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Producing the sixth Global Environment Outlook: The road to Guangzhou

As we move closer and closer to the third global authors meeting (9-13 October 2017) for the sixth Global Environment Outlook (GEO-6), the planning activities are becoming more and more intense and the expectations for the meeting are growing. The third global authors meeting will be the largest so far, with almost 200 experts and authors participating. Several outreach events are also planned in collaboration with our gracious hosts from the China Southern (Nansha) International Cooperation Centre and the Nansha District Government of China (Guangdong) pilot free trade zone, Guangzhou, China.

Five main groups will participate in the meeting, including:

- Authors and experts for the State of the Environment, Policy Effectiveness and Outlooks sections of the report,
- The High-level Intergovernmental and Stakeholder Advisory Group,
- The Scientific Advisory Panel,
- The Assessment Methodologies, Data and Information Working Group, and
- A group of twenty Review Editors.

With so many groups participating, the meeting has several key objectives:

- Address all comments received from the second order draft review of the State of the Environment chapters, and ensure the review editors are satisfied with the process.
- Move the Policy Effectiveness chapters towards first order draft quality.
- Conduct an expert elicitation exercise to assess the effectiveness of several policy case studies.
- Move the Outlooks chapters towards first order draft quality.
- Gather more data for the innovative Outlooks component of the report by holding a second 'game-changers' workshop.
- Advance the drafting of the economic and equity dimension 'common threads' throughout the report.
- Ensure the procedure for the preparation of the Summary for Policy Makers is adopted by the High-level Group and the Scientific Advisory Panel.
- Develop a draft structure for the Summary for Policy Makers.
- Participate in a field trip, policy dialogue and outreach activities with local organizers.

To have a successful meeting of this size ([see provisional agenda](#)) it will be important to be well coordinated and collaborative. The UN Environment Secretariat will have support staff for each of the groups as well as for the overall organization of the meeting. Our hosts will also provide important support to ensure the meeting runs smoothly.

The meeting will also focus primarily on the Policy Effectiveness and Outlooks chapters of the report, which will be the most innovative and targeted towards a policy-making community. By incorporating policy effectiveness case studies and real-world 'game-changer' ideas into the report, the GEO-6 team hopes to provide policy and decision makers with real-world examples and tools to dramatically change the trajectory of global environmental degradation by achieving the environmental dimension of the Sustainable Development Goals.

The scope and scale of the third global authors meeting is ambitious, but everyone involved is committed and engaged to provide the most useful and impactful Global Environment Outlook yet.

Delivering on the environmental dimension of the 2030 Agenda for Sustainable Development: A Gap analysis to strengthen the science-policy-governance interface

UN Environment is now running into the final production stage of the “Gap Analysis to enhance the science-policy-governance interface”. Responding to resolution 1/4 adopted during UNEA 1 and resolution 2/5 on “Delivering on the 2030 Agenda for Sustainable Development” adopted during UNEA 2, highlighting the need to enforce the Science-Policy interface, the final report will be delivered at the 3rd edition of the United Nations Environmental Assembly, which will be held from 4-6 December 2017 in Nairobi.

The 1st order draft of the report went through an extended two months review period, which included both internal reviewers from UN Environment (around ten people) and external reviewers selected from the Global Environment Outlook experts' database (around fifteen people).

UN Environment proceeded with hiring a high-level specialist in strengthening the Science Policy and Governance interface who has been tasked to incorporate all these comments into a final comprehensive report.

In the last three years, the leading theme of his work has been the ways to increase the effectiveness of the science-policy interface for international environmental information. That has included deep work on how the International Resource Panel could become more effective as a science-policy interface, and the editing and drafting of evidence-based reports for UN Environment and the European Commission. It included research and practice into effective science-policy interfaces and impactful reports.

Hard copies of the report will be distributed at the United Nations Environmental Assembly and the pdf version will be made available on the GEO website.

