

Summary and Key Takeaways

STAP Science Day

22 August 2023

Seventh GEF Assembly

Vancouver, BC, Canada

November 2023

STAP SCIENTIFIC AND TECHNICAL
ADVISORY PANEL
*An independent group of scientists that advises
the Global Environment Facility*



Summary and Key Takeaways
STAP Science Day on 22 August 2023
at the Seventh GEF Assembly, Vancouver, Canada

The Scientific and Technical Advisory Panel (STAP) to the Global Environment Facility (GEF) organized a Science Day event at the Seventh GEF Assembly in Vancouver, Canada, on 22 August 2023. The event featured an opening and two main sessions: (1) the Youth Leaders Learning Exchange, which provided an opportunity for youth to share their experiences and inspire other youth leaders, and (2) the Indigenous and Local Knowledge Event, which focused on how such knowledge can help the GEF to deliver greater global environmental benefits, with panel discussions on the Arctic and the North and on the Amazon.

**Opening remarks by Carlos Manuel Rodríguez,
CEO and Chairperson of the GEF**



The GEF CEO noted that the GEF Assembly was happening at a time when we were facing significant planetary crises, including wildfires ravaging parts of British Columbia, where the event was taking place. He noted that it is no longer enough to work with a few key government ministries; instead, a whole-of-government and whole-of-society approach is required to meet environmental and societal goals.

The GEF CEO also encouraged participants “to think outside the box” to address the triple planetary crisis of climate change, pollution, and

biodiversity loss. He noted that “problems cannot be solved doing the same thing as we strive to increase resources”. He stressed that the GEF must invest in society to make progress and emphasized that working with youth is instrumental in accelerating change. He challenged participants to think about how the GEF could be more impactful and expressed the GEF’s commitment to training young scientists and practitioners, including through the Gustavo Fonseca Youth Conservation Leadership Program, launched at the Assembly.

**Presentation by Dr Rosina Bierbaum,
Chair of STAP**



In her [talk](#), Dr Bierbaum outlined the triple planetary crisis and the need for nature-based solutions, emphasizing the need to prioritize the three pillars of sustainability equally. She also stressed the importance of GEF projects being based on a systems-thinking approach and the need for them to account for behavioural change explicitly, to pursue policy coherence, and to engage communities and stakeholders (including youth, women, Indigenous Peoples, and other marginalized groups) in decision-making.

Keynote address by Dr Rashid Sumaila, Killam Professor and Canada Research Chair, University of British Columbia



Dr Sumaila delivered the keynote address, “[Three things to save the oceans](#)”. He explained the concept of fish as a renewable resource, noting the need for a new approach to their management based on economic analysis from his research. He framed the current approach to ocean management as “everything, everywhere, all at once”, noting that “from the ocean good things come, and to the ocean bad things go”.

In actions to save the oceans, and therefore humans, Dr Sumaila stressed the importance and need to change our mindset from taking “everything, everywhere, all at once” to “not everything, not everywhere, not all at once”, which emphasizes the sustainable and fair use of ocean resources. He explained that adopting this approach will:

- Address the intergenerational injustice of conventional discounting and net present value decision-making (which concludes that rebuilding fish stocks and addressing climate change or biodiversity loss are not worthwhile). The approach applies an intergenerational cost–benefit analysis that accounts for the benefits that restoration efforts could achieve – in particular, fish protein for future generations and allows

these benefits to be valued using the discounting clocks of the generations receiving them.

- Help rebuild fish stocks by avoiding deep sea mining and protecting fish that are in areas beyond national jurisdiction.
- Facilitate biodiversity justice by closing fishing in the high seas and eliminating incentives and subsidies that harm fish stocks.

Dr Sumaila emphasized that adopting the proposed approach would, in addition to rebuilding fish stocks and facilitating biodiversity justice, help address climate change. He concluded his talk by recommending that the challenges related to the sustainable management of fish and other animals should always be included in meetings and discussions on achieving a sustainable planet.

