GEO MATTERS

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Towards a Digital GEO!

OUTREACH

UN DESA Editorial Board Training Series: Making of the Global Environment Outlook

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A Showcase of Air Quality Sensors



Towards a Digital GEO!

The resumed fifth session of the UN Environment Assembly (UNEA 5.2) requested the preparation of the seventh edition of the Global Environment Outlook (GEO-7). This request directed UNEP's Executive Director to prepare this edition of GEO through a streamlined and cost-effective governance and administration. In the current global assessment landscape from financing, administration and dissemination of the findings, digitization of the GEO process and products is essential in achieving this UNEA mandate. The digitization effort is also in line with UNEP's digital transformation strategy and the UN Secretary General's 'Our Common Agenda'. As a first step, a user needs-assessment was developed to cover five key areas of digitizing GEO's process and products. These five key areas include:

- Digital collaboration for Member States, stakeholders and experts/authors, built on the Microsoft backbone that allowed much of UNEP's work to continue seamlessly during the COVID-19 global pandemic. This functionality is meant to allow collaborative research, drafting, assessment and decision-making across the entire GEO-7 production process.
- 2. Enhanced online graphing and mapping capabilities that can draw from various online 'live' data sources. This functionality is meant to allow authors to create original graphics or maps for GEO-7 using publicly available data sources.
- 3. Enhanced online development of terms, definitions and glossaries, including better transparency for development and use of these terms, collaborative decision-making on the definitions to be used in GEO-7, high quality database storage and maintenance for definitions and their sources, and better tracking of the evolution of definitions, including the rationale for this evolution.
- 4. Enhanced online management and automation of peer review comments, including more transparent nomination and selection procedures for peer reviewers, enhanced efficiency of how



A presentation of the 5 functional areas of the GEO-7 digitization.

reviewers review drafts, greater transparency for how authors address review comments and better assessment by review editors of how review comments are addressed.

5. Online presentation of GEO-7 in an interactive and user-friendly way. This will allow users to interact with and understand the data and information used to support the assessment narrative.

Some of the five functionalities mentioned above have been tried and tested in the past (e.g., UNEP's Communities of Practice and UNEPLive), however, the technology and implementation approach of these platforms were not sufficiently user centric. Consequently, for GEO-7 a user-needs survey is vital to ensure that any development of prototypes to cater for the five functionalities will include a road-test of the new approach, so that user feedback can be integrated into the final improvements for these functionalities.

Through this needs-assessment, the GEO secretariat aims to receive inputs from as many assessment experts as possible to help design key tools based on user-needs and expected experiences and outcomes. The first consultative session was conducted on 16 May 2022. The objectives for this particular webinar were to: convene interested parties to share the highlights of the digitization of GEO and the process for responding to the questionnaire; to provide a

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forum for them to ask questions about the digitization of GEO process; and to provide a platform where assessment experts can provide feedback through the questionnaire on the digitization of GEO. The session begun with a brief interactive session of 'question and answer' to keep the participants engaged. These questions enabled the GEO team to get to know what region participants came from, the sectors they represent and if they had been part of previous GEO processes. The recording of this webinar can be found **here**.

In the ongoing needs-assessment consultation, GEO team is organizing a series of informative webinars to further expand on key areas of focus in the needs-assessment study for GEO-7 and to help guide informed input into a questionnaire. Through the webinars, the secretariat is able to convene interested parties to share the highlights of the digitization of GEO and the process for responding to the questionnaire while providing a forum for participants to ask questions about the GEO-7 digitization process.



Screen capture of the first consultative webinar

Assessment experts can access the online survey here to provide any inputs to the needs-assessment study.

To attend any upcoming informative webinars on the GEO digitization process, please reach out to **franklin.odhiambo@un.org**. These consultations will close on 13 June 2022.

OUTREACH

UN DESA Editorial Board Training Series: Making of the Global Environment Outlook Wednesday, 11 May 2022, 9:30-11:00 am (NY Time)



Screen capture during the 'Making of GEO' presentation

As part of the UN DESA (Department of Economic and Social Affairs) Editorial Board Online Training Series, the GEO team was invited to present a behind the scenes of the **making of GEO**. The team, led by Mr. Pierre Boileau, provided an in-depth overview of what it takes to make a GEO that is comprehensive, scientifically credible and policy relevant.

