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**Seoul international symposium and scientific workshop on the
regional interpretation of the conceptual framework of the
Intergovernmental Science-Policy Platform on Biodiversity and
Ecosystem Services and knowledge sharing**

Note by the secretariat

The annex to the present note sets out a synthesis of key messages developed at the Seoul international symposium and scientific workshop on the regional interpretation of the conceptual framework of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services and knowledge sharing, held in Seoul from 2 to 4 September 2013. The workshop was co-hosted by the United Nations University Institute for Sustainability and Peace and the Korea Environment Institute, with support from the Ministry of Environment of the Republic of Korea and the Asia-Pacific Network for Global Change Research, in cooperation with the Ministry of the Environment of Japan. The annex is presented as received from the meeting organizers and has not been formally edited.

Annex

Summary of the Seoul international symposium and scientific workshop on the regional interpretation of the conceptual framework of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services and knowledge sharing, held in Seoul from 2 to 4 September 2013

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I. Executive Summary

1. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) was established in April 2012 as an intergovernmental body providing scientific support for policy-making in the area of biodiversity and ecosystem services (BES). The four key functions of IPBES are to provide regular assessments, capacity building, knowledge generation, and policy support, with a focus on regional scales.

2. Many regional, national, and local assessments have been carried out in the Asia-Pacific region that can be collected and analyzed to identify challenges and future actions for IPBES' role in this and other regions. A regional focus is important to overcome conventional political and geographic boundaries that have complicated past efforts to manage transboundary resources and biodiversity concerns, and also to allow space for adaptation to institutional and environmental idiosyncrasies. Such elements of specific importance to the Asia-Pacific include high competition for land between the enormous populations and mega-biodiversity across the Asia-Pacific, and the particularly high vulnerability to climate change and related natural disasters in the many small island states of the Pacific and much of south Asia (Watson, Iwamura & Butt, 2013).

3. This document reports a synthesis of key messages from the Asia-Pacific Workshop on Regional Interpretation of the IPBES Conceptual Framework and Knowledge Sharing, co-hosted by the United Nations University Institute for Sustainability and Peace and Korea Environment Institute in Seoul from September 2 to 4, 2013. The intent of the workshop was to draw key elements on the interpretation of IPBES in an Asia-Pacific context with a focus on the state of knowledge and gaps in biodiversity and ecosystem service assessments, informing Objective 2 of the 2014-2018 IPBES Work Programme to strengthen knowledge-policy interfaces at regional and sub-regional levels. The workshop used the IPBES Catalogue of Assessments on Biodiversity and Ecosystem Services (IPBES, 2012) as an embarkation point to collate outputs and knowledge on biodiversity and ecosystem services across 46 categories, including knowledge gaps in ecosystem types and services, tools and processes employed, stakeholder engagement, integration of different types of knowledge, policy impacts, and capacity needs for the Asia-Pacific. Over 40 academics, senior-policy makers, private sector representatives and leading non-government organizations from across the region participated in the workshop (Appendix 1) to discuss elements for consideration in future regional assessments, gaps in knowledge, and relevant proposals for IPBES.

a. Key messages

4. 4. Based on the review of Asia-Pacific case studies in the IPBES Catalogue of Assessments, workshop presentations, discussions, and breakout groups, 12 key messages on developing the IPBES framework in regional and sub-regional contexts were developed in response to the four IPBES core functions and cross-cutting issues.

i. Actions on cross-cutting issues should:

1: Establish an IPBES Regional Hub to promote universal methods, policy coherence, regional collaboration, and address assessment shortfalls

ii. Structure, content, and key questions for assessments should:

2: Highlight where IPBES can deliver advances beyond the Millennium Ecosystems Assessment framework, especially regarding status and trends in biodiversity
3: Address cultural services beyond recreation and tourism; and regulating and supporting services beyond climate regulation and water purification
4: Integrate biodiversity and ecosystem service co-management across public, private, and civil society sectors

iii. Capacity building actions should:

5: Facilitate common data storage and sharing of knowledge to track changes over time
6: Address most commonly identified capacity building needs - improved practitioner skills for ecosystem assessment and methods for integrating cross-scale stakeholder knowledge and priorities

iv. **Knowledge generation actions should:**

- 7: Expand scope to cover gaps in Western Asia, Polynesia, and Eastern Asia sub-regions**
8: Address gaps in assessments on urban and dryland ecosystems
9: Create advanced knowledge systems across scales and institutional levels through the integration of social science, citizen, private sector, indigenous and local knowledge

v. **Policy-relevant tools and methodologies should:**

- 10: Develop scientific methodologies for trade-off resolution that engage cross-scale, non-elite stakeholders**
11: Develop verifiable criteria for holistic policy impact monitoring and reporting
12: Provide communications assistance for policy support tools

b. **Considerations based on key messages: Centralize existing knowledge networks**

