

## ***The role of IPBES on the science-policy interface of biodiversity and ecosystem services***

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Mr Chairman, Ministers, Science Director, distinguished delegates, ladies and gentlemen,

First, let me thank you for the pleasure and honour to have your attention and to thank the hosts for this opportunity.

Today I have been asked to describe the role of IPBES on the science-policy interface of biodiversity and ecosystem.

Let me begin by saying that I believe the loss of biodiversity is the most important global threat we face today.

The evidence that defines this crisis is documented in an ever-expanding body of work published by leading authorities, all warning that we are hurtling towards irreversible environmental tipping points. The melting Greenland ice sheet, shifts in the Atlantic Gulf Stream, creeping increases in ocean acidification and temperature, and the incremental loss of Amazon rainforest are changes that may seem small with shortsighted perspective but which eventually accumulate to cause a larger, more important change.

And almost every day alarming new data appear. On 10 May, scientists announced that a monitoring station in the Pacific had recorded atmospheric CO<sub>2</sub> levels topping 400 parts per million, with predictions of that level as the global average next year. In 1958, the level was 315 ppm and the rising rate of increase is said to be placing the planet on track for a catastrophic 3 to 5 degree increase in average surface temperature by the end of the century.

The Intergovernmental Panel on Climate Change is preparing its fifth global assessment for publication in 2014. The current draft highlights trends documented in previous assessments now increasing in severity and speed, and it strengthens previous conclusions about the impacts of climate change on physical, biological and human systems.

It highlights that continued climate change, combined with land use change and fires could cause much of the Amazon forest to transform abruptly to more open, dry-adapted ecosystems, threatening the region's enormous biodiversity and priceless services.

The danger of abrupt transformations in the ecology of the northern boreal forest and the loss of the reflective albedo effect service provided by Arctic ice are also highlighted in the current draft, as are the problems of coral reef destruction and invasive species due to rising sea-surface temperatures and acidification.

Some scientists have termed this the “sixth great extinction episode” in Earth’s history, and the loss of biodiversity is happening faster and everywhere, even among farm animals, according to the UN Food and Agriculture Organization.

Last fall, the FAO reported the rate of decline is dropping but 22% of domesticated breeds are at risk of extinction. The reason? Their characteristics either don’t suit contemporary demand or because differences in their qualities have not been recognized. When a breed population falls to about 1,000 animals, it is considered rare and endangered.

The genetic erosion in domestic animals reflects our general lack of appreciation of the value of indigenous breeds and their importance in niche adaptation. It is a consequence of ill-considered incentives promoting more uniform breeds and product-focused selection.

Among crops, meanwhile, about 75 per cent of genetic diversity was lost in the last century as farmers worldwide switched to genetically uniform, high-yielding varieties and abandoned multiple local varieties.

There are 30,000 edible plant species but only 30 crops account for 95% of human food energy, the bulk of which (60%) comes down to rice, wheat, maize, millet and sorghum.

The decline in the diversity of crop plants and animals is occurring in tandem with the need to sharply increase world food production and as a changing environment makes it more important than ever to have a large genetic pool to enable organisms to withstand and adapt to new conditions.

Ladies and gentlemen

Even though the science of what is happening to our biodiversity and our climate is getting clearer, and the means to mitigate these problems in various sectors are being developed, the political challenges surrounding global change are far from being resolved.

Thankfully, there are some important successes to celebrate and others emerging. Tropical deforestation is finally beginning to slow at the global level. Global pollution problems such as Ozone Depleting Substances (ODS) and organic pollutants are being successfully tackled. The global Protected Area estate has grown to 13% in 2010. Concern about biodiversity loss is rising up the political agenda. Climate change has matured from an environmental problem into a genuine developmental issue. The knowledge and role of local and indigenous communities are increasingly being recognized.

These successes encourage development of additional measures and infrastructures adequate to ensure that ecosystems continue to provide services essential to human well-being.

### **Role of IPBES on the science-policy interface**

Sound policy requires sound science.

The international success in protecting the ozone layer and the influence the IPCC has on the climate change regime have on the biodiversity regime demonstrate that science can motivate change.

It has been clear for some time that a credible, permanent IPCC-like science policy platform for biodiversity and ecosystem services is an important but missing element in the international response to the biodiversity crisis.

