

UNESCO's inputs and suggestions regarding the future IPBES work programme

28 September 2018

The new work programme should support the efforts to implement the post-2020 biodiversity framework, the [2030 Agenda for Sustainable Development](#), including the Sustainable Development Goals, and the [Paris Agreement on Climate Change](#). This alignment process will support uptake of results and commitment of the four UN partners as well as mobilize new partnerships. Continuous efforts are required to strengthen interlinkages, or to conduct joint studies, between IPBES assessments and other UN partners and Multilateral Environmental Agreements (MEA) studies/ programmes of work (including *inter alia* the Global Environment Outlook, the IPCC Reports, etc.) and align the assessments' key messages with those of other ongoing MEA processes in support of the 2030 agenda.

The future work plan should build on the learnings of the first work plan, the strategic framework yet to be presented and deepen the synergies with the expertise and knowledge held by the four UN partners and other key partnerships. IPBES works can be enhanced by optimising the network of UN partners.

The development of the new deliverables should start from the desired outcomes. Member states, observers and stakeholders should be asked what they really need from IPBES in order to be able to do their work better.

UNESCO has valued the opportunity to host the Technical Support Unit on Indigenous and Local Knowledge and our contribution with regards the ILK Task Force and partnerships with indigenous peoples' networks. We look forward to next steps as regards the preparation of the future work programme, especially the strategic framework document, the methodological guidance on indigenous and local knowledge, and the dialogue we will have on 25 October 2018 with the MEP and the Bureau.

We remain available to provide further inputs after these consultations on the draft of the work plan.

INPUTS/SUGGESTIONS:

1. To undertake a review of lessons learned from the outcomes and impact of the thematic, regional and global assessments; to review the effectiveness, outcomes and impacts of the first work plan deliverables across all its four functions to enable drawing lessons for its future work.
2. **To undertake an assessment on ocean acidification and take in consideration the role of ocean oxygenation decline in assessments (see inputs attached from IOC, the Intergovernmental Oceanographic Commission) and changes of specific concern to the achievement of SDGs by Small Island Developing States (SIDS).** The UN General Assembly has approved a Decade of Ocean Science for Sustainable Development (2021-2030).

3. To assess the biodiversity component of the behavioural, social, economic, institutional, technical and technological determinants of transformational change, and how these may be deployed to achieve Agenda 2030;
4. To assess the nexus of biodiversity, food and water, agriculture and health and nutrition, considering trade-offs among these areas and related policy options, taking into account the role of biodiversity and ecosystem services in addressing the Sustainable Development Goals, with a view to enabling decisions that support coherent policy and transformational change necessary to achieve the 2030 Agenda;
5. To consider increasing the duration of assessments to increase the opportunity for face to face contact between indigenous peoples, local communities and lead authors / contributing authors. (Given that much of literature on indigenous and local knowledge is available in grey literature, rather than in scientific journals, it takes additional time to successfully identify pertinent literature which could provide important insights for the authors).
6. To work on scenarios and models to assess the transformational change required for implementing Agenda 2030: to develop a new set of multi-scale biodiversity scenarios through a stakeholder-driven process with participation of indigenous and local peoples in this work.
7. To match these scenarios to the needs of particular policy or decision contexts. To apply participatory and cross-scale scenario methods in order to enhance the relevance and use of regional, sectoral and thematic scenarios for biodiversity and ecosystem services.
8. To promote coherence between the scenarios and related assessments prepared in the context of biodiversity and climate change. To enhance cooperation between these scientific communities working on scenarios and models, as well as cooperation with communities working on biodiversity monitoring and data, and the policy community.
9. **To develop a new narrative as regards biodiversity**, to demonstrate that tools and solutions for achieving SDG 15 are also essential for goals related to climate change, water, food security, gender equality and leaving no one behind and **to secure the wholehearted engagement of all relevant actors**. Design biodiversity communication strategies that seek to communicate messages and information in language and methods suitable to a variety of age groups and communities.
10. To address key gaps in methods for modelling the impacts of drivers and policy interventions on biodiversity and ecosystem services that had been identified in the methodological assessment; to develop practical and effective approaches to evaluating and communicating levels of uncertainty associated with scenarios and models, as well as tools for applying those approaches to assessments and decision-making.
11. To undertake methodological assessments on the effectiveness of various policy instruments and policy and planning support tools, and to characterize and quantify successful approaches and cases of the conservation and sustainable use of biodiversity (such as biosphere reserves of the World network and World heritage sites) and their impacts; to develop indicators to monitor and assess overall management performance and effectiveness of biodiversity conservation and sustainable use).
12. To produce specific technical papers for specific audiences to increase uptake of the assessments. Audiences could be technical experts in governments, capacity-building agents, teachers, and youth. This may be achieved through collaborative arrangements with partners and effective engagement at regional levels in close coordination with IPBES.

