination, of water and land, the mining and industrial projects in Western Africa and South Asia are also of a major concern, mostly due to lack of stringent business and environmental regulations. Petrol extraction, search

for minerals, the development of crops needing an intensive use of water (e.g. cotton, canola, etc.), together with the relentless destruction of forest areas to obtain timber and intentional wildfires will add up to agricultural and industrial contamination. [3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

*Angel FALDER HUERTA, BELGIUM, E902*

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Land system change seems to be happening so rapidly, and we lack integrity of political process to make GOOD land use choices together as society. Climate change and water resources also deep concern because of way these will impact potential for conflicts at all levels.

[3.Land-System Change]

*USA, E904*

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Human consumption on the cities have changed nothing and despite the emergency issues in the forest and the ecosystems the people living in the city have not realized yet that we are the solution and the problems.

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*Rafael Reyna-Hurtado, MEXICO, E906*

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Today the geopolitical situation is complex and can highly influence the issues of environmental protection. The problems with society, economy and environment are not getting better in Russia due to the main attention for foreign policy. And this foreign policy cannot help - because it is not friendly. So the sorting of garbage, use of ecological materials, etc. are still the actions of enthusiasts and not systematic while the country is in stagnation and most of the regions are in debts.

The level of pollution in our city you can smell in some districts as it was 5, 10, 20 years ago. The world is changing but not here.

The previous questions are relatively easy - state and people, please, stop doing nothing, find money, live sustainable. But we have a very cold May and at the same time problems with Arctic ice - there are no universal decisions yet what people should do with the climate change.

[1.Climate Change, 4.Biochemical flows, 9.Society, Economy and Environment]

*Alexander Feldt, RUSSIA, E908*

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President Donald Trump's statement that "climate change is only an invention by the Chinese" does not only testify to his deplorable ignorance but conveys actually a most dangerous message: extreme weather events (increase of the frequency of cyclones with resulting floods and droughts) is already killing people now and is detrimental to current efforts of biodiversity conservation (e.g. bleaching of corals in tropical waters).

[1.Climate Change, 2.Biosphere Integrity, 4.Biochemical flows]

*Dr. Thomas Schaaf, GERMANY, E909*

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Climate change causes sea level rise affect many people in lowland and the coastal area;

Population increasement, large area of natural forests and wetlands converted into agriculture land, reducing habitats of many wildlife.

Natural environment became polluted by economic development. More reservoirs built for hydropower caused bad effects to the downstream and lowland, local community in remote areas, particularly in lowland and coastal area are more vulnerable.

[1.Climate Change, 6.Population, 9.Society, Economy and Environment]

*VIETNAM, E912*

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Climate change: at the level of Bolivia and in the central south of South America, CC is generating alterations in food production patterns and increased risks from natural disasters. In that sense, the role of forests and protected areas in mitigation and adaptation to CC is not being properly taken into account

Land-System Change: Due to international market pressures (especially in China) and food security needs, a rapid change in land use is occurring affecting the integrity of ecosystems. Growing soybeans and expanding livestock is significantly affecting forests and wetlands

Water Resources: Water is becoming a critical resource in both the Andean and the plains. The melting of the Andes mountain

glaciers due to climate change and the contamination and alteration of aquifers as a result of the change in land use threaten the availability of water for human consumption and the production of food

[1.Climate Change, 3.Land-System Change, 5.Water Resources]

*Roberto Vides Almonacid, BOLIVIA, E915*

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In my country, the United States, I believe that we are in a state of environmental crisis, but on the whole the population is naive to the urgency of the situation and to its long-term consequences. I have prioritized 8. Lifestyle above because it is the consumption-driven nature of our society that contributes most to the climate change that is changing the earth in such profound ways. We produce and consume goods in a way that is exponentially greater than what is needed, making our carbon production similarly excessive and dangerous. Until our society can see the responsibility it has to live more modestly to protect the world for future resources, solutions for these problems will elude us.

[1.Climate Change, 3.Land-System Change, 8.Lifestyles, 9.Society, Economy and Environment]

*Richard Telford, USA, E917*

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The items speak for themselves. Try to save what we can.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Abdelali MACHROUH, MOROCCO, E918*

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Though I do not want to comment on climate change we are experiencing higher temperature every yer during summer which has made it unbearable during summer. Three decades ago average temp from may to October used to be 30-32. Now the range has increased to 33-39 degrees centigarde. This rise in temperature has effected niche of aquatic as well as terrestrial fauna and flora.

Water sources are drying up causing hardship tocommon people. Natural water bodies are increasingly contaminated thereby causing degradation in ecosystem and reduction in diversity of fauna.

Rise in temperature and deterioration in habitat has caused decline in faunastic diversity as well as floristic diversity.

People are effected because earlier fan used to be sufficient to cool ourselves and now Air conditioner has become indispensable there by changing the pattern of lifestyle.

[1.Climate Change, 5.Water Resources, 9.Society, Economy and Environment]

*Sabitry Choudhgury Bordoloi, INDIA, E919*

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Actually all of the above, varies across and within nations.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*INDIA, E920*

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Some of the other environmental issues include the use of genetically modified organisms which have many advantages such as resistance to pest and diseases, can grow faster, are tolerant to different environmental conditions such as drought which affects a good portion of Africa.

Explosion of diseases like Ebola and others due to either population growth so humans are moving into forests and getting exposed to new viruses, bacteria's etc, or due to lack of food that humans are trying out new foods which may not have earlier on been their stable diet.

Invasive species which may be exported from country to country through globalization. the worlds i becoming one, trains, flights, ships may carry pathogens, spores, seeds of plants that may colonize new areas and kill of the native species. Ballast water is key in this aspect as tonnes of water from one pert being discharged in another may carry a variety of species. This also leads to harmful algal blooms which are now a frequent occurrence.

Loss of biodiversity through over harvesting of species, lack of specimens in museums or gene banks so when a catastrophe hits like floods or famine,the losses cannot be quantified. Limited research of orphaned crops and the change of diet in the current population where most of the foods they consume are processed.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

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Pakistan requires an increase of 14.2% in water availability to meet the requirement of population by 2025; the growing burden on water resources threats will add to Pakistanis' wellbeing from unsafe or inadequate water supplies. Pakistan extracts 74.3% of its freshwater annually, thereby exerting tremendous pressure on renewable water resources, despite remarkable improvements in the proportion of population using an improved water source and sanitation facility, 27.2 million Pakistanis do not have access to safe water and 52.7 million do not have access to adequate sanitation facilities. The repercussions on health are severe, as it is estimated that 39,000 children under the age of five die every year from diarrhea caused by unsafe water and poor sanitation. In Pakistan the rapid climate change and global warming will have major impacts on increased crop water requirement. This will hamper productivity owing to changes in crop boundaries and reduced length of the growing season. Thus, the chances of reduced water availability during dry years can be expected, extremes will be more frequent and severe, which will have negative impacts on productivity and sustainability of irrigated agriculture.