5. IPBES can address these messages by better coordinating existing regional biodiversity and ecosystem service assessment activities and frameworks. Solidifying a network of governments and regional organizations and centralizing existing knowledge and data are important opportunities for IPBES. Asia-Pacific implementation of IPBES at regional scales can capitalize on established non-governmental organizations and widespread national use of complementary frameworks and agreements, such as the Millennium Ecosystems Assessment (MA) Framework, the Convention on Biological Diversity (CBD) Aichi Targets, and the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species. A number of initiatives not yet incorporated into the IPBES Catalogue already cover a number of identified gaps, such as the long-term involvement of the Secretariat of the Pacific Regional Environment Program (SPREP) in biodiversity conservation and assessment support tools in Polynesia; knowledge on intergovernmental wetlands management through the East Asia-Australasian Flyway Partnership (EAAFP); and promotion by the World Business Council for Sustainable Development (WBCSD) of ecosystem service approaches for natural capital accounting amongst private sector stakeholders. IPBES can isolate and prioritize gaps in existing knowledge and develop its capacity building, knowledge generation, and policy support responses in conjunction with such actors to avoid duplication and increasing reporting burdens.

6. There was some reluctance to support establishing new committees and reporting requirements in an increasingly crowded field of often disjointed multilateral environmental commitments, but shortfalls in current assessments cannot always be filled by existing regional activities. For example, there is a clear geographic imbalance in the current Asia-Pacific IPBES Catalogue of Assessments reflected in low participation of nations and territories in Western Asia, Polynesia, and Eastern Asia. Where significant Polynesian and Eastern Asian assessments are available elsewhere (such as through SPREP or the Asia-Pacific Biodiversity Observation Network (AP-BON)), current knowledge for Western Asian biodiversity and ecosystem assessments appears lacking. Establishment of regional operating hubs can coordinate efforts to overcome these gaps, centralize data and outputs to advance assessments, and provide communications assistance to translate science into actionable policy for governments, local resource managers, and the private sector.

II. Preamble

7. Many regional, national and local assessments, plans and actions have been undertaken across the Asia-Pacific region to assess the complexity of interactions between biodiversity, the functioning of ecosystems, and the delivery of benefits essential for human well-being. It is important to collect and share this knowledge to identify challenges and future actions needed for the conservation and sustainable use of biodiversity and ecosystem services.

8. IPBES is expected to focus on regional and sub-regional scientific activities that contribute to policy-making on biodiversity and ecosystem services. The development of IPBES at regional scales can transcend historic political and geographic boundaries to the sustainable use of our biodiversity and ecosystem services, recognizing the broader, integrated nature of our societies and environments, and also provide a fresh space for marginalized indigenous or local knowledge systems that have often spent centuries managing complex socio-ecological relationships beyond these boundaries. The Asia-Pacific region is expected to play an important role as it houses mega-biodiversity and, at the same time, large populations.

9. Held in Seoul from the 2nd to 4th of September, United Nations University Institute for Sustainability and Peace (UNU-ISP) and the Korea Environment Institute (KEI) co-hosted a first-of-its-kind international workshop on regional interpretation of the new Intergovernmental Science-policy Platform on Biodiversity and Ecosystem Services (IPBES) in the Asia-Pacific. The workshop was organized with the generous support of the Ministry of Environment, Republic of Korea and the Asia-Pacific Network for Global Change Research (APN), and in cooperation with the Ministry of Environment, Japan and IPBES.

10. The major objectives of the workshop were to discuss regional interpretation of the IPBES conceptual framework and to share knowledge on biodiversity and ecosystem services for regional assessment. The workshop discussed and identified key elements of regional activities under the IPBES framework to report to the second IPBES plenary meeting in Antalya, Turkey, December 2013. The workshop directly addressed Objective 2 of the IPBES 2014-2018 Draft Work Programme, seeking to strengthen the knowledge-policy interface on biodiversity and ecosystem services at regional and sub-regional levels. 40 senior environmental policy-makers, non-government organizations, and academics from across the Asia-Pacific discussed regional and sub-regional scientific activities that contribute to policy-making to support the development of the IPBES framework.

11. Through the review of existing Asia-Pacific assessments collated by IPBES in its online Catalogue of Assessments (<http://ipbes.unepwcmc-004.vm.brightbox.net>), the workshop helped support and build a guide for the development and endorsement of regional and sub-regional deliverables. The workshop discussed cases where collective scientific understanding and communication of complex interactions between ecosystems, biodiversity, and human life had already developed into positive roles for policy-makers and interventions. Breakout group discussions focused on recommendations for developing institutional capacity of IPBES to deliver on its four key functions, which form the structure of the key messages in this document:

- (a) Structure, content, and key questions for assessments;
- (b) Capacity needs;
- (c) Needs for knowledge in the form of research, data, and modeling; and
- (d) Needs for policy-relevant tools and methodologies.

