

# Best Practices Forum: The Governance of Environmental Data

## Proposal Submitted by:

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## Executive Summary

Environmental crisis has become evident in recent years and addressing it requires a multi-faceted and global strategy. Data has great potential to be leveraged for helping to shape human behavior towards sustainability. One of the critical components for building the strategy of digitalization that would contribute to the goal of environmental sustainability is to identify the Data Governance practices and experiences that can contribute to that goal. This was raised during the IGF 2020 discussions. The proposed BPF will consider best practices and opportunities for advancing sustainability through environmental data and its use in areas such as financial markets, platforms and apps, supply chains and consumer behaviors.

This proposed BPF offers a 4 year workplan devoted to collecting those best practices, lessons learned in their development, as well as providing useful recommendations that can be helpful in setting the path forward.

In 2021, the BPF will work on gathering best practices centred around environmental data governance issues. The BPF will analyze existing ownership, licensing and safeguards as well as the integration of environmental data into existing systems and infrastructure and the interoperability of such within the context of a multistakeholder ecosystem who would need to access and apply such data through a broad range of digital technologies.

As the mandate of the BPF is renewed, further work is suggested on ensuring best ways in which environmental data can be made more accessible, affordable and inclusive for all and how governance of environmental data can support responding to disaster and crisis situations.

## Background

Advances in technology and digital innovation are creating data and predictive analytics at unprecedented levels of scope, speed and scale across the globe. These data now hold more potential than ever before to shape human behavior and planetary conditions as well as underpin digital sustainability. However, there are presently very few international principles and safeguards in place in terms of how this data should be governed as a digital public good. Safeguards are also needed to enable public and private sector actors to collaborate in terms of data collection, predictive analysis and transformative applications for the environment.

Acknowledging that the current means and levels of international cooperation are unequal to address this unprecedented challenge, the UN Secretary-General convened an international high profile expert group ("High-Level Panel on Digital Cooperation", or "HLPDC") to provide recommendations on how the international community could work together to optimize the use of digital technologies and mitigate the risks.<sup>1</sup> The result of which was a report released by the HLPDC titled: [The Age of Digital Interdependence](#).

In response to this report, the UN Secretary-General produced the [UN Roadmap for Digital Cooperation](#). Within the roadmap, the UN Secretary-General is actively embracing the global application of digital technologies to tackle the Sustainable Development Goals (SDGs).

The UN Roadmap for Digital Cooperation calls on all UN agencies, funds, and programs to deliver digital public goods in the form of actionable real-time and predictive insights that can advance the SDG agenda. Importantly, the UN Roadmap for Digital Cooperation fully recognizes the importance of digital technologies for environment and climate action:

"The recent advances in technology offer ground-breaking opportunities to **monitor and protect the environment**, as well as overall planetary health. By harnessing them appropriately, **the digital revolution can be steered to combat climate change** and advance global sustainability, environmental stewardship and human well-being"

Given this increase in interest on the relationship between digital cooperation and the environment, a number of initiatives have been kickstarted separately and yet, simultaneously, by various UN agencies:

1. On the basis of input received from IGF stakeholders during the open consultation process post IGF2019, the MAG decided to make the environment a priority topic for IGF2020.

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<sup>1</sup> <https://digitalcooperation.org/>

2. With a notable degree of success, these topics have then also been included on the agenda of many of the national and regional IGF initiatives in 2020.
3. Of particular note was:
  - a) The APrIGF 2020 workshop titled: The Internet's Environmental Impact: an action-oriented dialogue.<sup>2</sup> This session explored the role internet governance must play in respect to environmental data and included a dialogue between a cross-section of experts representing private, public and NGO sectors of which included Andrew Zolli (VP Global Impact, Planet) and David Jensen (Director, UNEP).
  - b) The EURODIG 2020 Plenary titled: Greening Internet Governance, Environmental Sustainability and Digital Transformation.<sup>3</sup> This plenary considered how all stakeholders in Europe can make a difference now to ensure the development of environmentally sustainable internet and digital technologies, by eliminating their carbon footprint and their dependence on non-renewable and inhumane sources of energy and raw materials.
  - c) The UK IGF 2020 Panel discussion titled: The internet and Environment. The panel included experts; David Souter, Managing Director, ICT Development Associates, Michelle Thorne, Senior Program Officer, Mozilla Foundation, Daniel Zeichner MP, Climate Change APPG, Ugo Vallauri, Co-founder and Policy Lead, Restart Project and focussed discussions around the most important areas internet governance can make impact on the environment.