In Pakistan, the increased storage capacity alone is insufficient to solve the problem. More efficient use of water needs to be targeted.

The prevailing productivity per unit of water in Pakistan is among the lowest in the world.

[1.Climate Change, 5.Water Resources, 6.Population, 7.Food]

CEO-BRSP, PAKISTAN, E923

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Besides the nine environmental and social issues that are relevant to the doomsday clock, growing violence in the hearts of people, particularly senseless terrorism, and unequal treatment of women (not at par with men) are really the major threats to achieving peace, happiness and sustainable development on planet Earth. The spread of ISIS in almost all countries of the world is a terrible set-back to the initiatives of eradication of poverty and poverty-driven food and nutrition insecurity. Mass exodus of refugees from civil war – torn countries into the other countries which are better governed countries is an enormous parasitism. Often, the countries which receive thousands and thousands of refugees from countries of one particular culture and language into another entirely different culture and language create social conflicts. There are also several failed states whose citizens are not only suffering, but also they readily take to causing suffering to the other countries that are relatively at peace with each other.

It would seem that overemphasis on economic growth on one hand and religious fanaticism need to be routed out as the first ever step to stop the doomsday clock advancing. Once the world as a whole and humanity as a whole achieve biohappiness through contentment and pluralism of faiths, cultures, music, arts, and philosophy, the management of the doomsday clock would come under control. Yet, another requirement of the humans is learn from animals not to try to win over nature and ecosystems. Humans must learn to live within what nature provides.

A time has come to review what globalisation has done to many developing countries located within 22° to the south and north of the equator. These are planets' most biodiversity rich regions. For hundreds of years the indigenous people of these regions were living in great harmony with biodiversity. They used biodiversity only to meet their needs. However, with the rich nations and their rich people developing a craze for ivory of the tusks of elephants, horn of rhinos, and skin of tigers and lions, the forest dwellers have lost their sense of harmony with nature and have become poachers. It is heartening to note that there is an awakening in the world and the rich people do no longer want to possess all these once fashionable items.

Lord Buddha and Mahatma Gandhi were both born in India and both preached and practised 'ahimsa' (non violence). However, the people of India have forgotten both of them. Of course, these people cannot be blamed as they have become targets of terrorism and violence.

[10.Others]

Prof.P.C. Kesavan, INDIA, E924

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Climate change is, by far, the most vexing environmental issue. Unfortunately, efforts to curb the situation are being sliced down by the unwillingness of the politicians in power in the USA now. Advances in the way toward the solution to this issue is rendered extremely difficult given the political weight of the US and the contribution this single country makes to the global balance of the greenhouse gases in the atmosphere. The effects of the climate change, contrary to other parts of the world, are being felt in Africa; water balances are particularly affected. This is demonstrated through droughts and other severe weather events such as massive floods that are prolonged in some regions of the continent. As a consequence, patterns of land use and agricultural practices are changing and will contribute to the increases in climate change and are likely to lead to social conflicts.

These effects, combined with burgeoning demographic growth in the continent will lead to what can be sensibly called 'global crisis'. It is sad to see that the international community does not envisage more than token measures to address the issues of climate change and its consequences on freshwater, agriculture, land use and biological diversity resources in a squared way. [1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources]

DEMOCRATIC REPUBLIC OF CONGO, E925

In New Zealand we are being faced with constant reminders of climate change through large natural events; flooding/ tsunamis alerts, drought etc. Its becoming the normal.

Water scarcity is also becoming a key concern for people of New Zealand. There is competition for fresh, safe drinking water.... [-]

NZ, E927

All of the options are realistic issues (for Bhutan) and they are interrelated. One cannot see them in isolation and thus working towards solutions, we must keep this in mind.

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BHUTAN, E928

1. Himalaya being governed by low temperature conditions are more prone to changing climate. High species endemism, unique niches, rich biodiversity, water towers and human dependence are key characteristics of this. Changing climate will have serious implications on these.

2. Loss of forest cover and species extinction are key problems.

3. Unplanned development, changing agricultural practices, forest fires.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change]

INDIA, E929

Globalized economy and lifestyles, especially of the wealthier part of the world's population, with their ever-increasing demand of energy and resources are the key-drivers for climate change, land-use change and loss of biodiversity.

[1.Climate Change, 8.Lifestyles, 9.Society, Economy and Environment]

Drago Pleschko, AUSTRIA, E931

It is crucial to understand, and to make politicians and decision makers understand, the importance of bringing together conservation and people. Economy at all levels should consider the fact that natural resources are part of the big equation. People should be aware of the impact on the environment and the future of our planet resources depending on day by day decisions. Society, Economy and Environment are the most important triada in this century. We cannot continue ignoring the importance of natural resources in our economy. We do depend on a healthy planet to ensure our future as a species. All other issues need to be tackled under the scope of ecological economy.

[9.Society, Economy and Environment]

Eduardo Galicia, MEXICO, E932

There is an extreme pressure on the forest land cover to sustain population explosion on planet earth. Forest cover is decreasing at an enormous rate. Cropland is engulfing the forest land to fulfil the needs and greed of human beings.

There has been unbelievable changes in the climate in the recent past due to unplanned activities of again humans. This is making their own life miserable along with other members (Plants and Animals) of this planet. The most affected are tropical inhabitants.

Day by day living creatures including humans are facing drinking water scarcity like never before. All the available sources are either contaminated or dried out.

Pollution and contamination of air, water, and land are the results of unplanned industrialization and urbanization of humans. These cause irreversible damage to the balance of ecosystem.

[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources]

Prashant Joshi, INDIA, E933



Most definitely the change in politics in the USA has raised my concerns. The people here are such ignorant imbeciles. Their greed and their egos have huge roles in their outlook in life. It's as though only rich people count in the world.

[2.Biosphere Integrity, 5.Water Resources, 8.Lifestyles]

USA, E935

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In Peru, most of the population lives on the coast, which is a desert area with limited water resources. The highlands and the rainforest present problems with supply and access to water that is safe for human consumption.

In addition, large agricultural production systems are being established in different regions, without effective policies for water resource management. The country has high levels of water stress in an era of climate change, and this will only worsen since many of the water sources (paramos (high tree-less plateaus), bofedales (wetlands) and other water supply ecosystems) in the headwaters are being gradually destroyed, and the basins' water supply is dependent on tropical glaciers (all of which are receding).

