

Project Report: IPBES Regional Assessment of Biodiversity and Ecosystem Services for Asia and the Pacific.

Towards the Zero Order Draft (ZOD)

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Abstract. This brief project report summarizes the work program of the IPBES Asia-Pacific Regional Assessment and my contributions as a Lead Author towards producing and reviewing the Zero Order Draft as a visiting fellow at Kyoto University's Centre for Ecological Research.

Keywords: Asia-Pacific, Biodiversity, Ecosystem Services, Future Earth, IPBES

1. Introduction

The Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) was established in 2012 as an independent intergovernmental body open to all member countries of the United Nations. The objective of IPBES is to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development.

One of the deliverables (Deliverable 2b) is to prepare a regional/sub-regional assessment, following the scoping document accepted at the third IPBES Plenary (January 2015) and first author meeting for the Asia-Pacific assessment, held in Tokyo, Japan, from 17-21 August 2015.

The entire assessment process will take three years, with the final report, including a summary for policymakers, scheduled for submission to the IPBES Plenary in 2018. Based on existing peer-reviewed literature, grey literature and indigenous and local knowledge, the report will serve as a valuable tool for effective formulation and implementation of policy related to the sustainable use of biodiversity and ecosystem services at the regional, sub-regional and national levels. The report will also become one of the building blocks for subsequent global assessments.

There are roughly 140 authors with activity and experience in the Asia-Pacific region participating in the assessment including 6 early career Young Fellows. The assessment consists of 6 chapters and follows the IPBES conceptual framework (Díaz 2015a; Díaz 2015b):

Chapter 1: Setting the scene

Chapter 2: Nature's benefit to people

Chapter 3: Status and trends of biodiversity

Chapter 4: Direct and indirect drivers of change

Chapter 5: Integrated and cross-scale analysis

Chapter 6: Policy options for decision-making.

This brief project report summarizes my contributions towards producing and reviewing the Zero Order Draft (ZOD) of Chapter 3 documenting the status and trends of freshwater biodiversity in the Asia-Pacific region. This work was undertaken during a visiting fellowship funded by the International Research Unit of Advanced Future Studies at Kyoto University, hosted by Professor Shin-ichi Nakano at the Centre for Ecological Research.

Figure 1

2. Methodology

IPBES confidentiality clauses prohibit disclosure of draft content from the regional assessments. To avoid disclosure conflicts I refer the reader to IPBES regional assessment scoping reports already in the public domain (IPBES 2014a; IPBES 2014b).

The generic scoping report for the regional and subregional assessments of biodiversity and ecosystem services (IPBES 2014a) outlines the scope of Chapter 3 as, "Chapter 3 will reflect the Conceptual Framework box "Nature", emphasizing the components and fluxes impacting on "Nature's benefits to people". It will assess what is known about the past and current trends and future dynamics of biodiversity and ecosystems and their positive and negative effects on the key ecosystem goods and services identified in chapter 2. It will consider both structural and functional ecosystem diversity and genetic diversity and the area and extent of ecosystems and include fragile habitats and hotspots and species of special concern and importance such as Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) species, migratory species and International Union for Conservation of Nature (IUCN) threatened species, taking into account species listed at the national

level where relevant. It will also include species that are important for the functioning of ecosystems and livelihoods. Available forecasts on current trends will also be outlined. The chapter will also explore how changes in “Nature” impact “Nature’s benefit to people”. The chapter reflects in particular Goal C of the Strategic Plan for Biodiversity and will address issues related to the three Aichi Targets under this goal (Aichi Targets 11, 12 and 13) as well as relevant aspects of Aichi Target 14.”

Table 1

The complementary scoping report for the regional assessment of biodiversity and ecosystem services for Asia-Pacific (IPBES 2014b) presents the geographic boundary of the assessment (Table 1) and highlights key datasets as, “Relevant datasets from ongoing activities drawn from a wide range of sources, including global, regional, national, subnational and local institutions and organizations will feed into the Asia-Pacific regional assessment. Some examples are national biodiversity and strategic action plans, national reports and data portals: the Global Biodiversity Information Facility, the Indian Bio-resource Information Network, the Group on Earth Observations Biodiversity Observation Network with regional components, the Asia-Pacific Biodiversity Observation Network and subregional or national components, the Japanese Biodiversity Observation Network and the Korea Biodiversity Observation Network; regional initiatives: the Economics of Ecosystems and Biodiversity for Southeast Asia; regional research institutes: Bioversity International (Asia Pacific Oceania division), the World Resources Institute, the CGIAR Consortium for Spatial Information, the International Centre for Integrated Mountain Development, the International Union for Conservation of Nature; and government research institutes. Datasets from published scientific literature and citizen science projects will also be used within the assessment report.”

2.1 Contributions to the Zero Order Draft

Following an extensive literature review of the key datasets listed above, Chapter 3 Lead Authors and Young Fellows prepared candidate key messages for their respective biomes and subregions. Freshwater Lead Authors met for a three-day group meeting from the 3-6th November 2015 at the National Institute for Environmental Studies in Tsukuba to compile their respective contributions across subregions and freshwater subbiomes for the ZOD. This material was then submitted to the Chapter 3 Coordinating Lead Authors and Co-chairs to review for consistency and clarity prior to submission as the ZOD.

2.2 Zero Order Draft Internal Review

In late November 2015, the first internal review of ZOD was initiated with Lead Authors undertaking to review chapters that they did not contribute to. On the 19th of January 2016 Chapter 3 Lead Authors received a total of 335 reviewer comments to address in the first revision of the ZOD.