Responding to this need, the 65<sup>th</sup> Session of the UN General Assembly in September 2010 marked the occasion that passed the resolution for the creation of an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). However, the idea of an IPBES has a much longer history.

Since the late 90's, there have been efforts to bring an independent science assessment into the Convention on Biological Diversity (CBD) and biodiversity-related issues generally.

Parallel to the efforts within the CBD, there were a number of events and discussions outside of the CBD towards a new approach to assessments. It was increasingly being recognized that an IPCC-like mechanism was required for biodiversity and ecosystem services that would serve not only the CBD but also biodiversity issues embedded in other biodiversity-related conventions such as (CCD), migratory (CMS), wetlands (Ramsar), forest issues as well as climate change (UNFCCC).

To this end, ICSU, the Consultative Group on International Agricultural Research (CGIAR), World Bank, World Resources Institute and the World Business Council for Sustainable Development and the International Union for Conservation of Nature (IUCN) called for the creation of the Millennium Ecosystem Assessment in 1999. With time, the relevant multilateral agreements accepted that the Millennium Ecosystem Assessment could meet some of their assessment needs.

The Millennium Ecosystem Assessment brought an innovative approach to biodiversity assessments. It went beyond natural sciences and included social sciences, focusing not only on the status of biodiversity but also on their products and functions, or in other words, the benefits received by society thanks to the functioning of ecosystems.

The landmark Millennium Ecosystem Assessment published in 2005 was hailed as a success and demonstrated that such an intergovernmental platform can create a clear, valuable policy-relevant consensus from a wide range of information sources about the state, trends and outlooks of human-environment interactions, with focus on the impacts of ecosystem change on human well-being. It showed that such a platform can support decision-makers in the translation of knowledge into policy.

The Millennium Ecosystem Assessment provides our baseline. IPBES will tell us how much we have achieved, where we are on track, where we are not, why, and options for moving forward. It will help to build public support and identify priorities.

In parallel to these efforts, following on from a consultative process on an International Mechanism of Scientific Expertise on Biodiversity (IMoSEB) in November 2007, it was decided that an intergovernmental and multi-stakeholder meeting was to be convened to consider the establishment of an intergovernmental mechanism for biodiversity and ecosystem services. It was also agreed that any follow up process to IMoSEB should merge with the Millennium Ecosystem Assessment follow up process. The merging of these two processes has led to the present process for IPBES.

In June 2010, governments decided that an IPBES should be established as part of the Busan Outcome. This was subsequently considered at the 65<sup>th</sup> Session of UNGA, where we have finally come full circle to the passing of the resolution for IPBES.

In April 2012, IPBES was finally established in Panama City with its modalities of operation and institutional arrangements agreed.

The first meeting of the Platform's Plenary which is also known as IPBES-1 was held in Bonn, Germany in January 2013 and marked the operationalization stage of IPBES. This brings us to where we are today.

### **Role of IPBES and operationalization of IPBES**

Ladies and Gentlemen,

As you can see the process of establishing IPBES was a long, and at times, challenging process. While IPBES has been successfully established, we are now at the beginning of the operationalization stage, where further challenges lie ahead of us.

I would like to take this opportunity to remind ourselves of the four functions of IPBES: -

Firstly, to identify and prioritize key scientific information needed for policymakers at appropriate scales and catalyze efforts to generate new knowledge;

Secondly, to perform regular and timely assessments of knowledge on biodiversity and ecosystem services and their inter-linkages, which should include comprehensive global, regional and, as necessary, sub-regional assessments and thematic issues;

Thirdly, to support policy formulation and implementation by identifying policy-relevant tools and methodologies, such as those arising from assessments, to enable decision makers to gain access to those tools and methodologies; and

Last but not least, to prioritize key capacity-building needs to improve the science-policy interface at appropriate levels as well as integrate capacity-building into all relevant aspects of its work

It is important to keep these four functions in mind at all times when undertaking work related to IPBES. This will ensure that IPBES maintains its credibility and legitimacy.

IPBES will respond to requests for scientific information related to biodiversity and ecosystem services from Governments, relevant multilateral environmental agreements and United Nations bodies, as well as other relevant stakeholders. While there are other organisations and initiatives that contribute to the science-policy interface on biodiversity and ecosystem services, IPBES is unique in that it serves as a global mechanism that is recognised by both the scientific and policy communities.