Finally, it will be important to reduce the rate of deforestation, since the forests are vital ecosystems that enable the water cycle, which is particularly important considering that Peru holds 13% of the Amazon basin and more than 60% of its total territory is the Amazon biome. This key part of the natural infrastructure of the Peruvian mainland is vital for its environmental sustainability. In conclusion, the issues of forests, climate change, loss of biodiversity and water are all closely connected.

[5.Water Resources]

Mariela Gayoso, PERU, E936

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Often ignored environmental problems are unregulated construction practices and poorly planned urban development. Uncontrolled urban sprawl leads to loss of rainforest and wetlands, resulting in a reduction of the water resource and an increased vulnerability to climate change and flooding.

[3.Land-System Change, 5.Water Resources, 6.Population, 9.Society, Economy and Environment]

PANAMA, E937

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In Greece, the effects of climate change are already felt in the form of increasing frequency of extreme weather events, often causing considerable damage to agriculture and infrastructures, prolonged periods of reduced rainfall, and increasing occurrence of so called ""discomfort periods"" with high temperatures and humidity that effect the touristic areas. Incorporation of renewable sources in the country's energy mix is slow and the national adaptation strategy includes only broad recommendations but no specific measures and for the various sectors.

The continuing economic crisis has marginalized environmental concerns and conservation issues, and has led to an increase of deleterious activities, such as burning of fossil fuels, uncontrolled disposal of waste, illegal logging, etc. In addition, public spending on environmental works has been largely curtailed, and bodies dependent on central financing, such as the managing authorities of protected areas, face an uncertain future, often being unable to fulfill their role. Furthermore, the deluge of new laws adopted in the framework of the lending agreements to promote development and facilitate investments, usually with minimal or no public consultation, has weakened environmental checks and controls.

[1.Climate Change, 2.Biosphere Integrity, 8.Lifestyles, 9.Society, Economy and Environment]

Nikos G Petrou, GREECE, E943

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We can include culture, social justice and behaviour change that are crucial for environmental issues to be taken into account as it involves transition from current state to another balanced state of affairs. How to achieve this intricate balance within planetary boundaries is very crucial for us.

[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

Manisha Agarwal Garg, INDIA, E945

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In Brazil, the political crisis has created a political environment in which the Rural Lobby has been given free hand to reduce the number and size of conservation units and Indigenous Territories as long as they will support the current president, who has committed enough crimes and misdemeanors to be impeached, but is still hanging on. Because of the ongoing economic crisis and the constant news coverage about the President's crimes and misdemeanors, Brazilian society is not even aware that

the conservation units and Indigenous territories are being reduced or eliminated. As a result, deforestation is increasing again. At the same time, Brazil's efforts to meet the Paris Protocols on Climate Change have stalled, both because of the Rural Lobby's influence and because the federal government and most state governments are paralyzed, the federal government by the political crisis and the state governments by the economic crisis. At this time it appears that these trends will continue at least until a new President is elected in October 2018 and takes office in January 2019.

[1.Climate Change, 3.Land-System Change, 9.Society, Economy and Environment]

*BRAZIL, E946*

Climate change is the overwhelming problem dwarfing other important issues but compounding issues of migration food supply water availability etc.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 9.Society, Economy and Environment]

*Leonard Berry, USA, E947*

Climate change is global problem as it causes mainly either droughts or flooding which is an issue in southern and eastern Africa. Causes of climate change if left un monitored could lead to untold catastrophes and sufferings which result into inter alia destruction of infrastructure, loss life and hunger.

Change of land use is a challenge in developing countries mainly due to increase in demand for land for residential and agricultural purposes, and exploitation of natural resources such as minerals and vegetation.

Availability of clean water is major challenge to developing countries. Purification of water in both urban and communal land is an issue of concern in some countries. Lack of capacity to deliver adequate water in urban centres lead to health problems. Shortage of water is a challenge during drought period.

Equally related to problems of water is the unhealthy environment particularly in urban centres. Dirty environment is common largely because the local authorities are not coping up with the demand of clearing waste and garbage. The situation is compounded by inadequate infrastructure, the use of non degradable material, contamination from factories, mines and farms, and corruption. Sprouting of markets in un authorised areas contribute to the problem.

[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 7.Food]

*ZIMBABWE, E948*

We still have bad trend of development due to low culture of business and political leaders. As result, the threats are growing. IMHO, the critical point is the biodiversity and natural functioning the ecosystems as the basic mechanism of planet stability. other critical point, but in respect of society comfort and survival, is state of fresh land waters.

and the mechanism of changing the situation is greening the economy and protection of the nature

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

*Yaroslav MOVCHAN, UKRAINE, E954*

In India, metro cities are being influx by migration of the peoples from villages. When they start earning in cities, they start thinking of having some luxury, vehicles etc. which lead to congestion and ultimately, traffic and environmental problems.

Some unscientific decisions by the government has (like even/odd formula, even no vehicle on even date and odd no vehicle on odd date) also forced many peoples to have two vehicles with even/odd numbers.

Instead government should have focused on sustainable development and public awareness.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Yash Paul Sharma, INDIA, E956*

CHANGING CLIMATE IS THE FOREMOST PRIORITY ISSUE

[1.Climate Change, 4.Biochemical flows, 6.Population, 9.Society, Economy and Environment]

*INDIA, E957*

The change in land use in the eastern region of Bolivia has increased in recent years mainly due to the pressure of agriculture, cattle raising by new communities of internal migration of the country with different vision of production, which is very

aggressive to the type of soil existing in the east. In the 1990s, small-scale agriculture in colonization areas had a greater impact on forest conversion, but in the last few years, large and medium-sized producers have played a very active role in deforestation. Becoming a threat to climate change that has begun to affect the country in the last years.

Deforestation and forest degradation occur in all forest ecosystems Bolivia, mainly in the Amazon forest, in the forest in transition, in the dry forest Chiquitano, in the sub-Andean forest and in the Chaco. In a scenario of deforestation for the year 2100 is that the expansion of the agricultural frontier in Bolivia will be the main cause of Deforestation, causing it to exceed 33 million hectares of forest. In lowlands, the deforestation processes are responsible for 95% of the reduction in the level of Climate change is only responsible for 5%.