The Global Environment Outlook has been published by UNEP since 1997, and it assesses the state of the environment, the effectiveness of the policy response to address these environmental challenges and the possible pathways to achieve various internationally agreed environmental goals. For more information on the GEO, click here.

This session was part of UN DESA's new series of training sessions to further strengthen the impact of UN DESA publications. The series is aimed at providing opportunities for UN DESA colleagues to engage with experts across the UN system, learn from their experiences and apply them to enhance thought leadership to ensure UN DESA publications and products are communicated effectively to a wider audience with greater impact.

The event was virtual in nature and included Ms. Maria Francesca Spatolisano, Assistant Secretary-General for Policy Coordination and Inter-Agency Affairs who gave the opening remarks for the session.



From 1997







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During the session, colleagues from UN DESA had an opportunity to learn key facets about the GEO including:

- What GEO is, why it is the UNEP flagship report and the unique features that affect its impact.
- Approaches for establishing advisory bodies, author teams and production schedule.
- Key quality control elements (e.g., Peer reviews, Science editing, Citations and references, Glossaries, Maps and graphs).
- Approach on outreach (e.g., Derivative products (Cities, Business and Youth), Translations (Arabic, Spanish, Chinese, Russian), Summary for policymakers, Technical Summary, Key Messages, Outreach events).

The GEO Team generously shared their experience, expertise and knowledge throughout the session and the post-event feedback showed that an overwhelming number of UN DESA colleagues were very satisfied with the session and felt they could apply what they learned about the making of the GEO to their own work.

SDSN and Stockholm +50: Acting for a healthy planet



The United Nations' Sustainable Development Solutions Network (SDSN) Northern Europe and Kenya organized an event on 31st May 2022 at 10am-1;00pm (W. Europe Standard Time) titled '**Acting for a healthy planet: Environmental Science-Policy Solutions and Pathways Stockholm +50.**' The theme for the event was **Putting science into policy and practice for a healthy planet**.



The purpose of the meeting was to engage SDSN members worldwide to highlight and discuss how the SDSN can support the UN Environment Programme, national and regional stakeholders to mitigate the triple planetary crisis (climate change, nature and biodiversity loss, and pollution) through science-policy, policy implementation and practice.

The **GEO-6** Co-chair and advisor of the **Making Peace with Nature** Report, Professor Joyeeta Gupta presented the findings of the report, and the Head of GEO, Pierre Boileau also made a presentation on UNEP's future environmental assessment work. Prof. Gupta discussed the **Making Peace with Nature** findings and highlighted the relevance of these findings for science-policy work, particularly recommendations for action by different actors. Mr. Boileau, then discussed the future of environmental assessments in UNEP, specifically the GEO-7 process and preparation plans.

GEO-7 is expected to be a 'solutions' GEO and will be developed by engaging with governments, stakeholders and UNEP-wide and external experts. This process will make the solutions presented in GEO-7 even more relevant and action focused. The first step in this process will be initiated by a call for research and expertise in environmental science-policy in early autumn this year. There will be a submission system for experts that have published or have ongoing research on systemic transformations in energy, food systems, and linear economics models that generate pollution and waste. Ultimately this call is looking for experts that can contribute to the solutions-focused GEO-7 assessment.



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Four separate presentations were made from different SDSN teams and Regions: The first was a presentation from **Mrs. Gun Rudquist**, was on bridging the Gap between Science and Policy, sharing experiences from Stockholm University Baltic Sea Centre. After a short break, **Dr. Bessy Kathambi**, from SDSN gave a presentation on a Better Earth through Environmental Governance from a Wangari Maathai perspective followed by **Dr. Kaisa Korhonen-Kurki**, from SDSN Northern Europe who talked about experiences from the Finnish Saumakohtia dialogues: science meeting politicians and the fourth and final presentation on good examples was done by **Dr Eng. Hiram Ndiritu** SDSN Kenya, who made a presentation on promoting Greenhouse Gas Reduction and Low Carbon Technologies in the African maritime sector.