These events, among others, have been successful in inspiring significant engagement from members of the Internet governance community globally and made evident the desire for more active involvement in on-going policy dialogue and action on this issue.

4. Within the development of the UN Roadmap for Digital Cooperation and the Roundtable 1B on Digital Public Goods, UNEP was invited to submit a contribution to outline its recommendations on the use of environmental data as digital public goods.<sup>4</sup> The paper builds a case for a governance framework that will support the development of an equitable, open-access digital ecosystem of environmental data as a digital public good. Stating that credible multidisciplinary environmental data, and the applications of this data, are digital public goods which are necessary conditions for an equitable, sustainable and resilient society. The paper also addresses the pace and rapidity of the development of data technologies, both in terms of scale, scope and quantity of data gathered and how a governance framework is required to ensure that this data enhances and does not

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<sup>2</sup> <https://youtu.be/P5cr4maD1to>

<sup>3</sup> <https://www.eurodig.org/messages-2020/programme-2020/>

<sup>4</sup> <https://drive.google.com/file/d/1tJlI0c7xz4J2MVTU5lx2NdPQL8ALXEXj/view>

undermine planetary wellbeing. The paper concludes by highlighting the need for consistent and concerted efforts, on a global scale, to establish and implement a digital ecosystem governance framework.

5. UNEP has also been invited to develop an environmental action plan as part of the UN Digital Cooperation Roadmap - focusing on both the opportunities and risks of digital transformation for the environment.
6. UNEP is also developing a four year Digital Transformation programme as one of the core seven priority themes during 2022-2025.
7. The MAG invited UNEP to host a high-level panel at IGF2020 on “Debating the Future of Global Environmental Data Governance in the Age of Uncertainty”.<sup>5,6</sup> A UNEP representative was also a speaker in the Environment “main session”.

While these are important milestones, they will not be sufficient to ensure sustained engagement of the IGF community and to promote an outcome oriented approach to develop best practices on this critical topic.

It is in the spirit of harnessing such a powerful opportunity to collaborate and in recognising the significant expertise of the multi-stakeholder, multi-disciplinary, and cross-border IGF community that we propose a collaboration between UNEP and IGF in the form of a Best Practices Forum, potentially based on the IGF+ model, addressing the topic: The Governance of Environmental Data.

Ultimately, a global environmental data infrastructure and governance framework must underpin any chance we have to achieve a sustainable civilization and in supporting this proposed BPF, the IGF can play a significant role in helping humanity get there.

## Description of Proposed BPF on The Governance of Environmental Data

When we think about the environmental impact of the internet, our tendency is to want to explore topics such as energy consumption, e-waste and supply chain impacts from resource extraction and mining. All those are relevant topics in line with the impact of technology on the sustainability of human development, however, taking this direction in the conversation to produce actionable outcomes has historically been unsuccessful in creating clear consensus among IGF stakeholders for advancing the amazing work the IGF community is capable of. We propose to broaden the approach to also consider best practices and opportunities for

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<sup>5</sup> <https://drive.google.com/file/d/1hLiuJADgDXQ0WyZ5BkuBSuUIZs9pwbMu/view?usp=sharing>

<sup>6</sup> <https://drive.google.com/file/d/1EzTY4VG2MZ8q0k8HrdAHW7CVzezz4Zy7/view?usp=sharing>

advancing sustainability through environmental data and predictive analytics in areas such as financial markets, platforms and apps, supply chains and consumer behaviors. Environmental data is a mature subject where Best Practices can be collected. There is additional value in focusing this work strictly on the governance mechanisms around ownership, licensing and safeguards as well as the integration and accessibility of environmental data. Addressing the governance of environmental data is vital to ensure all nations, the less advantaged, indigenous groups and other minority groups are given due consideration. Such an approach supports the remit of the IGF as well as all UN agencies to bring accessibility, inclusivity and equality into full focus. If fair and equal access to environmental data is ever going to be possible - its governance will be key. Focusing on positive applications and relevant business models may enable more meaningful, relevant and constructive conversations that lead to more effective multi-stakeholder collaboration, engagement and tangible outcomes. This approach would also explore innovative responses to address the impact of the internet, and confront some of the environmental risks - but not lead with this narrative.