[3.Land-System Change]

*BOLIVIA, E960*

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Certainly, that all listed issues are interconnected. However, working in the area of sustainable development and biodiversity conservation I see that most stressful driving forces of Earth's surface changes and co-survival on the Planet are accelerated by land use change that impact biosphere integrity and climate change. And what is more sad that understanding of those changes and threats is still inadequately small or ignoring by societies on number of reasons, including lack of education, lack of systemic thinking and analysis of situations and ongoing processes, narrow thinking and narrow pragmatic business interests, etc. With era of communication technology we can deliver ""messages"", but we still have no enough concerned world citizens who can hear such messages. In many countries we have more and more consumers, who want to live on the standards of developed countries by any means. In the developed countries, consuming is an ideology of ""better life"". Just small percent of the society want to change their life styles voluntary, because all system and its development is based on consumption. ""No consumption - no business; no business - no jobs"", etc., etc.,etc. And this is true. It does not mean if you have or do not have ""brains"", the job search process is the same for all. Brilliant youth and experienced wise experts are in the same ""boat"" of selection process, which is similar to lottery. (In this section, I do not complain, I just reflect my own experience of person from developing country immigrated to developed). In the job search process you are lucky if you have a good networking, otherwise you will be just eliminated from selection process. And even better if you have someone who can recommend you for the position. I got my first work in Canada, because I was recommended to organization by person with high rank to the local environmental NGOs. But then the crisis of 2008, 2 years in the University that to upgrade education, illness and death of my husband, one year of volunteering after that (work without payment and living on scarce resources that just to survive) before to be hired on contract base from the grant that I developed myself. So, this is just very short story of my ""fight"" to continue to work in the field that I know perfectly, much better than many others, and to ""prove"" your rights to impact the global and local development processes.

We are talking about sustainable development and we try to integrate its principles at the global and local level, but we have no measure of sustainability, which is not only number of people who has no hanger, diseases, improved survival rates, access to education, etc. It should be also a number of people who voluntary wants to limit own needs and live in harmony with environment. I could write much more in this section, but I do not want to look very naive, because the ""consumption is in a nature of humans"" or because we do not know other scenarios of development instead of ""business as usual"".

We have amazing progress in the solving of many social issues, but environmental issues have no yet enough consideration in planning systems, they are not considered as valuable elements for human well-being and future generations. They do not have real value. And at the same time we are dramatically loosing lots of brilliant elements of wilderness, especially in developing countries. The World becomes more and more monotone homogeneous and we cannot stop this process. And the more sad that it happened just in time of my generation - a little bit more than in 50 years from the start of ""Anthropocene"". I feel that with growth of the DGP we have more and more inequality, corruption, ignoring of community interests for own profit. We have more dictators and politicians who still try to win their dividends on the populist slogans, like we saw it during recent election in USA. We see that societies can go back to the darkness of feudal relationships like Russia and several other countries of socialistic system. We see that traditional ""capitalism"" societies are also in crisis, because there is too much ""labor force"" and the problem of unemployment becomes more and more acute. We have too much labor force and not enough resources that can be transformed by this labor force into surplus value or consuming resources for survival. And we have no a good socialistic system that allowed to use the benefits from all members of the society. We are not ready to say that we have enough resources that allow to live in dignity for every person. Surviving resources in developed countries known as well-fair humiliate the human dignity. And around 1 billion people have no even this...

So, we have the human population that continuing to grow, we have natural resources, which are depleted in many places

and continue to be consumed with increasing trends, and we have lack of understanding of "environmental" component role in the development strategies, especially by decision and policy makers. In most strategies, the environmental components still have been viewed from the position of human consumption: to produce more food, more fiber, more fuel, more ecological services for the human society. The real value of biodiversity is masked by the growing interests of the increasing human population. Most of the society does not understand what is in reality means that "Nature needs half". Therefore it is clear that we are living in the critical time of global changes, it is difficult to say how they will start and how the process will go: we have many scenarios developed by Millennium Ecosystem Assessment and it is clear that various nations can follow to different scenarios, but we are living on the Earth with limited resources and adverse changes will echoing to all Planet.

I just recently completed the work on the preparation of the online course on sustainable development goals for the decision makers in Central Asia supported by UNDP (Turkey office). I was invited just "review" the materials that has been prepared by local authors under supervising of international expert in Russian, I was invited as a local expert from the region. But when I started I figured out that there is no either course structure or content and most authors did not understand clear about what matter they need to write. The structure of course was prepared, perhaps, by good expert with education background, but with "zero" understanding of SDG and development issues. So, I started from building of course structure and needed to explain to experts their tasks again, because there was no relevant content in the prepared materials; I also wrote about 10 lectures myself. However, even now I am not satisfied with quality of work provided and it was strange for me why I was invited to "help" with review of the course on last stage, when project was almost completed... I had applied to many UNDP and other development projects in Central Asia, but when employers see that my background is "biodiversity" they avoid to employ me, because they need experts in specific field of "management" or "education" or "community involvement" or something else, and when they see that you have mostly "science" background they are afraid to hire you. Although, in many cases, the science background is understanding of things and critical thinking, this is opportunity to operate with many variables, analyzing and summarizing data and producing the real synthesized results that can be better explained and applied in many situations. I think that gender inequality at the highest level also plays its role, because I am a woman who is originally from developing country (Uzbekistan), not young and still speaks in English with accent.

So, the problems of sustainable development are not only "ranking" the scores, that to provide very "shallow" materials for statistics and report about success in the implementation of SDGs as it was reported for MDGs, it is much deeper - it is about real changes in human society. For example, the "Land use change" in this questionnaire is measured by change in the "amount" that means that the indicator selected is very vague, because it does not take into account the quality of the land and that land becomes empty after transformation, losing its value for biodiversity and people. The Biosphere integrity measured by "acceleration of species extinction rate" is also very shallow, because with current means it is possible to measure only tiny part of vertebrate diversity, but not all genes, subspecies and species existing on the Earth, etc. Several questions looks ridiculous, for example, how you will explain me point 8: "Transformation of lifestyles away from excessive consumption of resources like energy" - go back to stone-age? How you will translate this sentence on other languages?

So, finalizing my response to this questionnaire, I would like to say that I would prefer do not participate in the review that was provided for "check" to obtain statistical data that to build beautiful charts, which mean nothing...

And I am very sorry for my critical view, but I am looking on the situation from "inside of the box" and I see what is going on in this area.

Best regards!

Elena

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change]

CANADA, E962

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The planet Earth is fine on its own. Humans are the cause of the problems, obviously. The general threats connected with these problems have been known for many decades now, and solutions (or at least the required directions) have also been well known. In 2017 we now have increasingly sophisticated technologies and information, giving even more potential effectiveness for the solutions. What is needed is the social and political desire and willingness to implement solutions. The influence of money on political systems is excessive. Political financial reform (political donations) need to be controlled better, and I believe that would allow politicians to be more capable of acting for the long-term benefit of society and the planet. A free and independent media is also very important -- to have a well informed populace, which will make better lifestyle decisions.