Youth Leaders Learning Exchange



The opening of the Science Day was followed by a panel discussion among six youth leaders: Naina Agrawal-Hardin, Yale University; Skw’akw’as (Sunshine) Dunstan-Moore, TLKemchEEn; Ray Kiliho, Jane Goodall’s Roots & Shoots; Frankie Marquez, Ocean Wise Conservation; Marina Melanidis, Youth4Nature; and Sophia Yang, Threading Change. Aileen Lee, Chief of Programs of the Gordon and Betty Moore Foundation, moderated the discussion.

The youth panellists emphasized the need for increased dialogues with youth to enhance engagement on biodiversity conservation and climate mitigation, stressing the necessity of three key elements of such dialogue:

- Going beyond just talking to listening so as to understand evolving situations
- Building empathy
- Practising humanity



The youth leaders also noted the importance of young people being part of the solutions and being involved in decision-making.

Greater support for youth-led projects was deemed necessary, as was creating mentorship opportunities and redistributing resources to empower youth action. For example, less than 1% of climate finance goes to youth-led work. Support for deep collaboration between youth, scholars, and Indigenous Peoples and local communities (IPLCs) was strongly emphasized as an integral part of identifying and implementing solutions to the triple planetary crisis. The youth panellists also noted that “relying on the diversity of knowledge is...not only the right thing to do but strategic”. They encouraged youth to channel their passion and anger to influence change, use compassion to combat apathy, and work collectively instead of competing.

Dr Bierbaum summarized the key takeaways from the Youth Leaders Learning Exchange as follows:

- Proactively increasing dialogue with youth, including through their preferred media (e.g. TikTok, Instagram), and ensuring that they are part of the solutions and of decision-making processes is essential to harnessing their potential in addressing environmental and societal challenges.
- Leaders and decision-makers need to actively listen to youth – a conversation is not just about talking but also about listening. As one of the panellists remarked, “Listen to youth to understand, not necessarily to respond.”
- We all need to facilitate intentionally safe spaces in which youth can communicate, learn from one another, and link with other members of society. More dialogue is needed to facilitate connections and support youth to identify and follow their path to a sustainable future.



- We all share similar goals about our planet, which require our collective effort to build on one another’s capabilities and strengths. We need better integration, not new entities, and to connect all actors, including youth, to existing networks.
- Society must commit to investing in youth – to learn what they know and work with

them in genuine conversations, collaborations, partnerships, and joint action.

- STAP can help follow up on the GEF's efforts to support youth, such as the Gustavo Fonseca Youth Conservation Leadership Program, training opportunities, and how to become a part of local and national youth organizations advising the multilateral environmental conventions the GEF serves.

Indigenous and Local Knowledge Event

Dr Eduardo Brondizio (Distinguished Professor of Anthropology and Senior Fellow at the Ostrom Workshop in Political Theory and Policy Analysis at Indiana University Bloomington) opened the Indigenous and Local Knowledge Event with a keynote address, "[Indigenous Peoples and local communities at the crossroad of global environmental governance](#)".



Dr Brondizio said that over the last 10 years a broad agreement had developed on three statements:

- There is growing recognition and multiple forms of evidence acknowledging the contributions of Indigenous and local knowledge, values and worldviews, territories, practices, and concerns in regional- and global-level environmental assessments, agreements, and governance.

- But global trends and regional asymmetries in development, production, and consumption have not changed and continue to be business as usual.
- Achieving the ambitious goals and targets in the post-2020 Global Biodiversity Framework and on climate change would not be possible without the lands and territories recognized, sustained, protected, and restored by IPLCs.

We need a more integrated approach to find, accelerate, and implement synergies between biodiversity, food security, climate change, and pollution.

If we want IPLCs to be part of global environmental governance, we need to deal with their aspirations and the threats they face. This needs to be a two-way road and needs to go beyond the environmental dimension.