The structure of IPBES mirrors the IPCC but our aims go further, and the inclusion of capacity building will help bridge different knowledge systems. Capacity building has been recognized as being vital to the success of IPBES, and this has been reflected throughout the discussions leading up to its establishment.

It is essential, particularly in developing countries, to build capacities and ensure full participation in the assessments and science-policy dialogues. This will ensure that the assessments that are undertaken have relevance, continuity, and ultimately, effectiveness at all levels and scales.

IPBES will reduce the gulf between the wealth of scientific knowledge on declining natural world conditions, and knowledge about effective action to reverse these damaging trends.

Among IPBES' many activities, a key priority of mine as founding chair is ensuring the usefulness to policy makers of our first comprehensive assessment, to be published in 2018.

While numerous institutions and processes are helping to use science effectively, further efforts are required to integrate multiple disciplines and knowledge systems to produce relevant knowledge effectively and translate knowledge into policy action.

The time has come for scientists within the biodiversity and ecosystems services field to promote evidence based policymaking by providing scientific evidence that is useful to policymakers.

I believe that IPBES will go a long way in increasing the awareness amongst the scientific community to develop policy tools and hence become more policy relevant. This will raise the credibility and legitimacy of biodiversity science and empower decision makers to act towards reversing the damaging trends we are seeing in the world today.

### **Outcome of Recent Activities**

Ladies and Gentlemen

I am happy to highlight that there have already been a number of activities that contribute towards meeting the functions of IPBES.

The first meeting between the Multidisciplinary Expert Panel, experts that carry out the scientific and technical functions of the Platform, and the Bureau members, who oversee the administrative functions of IPBES, was held in Bergen in the first week of June this year. The meeting was convened to respond to plenary decisions and requests to the Bureau and MEP for the operationalization of IPBES. A range of documents were discussed, with the main documents being the work programme and the conceptual framework.

It was agreed that the objectives of the work programme is to be structured taking into consideration different scope and scales. Out of the five objectives, three objectives were allocated to assessments at various scales with capacity building and communication making up the other objectives.

In the context of this Regional Consultation Meeting, the emphasis on structuring it this way puts an emphasis on regional and sub-regional assessments. The work programme recognizes the unique biodiversity and scientific knowledge thereof within and among regions.

In line with the functions of IPBES, capacity building is an important component in the work programme that cuts across all the objectives. When IPBES was established it was agreed that the Platform would: prioritize key capacity-building needs to improve the science-policy interface at appropriate levels; provide and call for financial and other support for the highest priority needs related directly to its activities; and catalyse financing for such capacity-building activities by providing a forum with conventional and potential sources of funding.

To date how exactly this will be achieved has not been decided.

Catalyzing funding will be one of the major tasks of IPBES with respect to capacity building. While funding for the highest priority needs should be secured by the Platform, we need to go beyond that and catalyze funding for all priority capacity building needs by matchmaking those who have resources, with those who need them.

The priorities for capacity building is still open to discussion and a Capacity Building workshop is planned to be held in Kuala Lumpur in November this year with the aim to to build further understanding and hopefully a convergence of views on how capacity building could and should be addressed in the context of IPBES.

Another pertinent issue is the importance in communicating IPBES activities to the various stakeholders. Communication was recognized as a vital component in achieving the IPBES functions and this was reflected in the work programme. Mainstreaming biodiversity will hinge on a good communication strategy and building a good network between users and producers of knowledge.

An updated work programme is currently available for online review and I encourage and highly value your input into this process.

In developing a Conceptual framework, delivering one that is both pragmatic and inclusive of different knowledge and value systems will be a major challenge.

Input from an expert workshop on conceptual frameworks that will be held in South Africa at the end of August will be incorporated into a document that will be tabled at the next plenary session. A sub-working group is currently undertaking this challenging task of finding a convergence of views that will suitably encapsulate the overall concept of IPBES.

The contentious issue of regional composition was also discussed in the meeting. In responding to a request by the plenary to review the regional structure and composition, it was agreed to recommend that the UN regional structure, consisting of five UN regions, is maintained for the selection of the future MEP, while considering the working arrangements allow for ensuring intellectually and biogeographically coherent regional activities.