[1.Climate Change, 8.Lifestyles, 9.Society, Economy and Environment]

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 This survey is a good attempt. Each country and individual should be concerned and do the best on our part to mitigate the problems.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Lalitha Vijayan, INDIA, E964*

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 In my opinion, severe drought driven by climate change in most of African Continent geography is a serious problem to be taken into account. It also very important to set a green belt of vegetation to stop desertification in the Sahel region.

Climate change is one of the major issue that create social insecurity in Africa and causes population migration/displacements, diseases and food scarcity.

Also the growing population is correlated with poverty. Is has a serious impact on land resources and landscapes and breaks natural corridors for animals.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 9.Society, Economy and Environment]

*Sidi Imad CHERKAoui, MOROCCO, E968*

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 Everything is needed to be taken into account, to be analyzed and prioritized, because all things in nature are interrelated.

It is important to take into account our consumption and garbage disposal habits, because it affects our environment more than we are aware of. At least in countries like mine, Mexico, we need to be educated in order to be aware of the urgency to change them.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*María Fernanda Jiménez Campos, MEXICO, E970*

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 The situation regarding conservation of water resources here in California is a direct result of climate change. It is a prime example of localized effects due to global alterations over extended periods of time.

[5.Water Resources]

*USA, E972*

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 Climate change, brought about by certain individuals in the human race, is caused by the unsustainable use of the planet's finite resources. On the other hand, the world population is growing disproportionately, which leads to even greater consumption of the planet's resources and the loss of biodiversity. We must change the basis of our relationship with the planet and our production system, because if we do not, it is creating and will create irreversible problems.

[1.Climate Change, 3.Land-System Change, 6.Population, 10.Others]

*Manu Monge Ganuzas, SPAIN, S001*

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 For me, climate change and the integrity of the biosphere are the most important issues for the future of the Earth. However, another subject that is also very important and gets very little attention are our lifestyles. If we continue down our current path, we will use up the resources very quickly. Our continued use of oil, the terrible amount of waste created by humans, as well as the quantity of jewels and gold that still separate the wealthy classes from the poor. If we do not start to make changes, the planet will change. Once that happens, there will be no turning back.

[1.Climate Change, 2.Biosphere Integrity, 8.Lifestyles]

*SPAIN, S004*

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 The abuse of primary resources and lack of measures for their control and management.

[9.Society, Economy and Environment]

*Jose Miguel Ramirez-Gonzalez, SPAIN, S005*

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 I do not believe that governments are taking prompt action to deal with the problem of over-population and its relation to

climate change.

[1.Climate Change, 6.Population]

*Arturo Mora, ECUADOR, S006*

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I think that population growth related to the lifestyle and consumption of the global population, to which developing countries aspire, are unsustainable. Ensuring food and space for all of these people results in a serious loss of biodiversity. Also, unequal access to water and the loss of access to water because of the loss of ecosystems is extremely serious.

[5.Water Resources, 6.Population, 8.Lifestyles]

*SPAIN, S011*

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I am worried about human overpopulation. All other environmental problems are a consequence of this, as a greater flow of material and energy is needed to provide resources for everyone.

[7.Food]

*ECUADOR, S012*

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One of the first negative effects of climate change will be the scarcity of water sources and aquifers, if we continue to lose forests, glaciers and other natural sources that provide water at such a fast rate. If we do not introduce measures to protect and preserve them in the short- and medium-term, we could be speeding up this negative process, leaving subsequent generations with no water resources. Maybe water sources should be the principal concern of all governments, as well as ensuring that this is a fundamental right for all its citizens. This is the basis of all food and the source of life.

[5.Water Resources]

*PERU, S013*

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Climate change is a reality that is already affecting our climate patterns and consequently the integrity of ecosystems and their biodiversity, as well as the quality and availability of water. On the other hand, large-scale mining, agricultural and aquaculture developments are seriously affecting people's quality of life, by contaminating the most valuable resource for sustaining life on our planet, which is water.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 9.Society, Economy and Environment]

*MEXICO, S014*

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I believe that climate change is going to lead to disasters on our planet.

[2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources]

Bertha Cecilia Garcia Cienfuegos, PERU, S017

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Free trade agreements and political, socioeconomic and environmental disasters and disadvantage for poor countries.

[1.Climate Change, 5.Water Resources, 7.Food, 10.Others, ]

*COSTA RICA, S018*

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THE ELEMENTS IDENTIFIED ARE CLOSELY INTERLINKED,  
THEREFORE IT IS ESSENTIAL TO IMPLEMENT MEASURES TO  
AVOID DAMAGING THESE ELEMENTS AND, AS MUCH AS  
POSSIBLE, RETURN THEM TO THEIR NATURAL STATE.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 9.Society, Economy and Environment]

*Juan Carlos Araya, CHILE, S019*

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The most apparent of all is climate change resulting from all the poor management we have inflicted on the planet over the last 200 years.

[1.Climate Change, 2.Biosphere Integrity, 5.Water Resources, 9.Society, Economy and Environment]

*PANAMA, S022*

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Current environmental problems are principally caused by lifestyle and financial models, and if these are not changed any

efforts we make will be insufficient.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

MEXICO, S024

Changes in land use bring about synergies with others. When vegetation is cut down, this results in a loss of biodiversity and erosion, which causes an increase in CO<sub>2</sub>, rising temperatures and the loss of water resources. This, in turn, leads to drought that affects food production. There is a growing need for this because of the increase in population that aspires to lifestyles that consume more natural resources.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources]

Juan Carlos Ortiz, CHILE, S026

Rural populations will be the worst affected as they depend on natural resources, their livelihoods rely on prevention and moving forward in the process of adapting to climate change in order to survive.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change]

Leonidas Suasnabar Astete, PERU, S027

Environmental problems are closely related and interlinked and as such can only be resolved using a comprehensive and interdisciplinary approach. If they are tackled individually, it is much more difficult to help. The politicians must appreciate the urgency of this situation.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

VENEZUELA, S029

Since I see the environment as a whole, it is difficult to ignore any aspect of man's impact on it. Undoubtedly the expansion of the agricultural frontier and the transformation of agricultural practices into different forms of land use are the main problem in the region. Moreover, this is justified in some sectors by relating it to the need for food to meet the growing population's needs. While these practices continue unchanged, any changes tend to be negative for the environment with possibilities of creating a high-quality sustainable environment.

[1.Climate Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

Alba Imhof, ARGENTINA, S030

Failure to implement legislation on climate change, clear public policies that materialize into concrete actions.