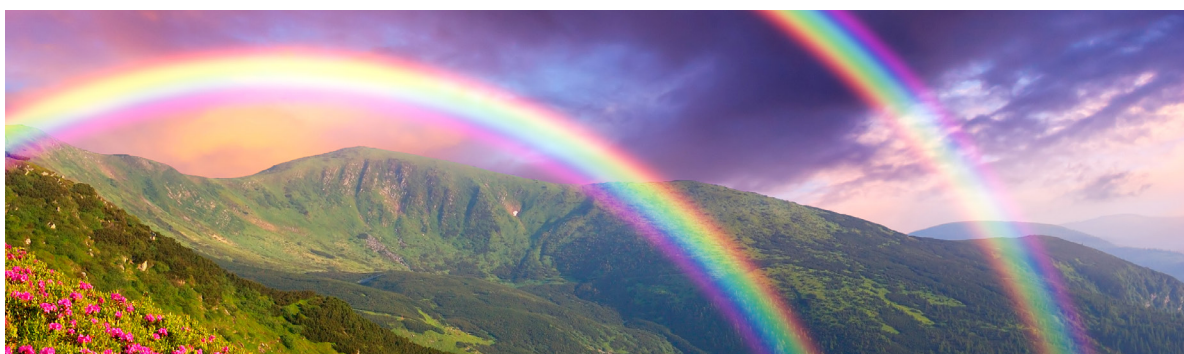
Sixth Global Environment Outlook (GEO-6) Review

The review period of the Sixth Global Environment Outlook assessment is on-going with 15th September 2017 as the expected end date. This is a large review involving all GEO-6 nominated experts, Government expertise that were nominated by Governments as well as United Nations thematic experts. Reviewers were considered based on two key criteria:

- Expertise: The reviewer had to have demonstrated knowledge, experience, and skills in one or more of the GEO-6 thematic areas or Assessments as a whole.
- Conflict of Interest: Reviewers were asked to disclose any potential conflicts of interest to determine if they stand to financially gain from the outcome of the process (i.e., employment and funding). The reviewer had to be independent from the generation of the product under review, free from institutional or ideological bias regarding the issues under review, and able to provide an objective, open-minded, and thoughtful review in the best interest of the review outcome(s). In addition, the reviewer had to be comfortable sharing his or her knowledge and perspectives and openly identifying his or her knowledge gaps.

The secretariat and the two review editors have also implemented a review committee composed of twenty external scientific experts. Membership includes experts from academia, research institutions, and government agencies as appropriate to deliver balanced feedback and multiple perspectives.

A brief public summary report of the review process and resulting reviewer assessments, intended for inclusion in the scientific credibility and quality assurance documentation will be generated by the review editors. This summary will also help advice on how to effectively conduct future reviews.



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The sixth Global Environment Outlook (GEO-6) Assessment for the pan-European region

The sixth Global Environment Outlook (GEO-6) Assessment for the pan-European region was one of the six regional assessments that are the basis of this sixth Global Environment outlook that is under review at the moment. It is of great scientific and political importance, as it highlights the state and trends of the environment and enhances the science-policy dialogue underpinning the policy and decision-making processes in the region. The pan-European Shared Environmental Information System is already in place and is starting to organize, regularize and coordinate the regional environmental knowledge base. This process is essential for measuring progress towards the achievement of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals.

The GEO-6 Assessment for the pan-European region argues for more urgent action, both through existing policies and the implementation of the 2030 Agenda for Sustainable Development (2030 Agenda), to address the challenges that the region is facing. Regional and global multilateral environmental agreements have improved regional environmental conditions, access to information and public participation. Further improvements are feasible through better implementation and improved access to justice. The region's resource footprint is unsustainable, owing to its overuse of natural resources and its trading patterns with other regions. Ecological, societal and economic resilience will be negatively affected in coming decades by global megatrends that are largely outside the region's direct control and influence. Environmental challenges are now more systemic, multifaceted, complex, uncertain and intertwined with socioeconomic factors.

Globally, limits have been crossed for four out of nine planetary boundaries due to human induced changes: climate change, biosphere integrity, land system change, and biogeochemical flows (nitrogen and phosphorus). Poor air quality, climate change, unhealthy lifestyles and the disconnection between society and natural environments increasingly affect human health in the region and give rise to new risks. Resilient ecosystems, efficient resource use, clean air, sufficient clean water, sustainable management of chemicals and waste and sustainable cities are essential for a healthy planet and healthy people.