13. To encourage governments, scientists and indigenous peoples to engage in dialogues and capacity building at national and regional scales on how to contribute to IPBES assessments and implement and use the products and policy tools from these assessments, within the framework of the Indigenous and Local Knowledge (ILK)-science-policy interface.
14. Provide training in biodiversity and ecosystem monitoring and assessment including standards and best practices in observations, data management, and scientific analysis, modelling and output visualizations. The capacity building function should include activities around teacher education / training of trainers.
15. To encourage empowerment and participation: engagement should be designed to encourage more participation of local communities, women and youth in decision-making processes and implementation actions.
16. To engage in a methodological assessment of ILK in biodiversity research, monitoring and assessments, looking at projects that have successfully bridged from local knowledge into national and international level research and data collection. The aim would be to provide an overview of the current state of research on ILK and biodiversity, clear case studies and lessons learnt, and guidelines that can both inform IPBES' work on ILK, and which could also be a useful tool for organisations, researchers and indigenous and local communities doing assessments and research at international, regional, and local levels. Such an effort could greatly advance methodological understandings of how to engage with ILK at national and international levels. As part of the above work, it would be valuable to do a formal review of the steps and methodologies taken to draw ILK into completed assessments and their SPMs, including the pollinators' assessment, scenarios assessment, the regional assessments, and the global assessment. This could then be used to provide guidelines and lessons learnt for future assessments.
17. To promote the coordinated development of existing portals to facilitate access to policy support tools and methodologies, as well as to related case studies and evaluations of the use and effectiveness of such tools, taking into account the different capacities and capabilities of countries.

IOC-UNESCO contribution to IPBES

Ocean Acidification:

1. Relevance to the objective, functions and work programme of IPBES:
While studies indicate that diversity, abundance and geographical distribution of marine species are affected by ocean acidification global and regional assessments in this regard are still missing. Identifying the mechanisms behind changes in marine life related to ocean acidification is indispensable when trying to establish sustainable management strategies of ocean resources.
2. Urgency of action by IPBES in the light of the imminence of the risks caused by the issues to be addressed by such action:
Environmental problems, such as ocean acidification, are transboundary problems. While the top five countries of CO₂ emissions, the origin of ocean acidification, are China, the United States, India, Russia, and Japan, scientific model results show that the Arctic and Antarctic oceans, and the upwelling ocean waters off the west coasts of North America, South America and Africa are especially vulnerable to ocean acidification. However, countries in these areas are among the ones with limited scientific and technical expertise measure and analyse ocean carbon parameters. Global ocean acidification networks, in particular GOA-ON, are key mechanisms/tools to not only support countries in building scientific capacity, but also to provide international organizations, such as the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO) and the International Atomic Energy Agency (IAEA), with technical advice to improve the enabling political framework for scientific and observational knowledge generation to combat the impacts of ocean acidification. Indeed, GOA-ON has been explicitly noted in several fora as an exemplar of international scientific collaboration.
3. Relevance of the requested action in addressing specific policies or processes:
Developments during the past four years prove the success of ocean acidification networks at the local and global scale. In 2015, an assessment of international policy and governance options addressing ocean acidification, highlighted the fragmented and insufficient political preparedness for ocean acidification affecting marine ecosystems and the services. Since then the 2030 Agenda, the UNFCCC with its Paris Agreement the related Marrakesh Global Climate Action Platform on Oceans and Coastal Areas, the Global Climate Observing Network provide the political rationale to foster and expand ocean acidification research and observation, nurtured by networks like GOA-ON and associated experts. Within the 2030 Agenda the aim of Sustainable Development Goal (SDG) 14 is to “conserve and sustainably use the oceans, seas, and marine resources”, and consists of 10 targets. GOA-ON is particularly involved in supporting countries to achieve Target 14.3, which aims to “minimize and address the impacts of ocean acidification, including through scientific cooperation at all levels.” The progress made towards this target by all UN Member States is measured by the corresponding indicator 14.3.1 ‘Average marine acidity (pH) measured at agreed suite of representative sampling stations’. IOC-UNESCO is the custodian agency for this indicator and was tasked to develop an indicator methodology. This methodology provides detailed guidance to scientists and countries in terms of what to measure, and how, following best