[1.Climate Change, 5.Water Resources]

CHILE, S031

Governance that moves towards sustainability may help us to preserve the environment. We need to improve the governance of common property and generate changes at the local level with a global perspective.

[10.Others]

Miriam Montero Salinas, SPAIN, S032

In recent years there has been a lot of talk about climate change and its effects, however there is no evidence of any effective action being taken to tackle the causes.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

ECUADOR, S034

The issue of climate change is very important because, more and more, it is causing increased rain, floods, natural disasters, droughts and low water levels in important lagoons.

Pests in crops caused by droughts, very few fish, certain aquatic species have disappeared, such as anacondas, which protect

the great deep lagoons, the migration of creatures that protect the mountains, ecosystems, waters due to natural disasters, rainfall and drought.

The effect of new unknown diseases caused by the heat of the sun.

[1.Climate Change, 7.Food, 8.Lifestyles]

*Felix Santi, ECUADOR, S035*

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Personally, I believe that the current system of consumption is what drives most of our lifestyles, the relative importance of education and humanity in harmony with the natural surroundings. This gap or distance between humans and the environment accounts for their lack of interest in regulating the extraction of resources.

[7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*ARGENTINA, S036*

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National policies and development plans do not consider the welfare of the most vulnerable communities in the country nor do they take into account climatic conditions and environmental risk factors on a local context (e.g. large-scale mining as a national development proposal).

[9.Society, Economy and Environment]

*Manuel Gilberto GUAYARA BARRAGÁN, COLOMBIA, S037*

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Integrating biodiversity into the production sectors promotes its conservation through sustainable use. This policy should be implemented nationally in the fishery, agriculture, forestry and tourism sectors.

[2.Biosphere Integrity, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others, ]

*MEXICO, S038*

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Environmental Education

Environmental Sociology

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*SILVIA MAMPEL ALANDETE, SPAIN, SP001*

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Population growth and the need for resources, which stem from the poor governance of African countries in addition to the populations' lack of knowledge and understanding of alternative solutions, are partly responsible for the loss of biodiversity

[2.Biosphere Integrity, 3.Land-System Change, 6.Population, 7.Food]

*Melis Blandine, SENEGAL, F001*

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CLIMATE CHANGE, POPULATION GROWTH IN AFRICA AND THE GROWING DEMAND FOR AGRICULTURAL LAND MEANS THAT THE PROBLEMS RELATED TO MEETING ALL FOOD NEEDS HAVE BECOME SERIOUS. THE REDUCED AMOUNT OF DRINKING WATER DUE TO CLIMATE CHANGE MEANS THAT WATER RESOURCES ARE BECOMING DEPLETED;

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food]

*KONE MAMADOU SALIF, MALI, F002*

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The choice of three themes is very restrictive or I did not understand the selection rule with respect to the table. Many things are related, including those in the title: the survival of humanity is directly linked to the environment. They are not separate. Thus, even if priority differences exist between the regions/countries of the world, it is a question of establishing a policy/strategy and then transforming it into concrete actions that would make it possible to avoid as far as the possible "end of the world" (which does not exist on a human scale, it is a metaphor). The diagnosis already exists and some solutions are known (but more investment is needed in research), but the problem is the implementation. Since 1992 (Rio), few results have been obtained because the states do not meet the set objectives. The challenge is to find a way to transform our society to achieve the environmental objectives and simultaneously reestablish intra- and inter-community equity. Perhaps it is necessary to return to the motto "think globally, act locally," with consistency at every corner of the globe via education, research, health and the protection of nature.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population,



7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Laurent Tatin, FRANCE, F004*

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The current economic model based on the predation of some countries of the increasingly scarce natural resources of other countries will constitute the major risk. The financial model is dominated by a system that has shown its immoral side and must be reformed, otherwise there is a risk of causing an unparalleled economic crisis. The destruction of the middle class foreshadows the end of this system.

[1.Climate Change, 5.Water Resources, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*Tewfik HASNI, ALGERIE, F006*

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The population believes that land is not flexible. Today, quantity production leads the population to use chemical substances that damage the soil and make it dependent on these substances. Worse, the coming or cessation of rainfall is no longer predictable. Consequently, it creates losses (in food and financial resources). The rate of deforestation is increasingly worrying: We are silently losing biodiversity, which is the guarantee for our survival.

The other problem that comes to mind is "Ecological Risks." In fact, sand mining is becoming more widespread and is worse on the Ramsar sites. It is not the only activity at the core, but its management leaves something to be desired. "

[2.Biosphere Integrity, 4.Biochemical flows, 6.Population, 10.Others]

*HEDEGBETAN, BENIN, F007*

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Climate change: The increase in natural disasters and the unpredictability of the seasons will affect farmers' agricultural output and will lead to human losses and huge costs for infrastructure restoration;

Population: The increase in population implies greater needs, therefore more pressure on natural resources;

Integrity of the biosphere: The value and importance of fauna, such as timber, is not yet recognized by everyone. In addition, land use changes affect habitats. At this rate, this heritage is either deemed to disappear or will no longer exist in its natural environment (zoo);

Food: Food crises in areas of severe drought;

Changes in land management: Soil restoration methods are not yet developed, which leads to worsening deforestation

Lifestyle: Notions of sustainable and rational management are not implemented:

Water resources: There is a decrease in water resources possibly due to the destruction of watersheds"

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles]

*NGABA MBEZELE JUNIOR YANNICK, CAMEROUN, F009*

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Climate change is one of the most important global environmental problems that world leaders must consider in their decision-making. It affects all life on Earth (including biodiversity and humans). Poor farmers are unable to meet their daily needs because production is unsatisfactory due to disruptions in the agricultural calendar. It also affects animals and plants, resulting from the unbearable conditions of certain groups of living beings. Human lifestyles must change because today, we consume everything in our path and consequently this causes a loss of biodiversity. The search for well being via material goods leads humanity to overconsume natural resources.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 8.Lifestyles]

*Jonas Kambale Nyumu, RDCONGO, F010*

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Environmental problems are fundamentally justified by the poor governance of natural resources in several countries. Indeed, transparent environmental governance (which excludes the permanent monitoring of natural resource management) would endorse another form of unfair management. We can also imagine a future threat based on the monopoly of resource management, which would only exist in the hands of the major powers on the planet.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles]

*MVE MEBIA Emmanuel, GABON, F011*

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Environmental problems should not be addressed in isolation because they are related to each other. Any foreseeable solutions must take this into account.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 6.Population, 7.Food, 8.Lifestyles]

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The current and major concern focuses first and foremost on humanity. There are several environmental imbalances due to current governance in one developing country and the world itself. The country has its natural resource and wealth, but the international and national policy does not make it possible to exploit these for the well-being of humanity itself. Wealth, along with activities that destroy the planet in the Northern hemisphere countries and the impoverishment of the Southern hemisphere countries will contribute to the collapse of this planet which, at the moment, is still viable compared to the number of people living on it. Without considering the human dimension that could change this world, we will still have environmental problems, such as deforestation, pollution, drought, loss of biodiversity, etc. Both voluntarily and with humility, we are responsible for our unconscious misfortunes.