However, the sixth Global Environment Outlook (GEO-6) Assessment for the pan-European region assessment points that neither environmental policies alone nor economic and technology-driven efficiency gains will be sufficient to achieve sustainability. More ambition is needed. The 2030 Agenda and its Sustainable Development Goals recognize this reality. Living within planetary boundaries will require fundamental transitions in energy, food, mobility and urban systems and entail profound changes in predominant institutions, practices, technologies, policies and lifestyles.

New governance coalitions involving national and subnational levels of government, businesses and citizens are urgently needed. The assessment urges that transition to a truly inclusive green economy must be built on resilient ecosystems, clean production systems, healthy consumption choices, reduced negative distributional effects of environmental policies and improved overall environmental justice for all. Positive long-term outlooks call for an urgent shift from incremental to transformational change in order to: decarbonize energy and transport systems and reduce other harmful emissions; restore ecosystems; decouple resource use, including material footprints, from overall economic performance; "green" public and private sector procurement; strengthen environmental responsibility in business; and incentivize lifestyle changes.

The sixth Global Environment Outlook (GEO-6) Assessment for the pan-European region assessment points out that, climate change is one of the largest threats to human and ecosystem health and to achieving sustainable development. It is also an accelerator for most other environmental risks. Growing impacts include melting ice, sea level rise, increasing flood and drought frequency, degrading ecosystems, loss of biodiversity, soil function and food productivity, changing disease vectors and exacerbated air pollution impacts on health.



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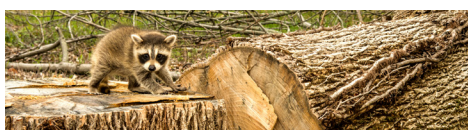
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Greenhouse gas emissions in the European Union are stable or declining, but in the South Eastern European subregion they are increasing. Largely through efficiency gains, emissions have decreased in the majority of sectors except for transport, refrigeration and air conditioning. To stay within range of 2°C–1.5°C temperature increases and already foreseen impacts, strengthened government action at the national and subnational levels, as well as multistakeholder coalitions, are needed on mitigation and adaptation, including accounting for emission footprints.



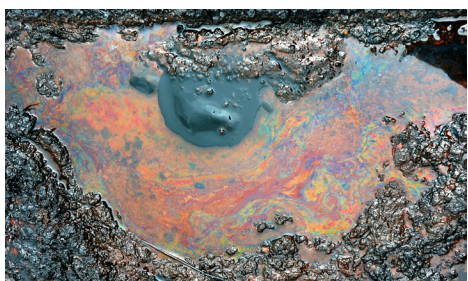
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Air quality is the largest health risk to the pan-European population, with disproportionate effects on children, the elderly and the poor. Over 500 000 premature deaths in the region were attributable to ambient air quality and 100 000 to indoor air quality in 2012. More than 95 per cent of the urban populations are exposed to pollution above the World Health Organization guidelines.



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Biodiversity loss and ecosystem degradation continue apace, despite increased conservation and restoration efforts. The main regional pressures are from increased land use change, particularly agricultural intensification, urbanization and habitat fragmentation by transport infrastructure.



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Chemical pollution impacts on human health and ecosystems across the region, with hazardous chemicals of particular concern owing to their toxicity, shortcomings in their management and a lack of transboundary controls. Other priority concerns include endocrine disruptors in consumer products, hazardous substances in electronic and electrical products, environmentally persistent pharmaceuticals and nanomaterials. Mercury pollution in the region is still significant, and new emerging issues such as some toxic chemicals in consumer products pose challenges yet to be tackled.



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Waste volumes continue to grow. Disposal of waste in landfills is the major environmental challenge in several parts of the region, despite progress with recycling in many countries. Handling of waste from electrical and electronic equipment is a growing concern, with control of transboundary movements insufficient under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Reducing food waste in the region is a key challenge.



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Freshwater pollution — mainly from agriculture — to surface waters and groundwaters is the main reason for poor water quality, also affecting coastal areas and regional seas. Between urban and rural communities there are large differences in the levels of access to sanitation and safe drinking water. There are also large differences within the region regarding the collection and treatment of wastewater. Irrigation, over-abstraction and highly polluted return flows threaten groundwater supplies, most notably in Central Asia. The chemical status of water is generally improving in the European Union, but progress is slow for diffuse pollution.