- practices guidelines established by the ocean acidification community. It also includes recommendations on how to report the collected information in a manner that ensures it is transparent, traceable and usability for global comparison of pH measurements.
4. Geographic scope of the requested action, as well as issues to be covered by such action: The requested action will need to be at the global level, with a focus on developing countries, SIDS and LDCs, which have little information about ocean acidification and even less about the impacts on marine biodiversity. Targeted studies in highly vulnerable areas will support local and regional analysis, which will feed into global assessments.
 5. Anticipated level of complexity of the issues to be addressed by the requested action: The level of complexity could range from a thorough review of peer-reviewed literature and publicly accessible government reports to new statistical analyses and syntheses of unpublished data.
 6. Previous work and existing initiatives of a similar nature and evidence of remaining gaps, such as the absence or limited availability of information and tools to address the issues, and reasons why IPBES is best suited to take action: The GOA-ON biological WG, GOA-ON in large and the IOC-Secretariat are currently focussing more on the identification of the mechanisms and relevant endpoints, however broadening the activities, and including an in-deep assessment of how ocean acidification is impacting marine biodiversity is missing.
 7. Availability of scientific literature and expertise for IPBES to undertake the requested action: see <http://GOA-ON.org>
 8. Scale of the potential impacts, and potential beneficiaries of the requested action: As stated in point the potential impacts are global. Beneficiaries will range from policymakers to local stakeholders, such as shell fish industries.
 9. Requirements for financial and human resources, and potential duration of the requested action: N/A
 10. An identification of priorities within multiple requests submitted: N/A
 11. Any other relevant information (including a list of any attachments provided): Attachment I 14.3.1 methodology

Deoxygenation

The IOC-UNESCO Global Ocean Oxygen Network (GO2NE) would like to make the suggestion that IPBES consider the role of ocean oxygen decline in assessments of biodiversity and ecosystem services of marine systems, including both open ocean and coastal water bodies.

1. Relevance to the objective, functions and work programme of IPBES: The oxygen content of the open ocean and coastal systems has been declining since the mid 20th Century as a result of nutrient discharges and warming global temperatures. Because oxygen is required by virtually all multicellular organisms, biodiversity and ecosystem services can be reduced or eliminated where oxygen is low. The combined effects of low oxygen and other stressors related to human activities (rising temperatures, high rates of fishing mortality, etc.) can be especially problematic.

2. Urgency of action by IPBES in the light of the imminence of the risks caused by the issues to be addressed by such action: Ignoring the potential role of oxygen decline in assessments of marine systems can result in the misidentification of causes of biodiversity and ecosystem service decline, as well as misidentification of solutions to mitigate or adapt to the decline.
3. Relevance of the requested action in addressing specific policies or processes: Mitigating ocean oxygen decline will require reducing discharges and atmospheric deposition of nutrients that originate from agriculture, sewage and burning of fossil fuels, and taking steps to limit global warming. Adaptation strategies can include altering fishing and activities that disrupt important marine habitat to protect species that are affected by oxygen decline.
4. Geographic scope of the requested action, as well as issues to be covered by such action: Over 500 coastal systems worldwide have reported oxygen concentrations sufficiently low to at least at times have negative effects on biota and ecological processes. Oxygen is also declining in most regions of the open ocean. The problem is, therefore, global in scope, but would also be relevant to most regional assessments. The extent of the problem in many developing nations is likely underreported.
5. Anticipated level of complexity of the issues to be addressed by the requested action: The level of complexity could range from a thorough review of peer-reviewed literature and publicly accessible government reports to new statistical analyses and syntheses of unpublished data.
6. Previous work and existing initiatives of a similar nature and evidence of remaining gaps, such as the absence or limited availability of information and tools to address the issues, and reasons why IPBES is best suited to take action: The IOC-UNESCO GO2NE expert group has recently produced a brief summary for policy makers and is collaborating with IUCN on a more extensive report on ocean deoxygenation. However, including this issue in IPBES assessments would be a much more direct route to incorporate the problem of oxygen decline in the identification of biodiversity and ecosystem service problems and solutions.
7. Availability of scientific literature and expertise for IPBES to undertake the requested action: GO2NE stands ready to assist IPBES in this work both directly and by helping to identify other experts in the field. There is a growing body of published literature as well as a growing wealth of data available for analyses.
8. Scale of the potential impacts, and potential beneficiaries of the requested action: Impacts can range in scale from global to local, and minor to severe depending on the scale and severity of oxygen decline. Beneficiaries potentially include those dependent on the services a biodiverse ecosystem survives, including stakeholders dependent on fisheries and marine-related tourism.
9. Requirements for financial and human resources, and potential duration of the requested action: At this time we are not requesting a targeted assessment on ocean oxygen decline, so resources required and duration would depend on the primary target of the assessment in which oxygen decline is considered.
10. An identification of priorities within multiple requests submitted: Ocean oxygen decline can play a role in assessments of water quality, fisheries, biodiversity and ecosystem services, for example, in estuaries, semi-enclosed seas and more open areas of the global ocean.
11. Any other relevant information (including a list of any attachments provided):
Attachment II Summary for Policy Makers

Attachment III: Science written by GO2NE in order to provide additional information on the topic of ocean oxygen decline.