[1.Climate Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 8.Lifestyles, 9.Society, Economy and Environment]

RABEMANANJARA Falitiana, MADAGASCAR, F013

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Global environmental problems are interrelated, even though the stakes are different depending on the level of development in each country. For a developing country like Madagascar, the stakes revolve around population growth, which will increase the pressures on resources through the conversion of forests into agricultural land, leading to climate vulnerability, and will in turn affect food security. It must also be recognized that the political choices and practices of one country will affect all others. Since our respective actions are interrelated, our judgment depends on our willingness (or rigor) to take action together.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 6.Population, 7.Food]

Andrianarivelo Ny Aina, MADAGASCAR, F014

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In order to reduce the threat of climate change and the consumption of wood, improved hearths in school canteens have been built in the more developed areas.

[1.Climate Change, 5.Water Resources, 7.Food]

Nicolau, GUINE-BISSAU, F015

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All of the problems listed seem important to me, as they are linked by causal effects.

[1.Climate Change, 5.Water Resources, 6.Population, 9.Society, Economy and Environment]

MICHISSO K GUILLAUME, BENIN, F016

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The consequences of climate change have also led to accelerated land degradation. Thus, the need to promote a system of resource management (land and water) is necessary in order to balance the socio-economic development of the rural communities whose survival depends entirely on the exploitation of natural resources.

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 9.Society, Economy and Environment]

Bahari I. Mahamadou, NIGER, F019

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Soil degradation

Inadequate training sessions for farmers

[1.Climate Change, 3.Land-System Change, 5.Water Resources, 9.Society, Economy and Environment, 10.Others]

Ido Babou Eugene, BURKINA FASO, F022

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Other factors should include natural disasters such as earthquakes, volcanos and droughts, etc.

[1.Climate Change, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

TAIWAN, T-007

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With the rising greenhouse gas concentration in the atmosphere, not only is Earth getting warmer, but extreme weather events including long-term droughts, heat waves, rainstorms and strong storms may also become more frequent, which will result in further problems such as the acceleration of species extinction, the reduction of available water resources and food shortages, and will have a huge influence on environmental changes on earth. In addition, extreme weather events may harm vegetation by reducing its ability to absorb carbon dioxide, thereby intensifying climate change. Accordingly, today's most important

topic is how countries around the world implement the Paris Agreement to effectively reduce greenhouse gas emissions and slow down global warming by improving energy efficiency, developing new and renewable energy resources to replace fossil fuels and the technology of carbon capture and storage.

[1.Climate Change]

TAIWAN, T-009

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The metropolitan lifestyle featuring industrialization and high energy consumption triggers extreme weather and also leads to the deterioration of air quality and the instability of drinking water sources. Relevant topics for discussion have chain reactions, the importance and sequence of which will be assessed.

[1.Climate Change, 4.Biochemical flows, 5.Water Resources]

TAIWAN, T-013

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For environmental problems on Earth, there are many factors that may cause changes, including the items listed above. But which three do I consider to be the most important? Climate change and global warming are in first place, of course.

[1.Climate Change, 4.Biochemical flows, 6.Population]

SUI-WEI, TAIWAN, T-015

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Development of new science and technology, biological gene mutation

[1.Climate Change, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment, 10.Others]

Wu Jinguang, TAIWAN, T-017

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Scientific and technological advancement will drive new revolutions and new solutions, so old risks will be able to be solved by new science and technology. For example, the problem of CO2 emissions can be solved by developing new carbon sequestration technology.

[1.Climate Change, 9.Society, Economy and Environment]

TAIWAN, T-018

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Climate change is becoming increasingly severe. We need to start carrying out environmental protection and care of Earth as individuals by bringing our own utensils when we go out and avoiding the use of too many plastic products made from expandable polystyrene.

[1.Climate Change]

CHEN YEN-CHIEH, TAIWAN, T-030

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Climate changes together with the relevant environmental and social changes may also have an impact on human health. In the past, changes in these ecological and physiological environments caused by the behaviors of human life and production brought new risks to public health in addition to economic benefits, such as transferring infection sources, reducing clean water supplies and lowering the productivity of agroecological systems.

With increasing impacts on the environment by human beings, the system maintaining life on Earth is undergoing large-scale changes. In addition to positively announcing the control of global greenhouse gas emissions and drawing up and signing conventions, countries around the world have also started with life and industries by researching and planning control policies to reduce greenhouse gas emissions together with countermeasures against environmental impact, ecological impact and public health impact, which is a topic we need to face in the future.

[1.Climate Change, 9.Society, Economy and Environment]

TAIWAN, T-032

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The severe climate change at present is leading to the frequent occurrence of sudden rainfalls, rainstorms and droughts, chilling damage and other problems in Taiwan. Disasters that only occurred once every hundred years in the past appear almost every year now, which is closely related to current lifestyles and society, together with economic and environmental changes.

Only by changing our reliance on science and technology to adjust our lifestyles will it be possible to improve climate change or environmental problems on Earth in the future.

[1.Climate Change, 8.Lifestyles, 9.Society, Economy and Environment]

*WU CHI-TSUNG, TAIWAN, T-047*

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From a scientific point of view, global climate change is closely related to energy consumption.

A lack of water resources is related to the population explosion, the excessive concentration of populations in metropolitan districts and complex lifestyles, etc.

Lifestyles are related to commercial activities, and a waste of energy resources is the main reason for global environmental changes.

The nine items in the main reasons listed above interact as both cause and effect."

[1.Climate Change, 5.Water Resources, 8.Lifestyles]

*TAIWAN, T-059*

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Human society and the leaders of all countries lack reflection on previous development patterns and still see economic development as the main focus, meaning that there are no positive or effective countermeasures raised in the face of climate change, biodiversity conservation and various topics!

[1.Climate Change, 2.Biosphere Integrity, 9.Society, Economy and Environment]

*TAIWAN, T-061*

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Non-governmental environmental protection organizations devote themselves to slowing environmental deterioration, but the government and enterprises only focus on

economic development and exploitation for profits. Environmental protection organizations need to convince the government and enterprises that we can only pursue mutual profits with sustainable operation that is friendly to the environment.