This BPF proposes to address the very important issue of environmental data governance and how it can be used for transformational change to drive sustainability outcomes. It seeks to leverage IGF's community of thought leaders and industry professionals, as well as the broader internet governance community globally, to play an active role in the development of a governance framework and ultimately in the application of environmental data for transformational change.

We propose that the topics complexity, international nature and high level of priority in different global and regional processes, justifies the need to have its own separate BPF instead of being included in the BPF on the broader topic of Data which is already being addressed in 2020 by the IGF community.

## **An Opportunity to Launch the First Incarnation of the Proposed IGF+ Model**

We would also further propose that this BPF is implemented in line with the prospective IGF+ model, in particular around the Policy Incubator and Cooperation Accelerator mechanisms presented, given that both the HLPDC Report and the UN Roadmap for Digital Cooperation recognised the value this setting could bring by elevating the role of IGF from that of facilitating the primary function of stakeholder engagement to that of facilitating the primary outcome of policy setting.

For the IGF to become involved in this topic in such a manner would increase its position to that of a key multilateral body for digital cooperation dialogue and policy setting through a multi-stakeholder process for environmental data. This would be co-convened by UNEP who holds a mandate from UN member states to convene stakeholders in the development of a global environmental data strategy. This IGF BPF would be an integral component of the stakeholder engagement and policy setting process further cementing its importance in the broader UN context.

## Proposed Objectives and Focus

We propose aligning the objectives and focus on this BPF with the key issues that have been identified by stakeholders through consultations conducted by the IGF and UNEP during 2020.

These include:

- global digital standards, architecture & governance framework for environmental data and analytics
- principles and safeguards for public-private partnerships that produce actionable, real-time and predictive insights to monitor environmental SDGs and MEAs as digital public goods that also give due consideration to equal and inclusive access to such information for all nations, indigenous and minority groups.
- applications of environmental digital public goods to inform and transforms financial markets, supply chains, consumer behaviors and policy making
- guidance to mitigate the environmental impacts from ICT supply chains, energy and e-waste

To ensure the objectives of this BPF can be achieved to their fullest extent, and in light of the significant complexity of this topic, we propose that this BPF run for a 2 year term commencing in 2021 with a strong recommendation to then extend this term by a further 2 years thereafter. The total duration would be 2021-2024.

## Workplan

As mentioned above, we propose the topics that will be covered as part of this BPF will be identified and prioritized based on a number of global and regional stakeholder consultations, including the high level panel on environmental data governance being held during IGF2020. This ensures that, just like other successful BPFs, the initial direction won't be given by a single organization but rather it will be set through a multi-stakeholder approach.

We do however anticipate that the topics covered could fit under the umbrella of the broader scope of each years focus as proposed below; areas where internet governance clearly intersects with environmental data and other closely related tools used to derive the most value from such data ie predictive analytics:

### Yr 1

Addressing governance issues around environmental data to take into account market impacts, business models (circular economy, platforms etc) and environmental data applications. Some of the governance issues we would anticipate exploring with respect to this theme include, but are by no means limited to: ownership, licensing and safeguards as well as the integration of environmental data into existing systems and infrastructure and the interoperability of such within the context of an ecosystem of multi-stakeholders who would need to access such data through a broad range of technologies.

Yr2

Addressing governance issues for environmental data around accessibility, foresight, agility and resilience. Some of the governance issues we would anticipate exploring with respect to this theme include, but are by no means limited to: ensuring environmental data is accessible, affordable and inclusive for all; that policy and use of environmental data remains agile and resilient to accommodate our ever-changing digital landscape, the introduction of yet to be discovered emergent technologies and future use cases for environmental data; and, in consideration of the unforeseeable future, how might we address the governance of environmental data to better plan for and respond to disaster and crisis situations.

## Outreach Plan and Multi-Stakeholder Engagement

The IGF has a highly engaged community of experts who have indicated significant levels of interest in participating in a BPF on this topic. National and regional initiatives of the IGF that have indicated interest in being involved include APriIGF, NetThing (Australia), UK-IGF, TWIGF and EuroDIG. The Internet Society Foundation has also expressed interest in engaging on this theme. We also propose to include all regional and national IGFs to ensure they are given ample opportunity to participate in this BPF.