From a historical perspective, there had been slow, incremental progress, at least in recognizing the problems faced by IPLCs. A relationship has evolved with IPLCs on key environmental governance issues in parallel but not in connection with the struggles for IPLCs' rights, organization, and place at the table in discussions about governance. More was needed – a step change.

Turning to place-based initiatives in the Brazilian Amazon, Dr Brondizio indicated that we had learned that local leadership, alliances, and diverse partnerships facilitate success and advances in such initiatives.

In terms of conditions limiting or overwhelming successes and advances in place-based initiatives, there were two key lessons: first, there is a mismatch in landscape governance arrangements. There are areas with very successful local governance, but even in those areas, the governance systems are not equipped to deal with problems from the outside that are well beyond the

responsibilities and capabilities of local communities.

Second, there are mismatches between the economic benefits and the costs of conservation. IPLCs bear the costs of monitoring, managing, and governing landscapes, but often the economic returns from, for example, fisheries, agriculture, and forestry are low and insufficient to cover the costs.

A broader framing is needed by recognizing the contribution that IPLCs make to global food production, as well as to global environmental benefits

The keynote address was followed by the Arctic and the North panel discussion, which featured Eli Enns (IISAAK OLAM Foundation), Judith Daxootsú Ramos (University of Alaska Southeast), and Jackie Qataliña Schaeffer (Alaska Native Tribal Health Consortium), with Monica Medina, President and CEO of the Wildlife Conservation Society, as the moderator. The discussion centred on how Indigenous knowledge can inform science and provide long-lasting positive benefits for biodiversity conservation and climate mitigation locally and globally.

The following points were made during the panel discussion and in the Q&A with the audience:

- Much Indigenous knowledge is embedded in language and in place. Creation stories are often at the heart of this knowledge and explain the origins of the Earth and its people, with codes of behaviour that govern people's relationship with the Earth.
- Indigenous Peoples were well placed to observe anomalies or changes that might be happening in the local region or ecosystem and to identify emergent trends

at the outset to assist in developing hypotheses through local observation and knowledge. Local observers are usually the best sources of such information because there are no data-collecting models that can collect data all the time.

- Indigenous knowledge could help with design and engineering in the Arctic. Two examples include adopting a flexible box design that would enable a house to shift on moving tundra and protect pipework and showing that snow multiplies solar voltage to deliver more energy from the reflection off the ice and snow.



- It is vital that we listen to the elders who have Indigenous knowledge. This knowledge has been called “stories” and “storytelling” by Westerners, but it is an oral history, and it should be valued as such. Just because it wasn't written does not mean it isn't valuable.
- Lack of jurisdiction over sovereign lands was leading to a rapid loss of Indigenous knowledge and to rural-to-urban migration.
- Investment must be made in equitable spaces and in youth to share in the co-production of knowledge systems and different world views.

The Arctic and the North panel discussion was followed by the Amazon panel session, featuring Valerie Hickey (World Bank), Alfredo Vargas Pio (the Federación Nativa del Río Madre de Dios y Afluentes – FENAMAD), Daniel Rodriguez (FENAMAD), Mariana Varese (Wildlife

Conservation Society and Secretariat of Aguas Amazónicas), and Corine Vriesendorp (Andes–Amazon Program at The Field Museum), with Avecita Chicchón, Program Director for the Andes–Amazon at the Gordon and Betty Moore Foundation, as moderator.

Points made during the panel discussion and in the Q&A with the audience included:

- It is vital that Indigenous and local voices are heard, and Indigenous and local interests respected, and that Indigenous and local voices are included in local and national decision-making bodies.



- There is not a one-size-fits-all solution to working with Indigenous Peoples. IPLC is a useful acronym, but in the Amazon, there are 47 million people, 2.2 million of them Indigenous, comprising 400 groups in over 5,000 territories. They do not all have the same interests.
- Indigenous Peoples need access to funding. In the Amazon, less than 1% of funding for conservation and climate change goes directly to Indigenous Peoples.
- Indigenous Peoples need access to information to understand what funds are available and assistance with administrative and organizational capacity to compete for finance. They have the technical knowledge but not always the financial management capacity.