[1.Climate Change, 2.Biosphere Integrity, 3.Land-System Change, 4.Biochemical flows, 5.Water Resources, 6.Population, 7.Food, 8.Lifestyles, 9.Society, Economy and Environment]

*HUANG CHI-TUNG, TAIWAN, T-065*

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Environmental problems are unable to be changed because of the social economy. For the pursuit of a bountiful quality of life, the education of people must be also prioritized in addition to government policies emphasizing green energy and pollution-free industries. If environmental problems cannot be solved completely, environmental pollution should be reduced to achieve a balance between pollution and the environment such that pollution can be absorbed by the environment itself.

[4.Biochemical flows, 9.Society, Economy and Environment]

*TAIWAN, T-078*

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A range of countries are marching toward developed countries, leading to rapid deforestation and climate change. This causes the prices of commodities to rise suddenly, resulting in burdens for people.

[1.Climate Change, 6.Population, 9.Society, Economy and Environment]

*TAIWAN, T-079*

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Modern environmental problems are closely linked because we want modern civilization and convenience, but we cause all kinds of damage and pollution that are irreversible. We humans must take measures to avoid problems before we pay attention to such civilization, because the pollution we cause will cause us to suffer as well.

[2.Biosphere Integrity, 4.Biochemical flows, 8.Lifestyles]

*TAIWAN, T-084*

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1. Turn off the power when leaving and reduce the use of air conditioning.

6. Promote the one-child policy.

[1.Climate Change, 2.Biosphere Integrity, 6.Population]

*TAIWAN, T-085*

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Lifestyle changes lead to original environmental changes, which will lead to changes in the inhabiton patterns of species. For Earth, changes are an eternally immutable truth. However, can humans adapt to such changes over a long period of time?

This is a cruel but interesting question. If the answer is yes, then humans can continue to live on Earth in the days to come, but if the answer is no, humans will certainly perish! What is ridiculous is that the reason for these changes is humans themselves. The phrase ""being caught in one's own trap"" truly reflects the current dilemma.

[1.Climate Change, 5.Water Resources, 8.Lifestyles, 9.Society, Economy and Environment]

SHIH HUNG-WEI, TAIWAN, T-093

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Family education and school learning from childhood

[1.Climate Change, 4.Biochemical flows, 6.Population, 8.Lifestyles, 10.Others]

TAIWAN, T-094

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Policies on air pollution such as fine dust are needed

[4.Biochemical flows]

KOREA, K001

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As life is becoming more convenient, people tend to be wanting more. rather than being satisfied. Resource depletion is making this problem more severe.

[8.Lifestyles]

KOREA, K011

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I wish that wars in other countries could be ended and human rights could be guaranteed. I hope for an environment where we can live with human dignity.

[1.Climate Change, 9.Society, Economy and Environment]

KOREA, K018

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Climate change is the biggest problem. If we want to save the planet, we have to resolve climate change.

[1.Climate Change]

KOREA, K020

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Fine dust is the biggest issue. It is very serious and causes tremendous climate change.

[1.Climate Change]

KOREA, K021

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The biggest problem is people's lifestyle that considers the planet as an object to make use of. Because of this, many problems are connected with each other.

[8.Lifestyles]

KOREA, K025

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Without social structural changes, environmental problems cannot be improved. Without preceding changes to laws and institutions, there could not be any fundamental solutions.

[9.Society, Economy and Environment]

KOREA, K027

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1-The risk of climate change is getting noticeably higher each year. In Korea, the polarization of the summer and the winter is getting worse, and in Southeast Asia, the lines between the dry season and the rainy season are blurring.

9-People's indifference is the most serious problem. Also problematic is that they do not recognize it as a problem even if they come to know about it.

[1.Climate Change, 9.Society, Economy and Environment]

KOREA, K029

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The problem of particulate concentration is getting increasingly serious. When rain falls, it frequently stops soon. It is getting hotter day by day.

[1.Climate Change]

KOREA, K034

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Human desires and greed seem to pose big problems to the environment. We may feel convenient for now but will suffer the price of convenience some day.

[4.Biochemical flows]

KOREA, K035

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Population aging is emerging as a serious issue. There is a pressing need for a solution regarding the growing number of elderly people.

[6.Population]

KOREA, K037

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Strong action is needed because it is a problem that the whole world recognizes

[1.Climate Change]

KOREA, K038

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The level of environmental awareness is too low. It is because of lack of proper education.

[1.Climate Change, 9.Society, Economy and Environment]

KOREA, K039

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It is time to act for the environment.

[4.Biochemical flows, 7.Food, 9.Society, Economy and Environment]

KOREA, K040

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Consumer consciousness should be changed so that people would buy only necessary items.

[8.Lifestyles]

KOREA, K042

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Food shortage and climate change are the most serious problems.

[1.Climate Change, 7.Food]

KOREA, K043

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When I go into the sea, I can feel the dying areas are increasing every year. Eating meat causes many problems beyond health problems.

[1.Climate Change, 8.Lifestyles]

KOREA, K142

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Climate and environmental changes seem to occur because of our lifestyle.

[8.Lifestyles]

KOREA, K146

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Climate change poses danger to the existence of the planet.

[1.Climate Change]

KOREA, K147

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People's reckless use

[1.Climate Change]

KOREA, K149

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Considering the progress of the Fourth Industrial Revolution, we must focus more on the population problem, which is the

root cause of all problems.

[6.Population]

KOREA, K154

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These seem to be result variables of climate change, social inequality and lifestyle changes. I am concerned about the possibility of a worsening vicious cycle in which the result variables again affect the causal variables

[6.Population]

KOREA, K157

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We are easily exposed to environmental hormones from daily goods such as plastic containers and receipts, and it is also connected with female fertility problems.

[2.Biosphere Integrity, 4.Biochemical flows]

KOREA, K168

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I'm scared at too much changes of the seasons compared to when I was young. Spring and autumn are disappearing and both extremely hot and cold weathers occur all over the world.

[1.Climate Change]

KOREA, K174

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Especially this year, fine dust is so severe that I'm afraid of going out. Measures are needed both nationally and globally.

[4.Biochemical flows]

KOREA, K176

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Fine dust, environmental pollution and an aging population are serious.

[1.Climate Change, 6.Population]

KOREA, K178

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Measures to deal with air pollution such as fine dust and ozone problems are needed

[4.Biochemical flows]

KOREA, K179

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Regulation of cultivation of GMO crops is necessary.

[2.Biosphere Integrity]

KOREA, K189

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Because of air pollution, fine dust, soot, and chemical materials, it is difficult for humans, animals and plants to breathe.

[4.Biochemical flows]

KOREA, K190