The IGF governing process also compliments inter-agency cooperation and co-leadership given their exemplary reputation for inclusivity and collaboration and as indicated in their recent report:<sup>7</sup>

“BPFs do not intend to duplicate work already underway elsewhere, rather serve as a matchmaker to form new coalitions by identifying existing initiatives and promoting best practice experiences. Membership is open and free. All stakeholder groups are invited to participate and share experiences”.

There is much value in bringing new experts to participate at the IGF, in this case, environmental Data experts, which should be a welcomed addition to the IGF community. Environmental data encompasses geospatial, data centers, citizen science, network providers and many other relevant Internet stakeholders.

To this end, should the IGF choose to move forward with this proposed BPF, it would be reasonable to deduce that the IGF stands to substantially increase its membership base and level of engagement with other agencies, sectors, industries and stakeholders on sustainability topics that offer a unique value proposition and new area of relevance.

Regarding planned Interaction and synergies with other IGF activities, while this BPF proposal was developed before the Swiss government pledged to develop an intersessional IGF initiative called the Policy Network on Environment and Digitalisation (PNE)<sup>8</sup>, there is willingness from this

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<sup>7</sup> [https://www.intgovforum.org/multilingual/filedepot\\_download/3405/2212](https://www.intgovforum.org/multilingual/filedepot_download/3405/2212)

<sup>8</sup> <https://www.intgovforum.org/multilingual/content/policy-network-on-environment-and-digitalisation-pne>

BPF to interact closely with the PNE in order to show its potential to be considered as a workstream inside its work. Once the PNE becomes fully organized and able to set its agenda in a bottom up manner, the BPF will explore further avenues to collaborate closely and support the PNE's work in the future years.

We have also discussed the topic of this BPF with other well respected experts in the internet and data governance communities and have reached out to the following people for guidance and / or support in writing this proposal to ensure we are approaching this topic from a multi-stakeholder, multi-sector, inter-agency position:

- **Anriette Esterhuysen** (Senior Advisor, APC), Chair UN IGF MAG
- **Chat Garcia-Ramilo** (Executive Director, APC), supporter and proposed expert of this BPF
- **Youssef Nassef**, (Secretariat, UNFCCC), supporter and proposed expert of this BPF
- **Leandro Navarro**, (APC, Technical University of Catalonia), support and proposed expert of this BPF
- **Jacob Malthouse**, (VP, Foresight Cleantech Accelerator), supporter and proposed expert of this BPF
- **Sasha Luccioni** (AI for Good, Canadian Commission for UNESCO, University of Montreal) supporter and proposed expert of this BPF
- **Anne Bowser** (Director of Innovation, the Wilson Center), supporter and proposed expert of this BPF
- **Prof. Damon Matthews** (Acting Director, Sustainability in the Digital Age, FutureEarth), supporter of this BPF
- **Jennifer Garard** (Head of Research, Sustainability in the Digital Age, FutureEarth), supporter and proposed expert of the BPF
- **Lauren Fletcher** (BetaEarth, Dendra, ex-NASA) supporter of this BPF

Some of the aforementioned have put their support for this proposed BPF in writing. Please see their letters of support that accompany this proposal at the following link: <https://drive.google.com/drive/folders/1BpraiF1b2sya34FHqLPyn-OhIWbjMYay>.

UNEP have also extensively socialised their desire to engage their stakeholders in this process and will actively support this PBF to ensure there is maximum engagement from their network and from member states.

Youssef Nassef, of the UNFCCC Secretariat, sees significant benefit in engaging the UNFCCC in this BPF, particularly from the perspective of ensuring equal, fair and inclusive access to environmental data. He agrees that the issues of governance around environmental data are key to ensuring such outcomes are achieved. As such, we also have their agreement to support this BPF. Should the BPF be approved they will engage their networks and stakeholders to further maximise engagement. This will assist us in ensuring an even broader spectrum of experts, industry, member states, cultures and sectors are represented.