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Land-use change is leading to the deterioration of the physical and chemical properties of soils, thereby causing water and air pollution. Soils are also under threat from climate change, erosion, contamination, salinization, floods and landslides, which in turn threaten food and nutrition security. Urban sprawl causes the loss of arable land, natural habitats and biodiversity. The loss of green areas in cities has exacerbated climate change effects and caused deterioration in the physical and mental health and cognitive development of children.



Know an Expert: Global Environment Outlook Author Profile



Ms. Indu K Murthy is an Indian Scientist specializing in tropical forest ecology and climate change. She is a Consultant Scientist at the Centre for Sustainable Technologies, Indian Institute of Science and the Director of Aranya Climate Change Services Private Limited. She has been associated with Indian Institute of Science, a premier research Institute in India for more than two decades. She specializes in forestry and climate change related issues and has worked extensively in the Western Ghats region. She works with the Ministry of Environment and Forests, Government of India as well as state forest departments to climate proof ongoing and proposed developmental programmes and projects. Indu K Murthy is also very keen on creating awareness about climate change among corporates,

college students, school students and the public. She conducts citizen science programmes wherein non-scientists get involved in generating information about forests and get involved in the long-term research she is conducting on forests. She also works as a forestry and climate change consultant for the United Nations, the World Bank, and other multilateral agencies.

Indu K Murthy has published extensively in scientific journals and writes popular articles for newspapers from time to time. She is a contributing author to the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report and a Lead Author for Air and Land Chapters of the GEO-Regional Assessments. She is the Contributing Lead Author for the Climate Change component of the Drivers Chapter in GEO-6. Ms. Indu K Murthy believes that the time to act to save the environment from the various planetary challenges including climate change is running out and the time to act is now. GEO-6 is the effort that will bridge the gap that exists between science and policy making. Bringing in authors from different parts of the world, the GEO-6 process endeavors to reflect the differential challenges faced by people in various regions of the world. The robust scientific analysis was done in the context of healthy people and healthy platform in the GEO-6 will enable governments and the world to transition towards a sustainable future, which is the central goal of the SDGs.

Travelling on the Nairobi to Mombasa train

By Pierre Boileau

On a recent bit of time off, my family and I decided to take the new train between Nairobi and Mombasa, Kenya to take advantage of this new experience and also to visit the Kenyan coast for a bit of ocean and sunshine. We all agreed the ride on the train was very comfortable and clean and shaved perhaps 3-4 hours off of the ride using the Nairobi to Mombasa highway [see photo of daughter and her fiancé]. We also noticed that the train is very popular and was quite full for this ride.



The new train made its inaugural voyage on 29 May 2017 and has been a hit ever since [see picture of maiden voyage]. However, the level of security for taking the train is very high. Our baggage was first sniffed by dogs, our tickets were checked against our identification; we were then scanned through metal detectors and our bags through x-ray machines. This was before even getting to the terminal. Inside the terminal our tickets were again checked and we and our bags were scanned again.

Although the security was very high, the process ran very efficiently and most everyone was very accommodating and helpful. In all the security checks took perhaps 20 minutes. We all thought this was quite reasonable, given the level of risk. Once we were on the train we were well coached through the process of using the services in the train and how to keep the train clean and safe. The train left precisely on time, at 08h59 and arrived very close to the planned arrival time.

The train took about 5 hours to reach Mombasa, with an average speed of over 100 km/hr. We made two stops during the trip but there are potentially 4 other stations on the route where stops could be made. Once in Mombasa there is quite a bit of transportation to take you into town. Since we were headed to the south coast we also had to take the Mombasa ferry, which also was quite efficient. The train does not arrive on the Mombasa Island but is quite close to the international airport, so connections should be quite good, if you wish to leave Kenya by air.



All in all we were very impressed by the new train and would recommend it for excursions to Mombasa. Perhaps vacationing on the north coast would be more practical because then we wouldn't need to drive through the city or take the ferry. Live and learn.