- Formats and procedures need to be simplified and adapted, and bureaucracy minimized. It is very important that the voices not only of men but also of women, youth, and elders are heard.
- The fundamental rights of IPLCs need to be guaranteed and protected; this includes the rights to land, rights to self-determination, and rights to health.
- Indigenous Peoples do not need help managing lands and governing lands; they need help securing rights to those lands.
- Non-indigenous conservation communities need to be willing to give up power and allow IPLCs to manage large grants.
- Bringing together multiple kinds of knowledge and building knowledge is a deliberate act that needs to be inclusive from the beginning: Who are you inviting? How do you ensure that everyone knows they have something to offer and something to learn? How are you building knowledge in a holistic way?

Summary of takeaways from STAP Science Day

Dr Bierbaum summarized the key takeaways from the STAP Science Day as follows:

- Equal prioritization of the three pillars of sustainable development (environmental, economic, and social), applying a systems-thinking approach in identifying the issues and developing solutions, pursuing coherent policies across the pillars, and facilitating behavioural changes among stakeholders are essential for addressing the triple planetary crisis.
- Integration across peoples, cultures, topics, geographies, ways of learning, and governance structures is essential for addressing today's sustainability challenges. Hence, there is a call for a new way of doing business that prioritizes bringing all stakeholders, government, and society into decision-making processes, including through a whole-of-

- government and whole-of-society approach, to address environmental and socioeconomic challenges.
- To harness their potential in addressing environmental and societal challenges, we need to proactively increase dialogue with youth, including through their preferred media (e.g. TikTok, Instagram) and invest in them (including providing better access to funding) to ensure that they are part of the solutions and decision-making processes.
 - The commodification of Indigenous knowledge is an existential threat to social structure and will harm society and human well-being, as noted by the following quotes from the different panellists:
 - “Western systems are rigid, and therefore, Nature will always win.”
 - “If we violate natural law, we will lose.”
 - Indigenous Peoples view and interpret the world and nature differently:
 - “Everything is one and interconnected.”
 - Hence, “Indigenous values integrate and harmonize with Nature”.
 - And therefore, “pursuing sustainability is not good enough; you don’t want just to maintain; you want to elevate or enhance”.
 - Oral histories and storytelling from Indigenous Peoples and citizens (citizen science) can provide solutions to environmental challenges, hence the importance of integrating Indigenous knowledge and citizens and Western science for the co-production of knowledge. This must be done in respectful, side-by-side partnerships, in safe places, with a recognition of how important culture and context are.
- Indigenous Peoples should be guaranteed a seat in local and international decision-making processes and involved in the co-management of resources; their rights (to lands, water, and other natural resources) should be upheld, and their wealth of traditional knowledge should be recognized and embraced.
 - To achieve conservation outcomes, it is essential to understand the landscape of actors to avoid duplication. Hence, there is a need to map out the stakeholders to understand and build on existing efforts and agree on a common goal and an integrated approach to solutions.
 - Beyond biodiversity conservation, we should also pay attention to sustainable use and benefit-sharing and the possible downsides and trade-offs of conservation, such as human–wildlife and human–human conflicts.
 - Further, beyond delivering global environmental benefits, we should think about the co-benefits that will be very important to the local people and cultures, including health and livelihoods. Ensuring that interventions provide socioeconomic benefits for local communities is essential for success.
 - It is essential to ensure that IPLCs have access to direct funding, including providing IPLCs with access to information and with administrative and financial management capacity to compete for finance.
 - We all need to have the necessary staying power. Engagement with youth and with IPLCs should not be a one-off. It is not tokenism. We need a community and a meeting of minds that continue to share information, collaborate, and work to address our sustainability challenges over many years.