The implementation of the work programme deliverables will require working across regional boundaries however they may be constructed and there is no universally accepted biogeographic regional distribution and no common understanding or agreement on the subject matter. Regional consultations such as this provide an important testament towards this workable solution.

While the Bergen Meeting resulted in the progress on the various documents requested by the plenary, it is worth noting that it was the first meeting between the MEP and Bureau members. The meeting allowed for the Bureau and MEP to discuss the interrelationship between their roles.

The success of IPBES hinges on its people and as an ice-breaker, I think for those who were present in Bergen, we can all agree that it was a successful week where a good working relationship was formed between and amongst the Bureau and MEP members. I trust that we will continue to carry the momentum forward and form a formidable group that will be able to contribute significantly towards a successful IPBES.

There are also many other activities that contribute towards the functions of IPBES.

As an input to the conceptual framework, an International Expert and Stakeholder Workshop on The Contribution of Indigenous & Local Knowledge Systems to IPBES was held in Tokyo in June 2013. International experts nominated by governments and selected by a working group were invited to provide input on incorporating traditional knowledge into the IPBES generally and into the conceptual framework specifically.

The meeting, jointly organized by UNESCO, United Nations University and IPBES, was conducted in response to the first Plenary meeting requesting a workshop to provide input on “the recognition of indigenous and local knowledge and the building of synergies with science”. The workshop provided a set of recommendations for the consideration of inclusion into the conceptual framework. The recommendations surrounded the challenge of bridging different knowledge systems with scientific knowledge.

Activities such as these, including this Regional Consultation meeting, contribute significantly to the success of IPBES and I look forward to many more beneficial activities both formally through the IPBES intersessional process, as well as other informal side events.

### **Importance of Regional Structure**

Ladies and Gentlemen,

The Indigenous & Local Knowledge Systems workshop provided a telling reminder of the importance of ensuring that IPBES is relevant “on the ground”. I mentioned that IPBES mirrors the IPCC model, but one glaring difference is the importance of managing biodiversity and ecosystem services at more local scales compared to the climate.

As a region rich in both biodiversity and cultural diversity, GRULAC can play a major role in shaping the way forward for IPBES. To develop solutions that are relevant at local scales, different knowledge systems will have to be considered and the region and the communities within it can serve as a microcosm in bridging different knowledge systems.

The work programme’s emphasis on regional and sub-regional assessments also provides impetus on having regional consultations and further collaboration. It is recognized within the work programme that in order for assessments to be relevant, a bottom-up approach is essential and I trust that activities such as these can lead to a strong regional network on biodiversity and ecosystem services.

Building strong networks and exchange of information will also serve to contribute to capacity building. With respected organisations in the region such as CONABIO, Von Humboldt Institute, FAPESP and others, activities in GRULAC can both increase the capacity within the region as well as serve as a model to the rest of the world. These centres of excellence can play a prominent role in supporting IPBES implementation within the region.

Finally, I would also like to highlight the important issue of values. As with the Millennium Ecosystem Assessment, IPBES needs to go beyond biodiversity and the natural sciences to address the social science component of biodiversity and ecosystem services. The issue of valuation of biodiversity and ecosystem services issue was further discussed in Tokyo, and was a major issue in the Trondheim Conference on Biodiversity. The conceptual framework will provide a focus on values in relation to biodiversity and ecosystem services and finding a convergence of views will be a challenge.

How do we value the seemingly invaluable? Can there be a universal agreement on the value of biodiversity and ecosystem services? Can we put a price on nature? While I agree that many of the services the environment provides, like clean water and air, are irreplaceable necessities, however, the undoubted value of these natural treasures should be reflected in their price, which should rise steeply as they become scarcer. In practice, natural assets are often hard to price well, if at all. These are some of the challenging questions that I hope will be discussed in the following days that can contribute towards the conceptual framework in particular and to our understanding of the relationship between biodiversity and human well-being in general.

And so the task at hand is as important as it is complex, and I would like to take this opportunity to extend my sincere gratitude to our host country and organizers for their generosity and for making this regional consultation possible. The work in IPBES is now beginning, and as its Founding Chair, and on behalf of the Platform, I wish to thank you all for your contributions to this extremely important consultation, and wish you fruitful and productive discussions and a pleasant stay here in Sao Paulo.

Thank you for your kind attention.