During the presentations the audience actively participated in a rich question and answer discussion with the experts. Members of the audience inquired about how to participate in science-policy work and ways to stay optimistic for environmental solutions. Lastly the event concluded with a brief launch of the Call for Environmental Science-Policy Solutions and Pathways done by network managers of SDSNs Northern Europe and Kenya.



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From a colleague, Science Division

A Showcase of Air Quality Sensors

by Ngongang Danude

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The topic on air pollution in Nairobi, Kenya is gathering attention from various stakeholders including government officials who are working hard to provide clean air for sustainable livelihood for its residents.



Ngongang Danude, , GEMS Air Unit, Big Data Branch, Science Division

On Sunday 8 May 2022, for the first time in Africa, an international marathon was organized with air quality sensors deployed along the race route to monitor real time information of Nairobi's air quality, during the inauguration of the 27-kilometre Nairobi Expressway from Mlolongo, Machakos County through the Jomo Kenyatta International Airport to the city's Westlands area. The Nairobi City Marathon was organized by Kenya's Ministry of Sports, Arts and Social Development and was held ahead of the official opening of the Nairobi Express Way.

Around 10.000 participants were expected at the event to demonstrate their athletic skills and enjoy the new express way which changes the landscape of the Nairobi city. In attendance, was the President of Kenya, His Excellency, Uhuru Kenyatta, First Lady, Margaret Kenyatta, Cabinet Secretary of the Ministry of Sports, Hon. Amina Mohammed amongst other officials showing their commitment to sports activities.

The topic on air pollution in Nairobi, Kenya is gathering attention from various stakeholders including government officials who are working hard to provide clean air for sustainable livelihood for its residents.





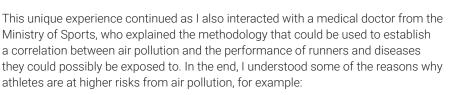
President Uhuru Kenyatta (middle) receiving explanations on the air quality sensor platform from Mamo Boru Mamo, Director General of National Environment Management Authority (left) and Philip Osano, Centre Director General of Stockholm Environment Institute (SEI), Kenya (right)

I led the technical team which deployed air quality sensors along strategic locations ahead of the marathon. Nyayo stadium and Naivas Supermarket in Westlands were some of the key strategic points where sensors were deployed. A total of nine sensors covered the entire race route reporting data on the air quality to inform decisions and actions to Athletics Kenya, athletes, and the public on air pollution.

At the event, the Air Quality team and I demonstrated the relevance of air quality data and showcased the level of air quality the runners were exposed to. I had an opportunity to brief the President and First Lady on the online air quality platform which showed the network of air quality sensors throughout the marathon in Nairobi and specifically in Kasarani area. Representatives from the Ministry of Environment, Stockholm Environment Institute (SEI) and UNEP were also present to witness this high-level outreach event.

The political atmosphere which I found myself was intriguing, where government officials asked questions on the linkages between air quality and the performance of runners and athletes. I was happy to shake the president's hands for exactly

30 seconds, after he had great satisfaction knowing that air quality projects could be brought to this level of athletic competitions with measurable expectations and targets to underline the commitment of Kenya Athletics and the Ministry of Sports in linking the environment and climate change. I was happy to note how knowledgeable the First Lady was on the topic of air pollution in cities, with questions oriented on how the project is intending to use the data. Despite the complexity of this technology, I was happy to have found the right terms to pass the key messages of the work undertaken by the Global Environment Monitoring System for Air (GEMS Air/ UNEP) in Kenya.



Increased ventilation during exercise,

The first Lady Margaret Kenyatta receiving

the explanation of the air quality platform

- A greater fraction of air is inhaled through the mouth during exercise, effectively bypassing the normal nasal filtration mechanisms,
- The increased airflow velocity carries pollutants deeper into the respiratory tract. At the end, it was obvious to relate utilities (sports, climate change, transport etc.) that could provide sound basis to the air quality data from air quality sensors. The event was a success and we at GEMS AIR look forward to continue partnering with governments and other stakeholders in the air qualityconversation and better year in providing solutions and necessary data to action change in improving air quality.



Lt. Gen (Rtd) Jackson Tuwei explaining to the president the importance to undertake environmental awareness on sports and environment



route reporting data on the air quality to inform decisions and actions to Athletics Kenya, athletes, and the public on air pollution.



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