3. Outlook and future directions

The ZOD of IPBES Regional Assessment for Asia and the Pacific paves the way forward to extend the early work of the Millennium Ecosystem Assessment (MEA 2005) with issues specific to the Asia-Pacific and subregions. At a scientific level, IPBES gives the opportunity to bring together the best scientists in biodiversity and ecosystem services and gives access to cutting-edge ideas and concepts for better natural resource management. From a community engagement perspective, IPBES is also providing tools for helping engaging with the wider community, with benefits to help mainstream the ecosystem services framework from science to policy.

IPBES has provided an over-arching framework for ecosystem assessments that link science to policy, but despite this achievement key knowledge and data gaps remain at the regional and sub-regional levels. The selection of appropriate indicators for biodiversity and ecosystems pose a

particular challenge to producing a representative assessment of the regions biodiversity status and trends. To address this shortcoming, I recently attended the Future Earth Symposium on “Global Biodiversity Assessment and Monitoring Science, Data and Infrastructure Needs for IPBES and Beyond” in Monte Verità, Ascona, Switzerland from 6-10 March 2016. This was a joint symposium of the Future Earth Clusters ‘Global Biodiversity Assessment and Monitoring, Prediction and Reporting’ and ‘Support for IPBES’. The symposium focused on addressing the scientific needs of IPBES, in particular around the selection of indicators for biodiversity monitoring. The meeting brought together ~60 invited experts to identify and mobilize new, emerging and non-exploited indicators within the IPBES regional and global assessment work program. A joint synthesis paper on ‘Indicators for IPBES’ is currently in the final stages of preparation to help address the issues and data gaps identified in ZOD.

The ZOD IPBES Regional Assessment for Asia and the Pacific has now completed it’s second round of internal review revisions with an expected completion of the First Order Draft in May 2016. The IPBES work plan anticipates the full and final revision of the report will be completed by November 2017, after which it will be translated into the six languages of the United Nations and be sent for acceptance by governments at the Sixth session of the IPBES Plenary in March 2018.

4. Acknowledgements

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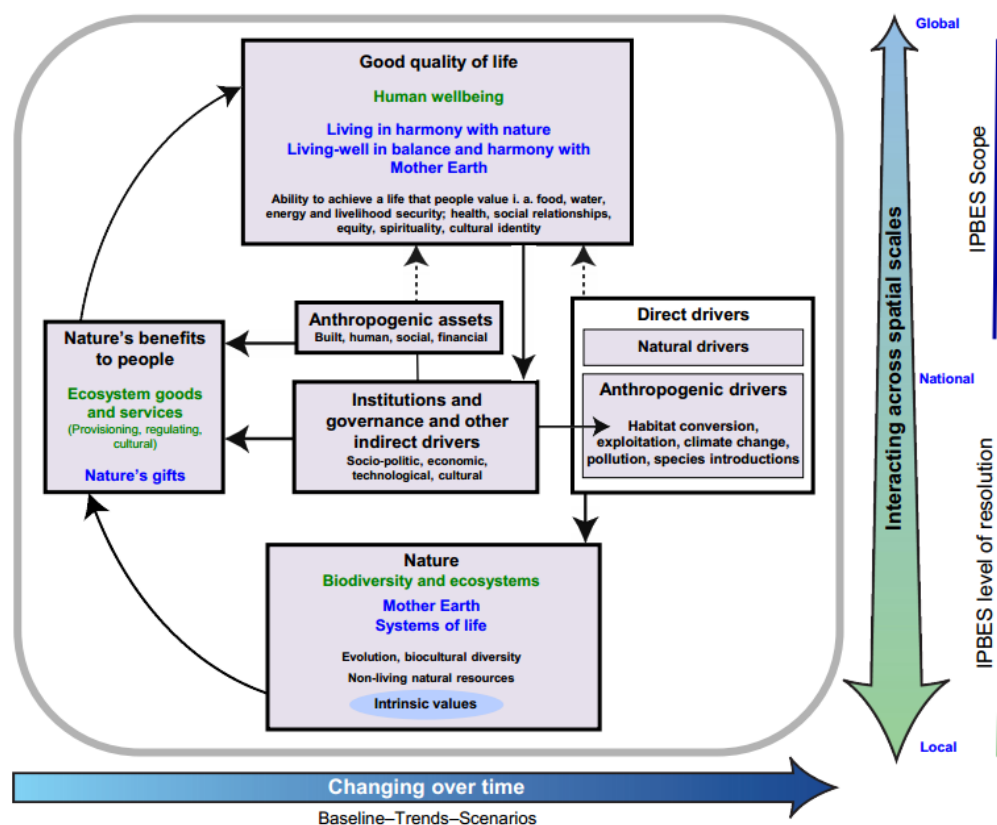


Figure 1. Conceptual Framework from IPBES (Díaz 2015; Díaz 2015)

Table 1. Geographic areas of the IPBES Asia-Pacific regional assessment (^a Overseas territory.) (IPBES 2014a)

Subregions	Countries and territories
Oceania	Australia, Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Zealand, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. Pacific island territories of Cook Islands, New Caledonia, American Samoa, ^a Tokelau, ^a French Polynesia, ^a Niue, ^a Guam, ^a Commonwealth of the Northern Mariana Islands, Pitcairn Island ^a and Wallis and Futuna. ^a Oceanic and sub-Antarctic islands in the Pacific region (or Pacific and Indian Ocean regions)
South-East Asia	Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Viet Nam
North-East Asia	China, Democratic People's Republic of Korea, Japan, Mongolia and Republic of Korea
South Asia	Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan and Sri Lanka
Western Asia	Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates and Yemen (Arabian peninsula), Iraq, Jordan, Lebanon, State of Palestine and Syrian Arab Republic (Mashriq)