There is also an opportunity to engage other stakeholder groups and their extensive ecosystems who have an equally high level of interest in ensuring we achieve best practise outcomes for the governance and use of environmental data. These other organisations and ecosystems include, but are by no means limited to:

UN Agencies / Initiatives:

- UNESCO
- UN Science Policy and Business Forum
- UNDRR GRAF initiative
- UN World Data Forum
- World Bank
- AI for Good
- UNSD
- FAO
- UNDP
- UN-REDD Programme
- UN-WATER Programme
- UN ITU (ITU-T + ITU-D)

Not For Profit Sector:

- Global Enabling Sustainability Initiative (Gesi)
- Citizen Science Community
- The Wilson Center
- Digital Futures Society
- Future of Sustainable Data Alliance
- Global Regenerative Council
- Future Society - Global Data Access Framework Initiative
- GEO
- APNIC Foundation
- APNIC
- ICANN
- California Food and Agriculture Council
- NetMission
- Internet Society and Foundation
- IUCN
- WWF
- CI
- NASA Harvest Africa Program
- Bangladesh NGO Network for Radio Communication (BNNRC)

Academic Sector:

- University of Maryland
- University of Montreal
- Stanford HAI

- Griffiths University
- UNSW
- Columbia University
- UPC - Barcelona Tech

Private Sector:

- Planet
- Sodexo
- NASA
- Microsoft
- IBM
- DotAsia
- Google
- AWS
- Huawei
- Samsung

Public Sector:

- Government of Myanmar
- Government of Estonia
- Government of Denmark
- Government of Netherlands
- Government of Germany
- Government of Bangladesh
- Government of Sri Lanka
- Government of Singapore
- Government of Malaysia
- Government of Mongolia
- Government of Fiji
- Government of Vietnam
- Government of Pakistan
- Government of Indonesia
- Government of Nepal
- Government of Papua New Guinea
- Government of Solomon Islands
- Government of Norway
- Government of Sweden
- Government of Switzerland
- European Commission
- Government of Canada
- Government of Australia
- Government of France
- Government of United Kingdom

## Funding

Given the high priority many IGF and UNEP Donors place on digital sustainability initiatives, we believe adequate funding can be obtained to support this proposed BPFs outcomes over the four year proposed period. We propose this should include an inception phase to be implemented in 2021 where further funding can be explored and mobilized also.

The UNFCCC have also indicated they may be able to support partial funding of this BPF through their association with UNEP and we believe this would be an excellent avenue to explore.

We will also aim to leverage off existing work that is existent and ongoing with an emphasis on relevant research and initiatives that are already taking place. We will aim to partner with organizations and institutions such as those above to engage these ecosystems and take into consideration their learnings into the outcomes of this proposed BPF also.

## Support to Ensure Successful Implementation

We have taken some time to consider how we may be able to support the IGF in implementing this proposed BPF and propose we draw on the expert collaboration between those that have spearheaded this proposal (as outlined at the beginning of this document).

Whilst we have the support of MAG members Sylvia Caldena and Maria Paz Canales Loebel, Sylvia will be finishing her term with the MAG at the end of this year and Maria Paz, whilst intending to be very supportive, is heavily committed with other initiatives as a MAG member.

We have taken some time to circulate this proposal with a number of the new MAG members who have been recently appointed and a number of them have indicated their interest in supporting this BPF. Joyce Chen from APNIC is one of those and she has also indicated her support in being named a proposed co-facilitator of the BPF alongside Maria Paz Canales Loebel and Kathryn Sforcina.

We further propose that David Jensen, the head of the Digital Transformation Task Force at UNEP, as well as Pablo Hinojosa, the Strategic Director from APNIC, would be engaged in supporting roles as thematic experts to assist the forum co-facilitators for the proposed BPF. Their role would be to support the forum co-facilitators in a number of ways, including but not limited to, ensuring adequate consideration is taken in the setting of the topics that will be addressed, keeping the forum on track throughout, as well as helping the forum co-facilitators to set realistic timelines to achieve milestones during the term of the BPF. Both David and Pablo also have access to extensive ecosystems in their professional capacity and would make a concerted effort to engage their networks and the networks of the organisations they represent, in this proposed BPF.

We further propose that Kathryn Sforcina, an industry expert who has also been significantly involved in spearheading this proposal and in gaining the support of various stakeholders, including the UNFCCC, would act in the capacity of non-MAG member co-facilitator and contribute by carrying out a research / coordination style function to support the inception and

implementation of the proposed BPF and ensure its desired outcomes are achieved. Kathryn also has access to significant networks in her professional capacity across almost all global markets and sectors and will also make a concerted effort to engage stakeholders within that network for the best outcomes of this proposed BPF.

We would also propose that should the MAG see fit, that a consultant be allocated to support the outcomes of this proposed BPF, though it is worth noting that the consultant would not need to be carrying out any new research in their role, but rather helping to collect and organise the contributions received by the BPF.

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