III. Key messages for IPBES core functions to develop regional framework and address gaps in regional assessments and actions of biodiversity and ecosystem services

i. Actions on cross-cutting issues should:

Key Message 1: Establish an IPBES Regional Hub to promote universal methods, policy coherence, regional collaboration, and address assessment shortfalls

12. The IPBES Catalogue of Assessments collates knowledge on biodiversity and ecosystem services across 46 categories. Around one third of assessments had information for less than half of all categories, with clear shortfalls in knowledge generation, assessment documentation and data sharing, and capacity building. Encouraging further reporting to address incomplete or insufficient assessments may be unwelcome due to existing reporting burdens for otherwise complementary multilateral environmental agreements, such as the CBD. Furthermore, existing regional organizations such as IUCN, SPREP, AP-BON or the EAAFP already undertake significant regional assessments that can expand IPBES' collective knowledge base, and also have established expertise in communicating the outcomes of these assessments to policy-makers and resource managers in the region.

13. One action to take advantage of these existing networks and overcome potential challenges of duplication, increased reporting burdens, and additional bureaucracy is to establish an IPBES Regional Hub. This hub can focus on concerns that a centralized secretariat may have difficulty with. Important roles for this regional hub should include:

- (a) Fostering a regional cooperation network to unite existing work of region-specific governments, organizations, and other stakeholders;

- (b) Identifying region-specific gaps in existing work to fill through unique assessment, capacity-building, knowledge generation, and policy support activities;
- (c) Act as a centralized common repository of regional data with common standards and a clear data-sharing mandate to emphasize the use of universal methodologies applicable across scales, such as the IUCN Red List of Threatened Species;
- (d) Provide a platform to facilitate wider stakeholdership for the private sector, indigenous groups, and civil society in regional and national BES strategies and action plans;
- (e) Host a high-level regional committee structure for national governments focusing on inter-agency inclusion to overcome policy incoherence, address geographic imbalance, and directly communicate the value of IPBES policy support tools; and
- (f) Coordinate region-specific interventions and collaborations to take account of trade-off dynamics and institutions unique to the region.

ii. **Structure, content, and key questions for assessments should:**

Key Message 2: Highlight where IPBES can deliver advances beyond the Millennium Ecosystems Assessment framework, especially regarding status and trends in biodiversity

14. The Millennium Ecosystems Assessment (MA) framework has had the most significant impact on biodiversity and ecosystem assessments, used most frequently as the departure point for IPBES Catalogue case studies. This allows for a basic degree of consistency and comparability within and across regions, and helps build a common language among practitioners. A good means to communicate and develop value for IPBES is to highlight how IPBES intends to deliver beyond the existing successes of the MA, CBD, or other MA-based initiatives like TEEB (The Economics of Ecosystems and Biodiversity), such as:

- (a) Greater focus on valuation of ecosystem services;
- (b) Relationships of biodiversity and ecosystem services to human well-being;
- (c) New models for integrating different types of knowledge;
- (d) Assessments of ecosystems, services, and biodiversity at thematic scales;
- (e) Positioning institutions and governance as the central mediating point of biodiversity and ecosystem services; and
- (f) Clearly capturing the role of all three levels/components of biodiversity in socio-ecological dynamics (i.e. genetic diversity, species diversity, and ecosystem diversity).

Key Message 3: Address cultural services beyond recreation and tourism; and regulating and supporting services beyond climate regulation and water purification

15. All assessments covered a broad range of ecosystem services (on average seven services in each assessment) although almost half did not address any cultural services. ‘Recreation and tourism’ was the only cultural service recognized in the vast majority of those that did, with notable exceptions including the Japan Satoyama-Satoumi Assessment (JSSA) and south-east Asian assessments where spiritual aspects of biodiversity still play important roles in conservation and ecosystem management. Provisioning services, especially food and water, were the most commonly addressed ecosystem services in the Asia-Pacific. An earlier assessment of MA sub-global assessments (SGAs) also indicated weaknesses in regulating and supporting services (Layke et al., 2012), but understanding of these, especially regarding climate regulation and regulation of water flows, appear higher in current Asia-Pacific assessments compared to 2005 when these SGAs were published. Still, there is need for thematic assessments in less tradable or commonly regulated regulating and supporting services such as pollination, biological pest and disease control, or soil fertility, particularly given that regulating services may be key indicators of regime shift risk (Bennett et al., 2009). Understanding relationships between ecosystem services is also a route to improve trade-off synergies by identifying and manipulating policy drivers that can impact multiple services.

Key Message 4: Integrate biodiversity and ecosystem service co-management across public, private, and civil society sectors

16. Incorporation of non-elite stakeholders (e.g. indigenous, local, or civil society actors) is integral to co-management and bridging links between diverse knowledge of complex socio-ecological issues, a core principle of IPBES (Busan Outcome, paragraph 7(d); UNEP/IPBES/3/3). Broad stakeholder engagement can drive innovation and legitimacy in ecosystem management and policy, particularly at regional scales seeking to transcend conventional political and geographical boundaries and realize IPBES objectives of more holistic and integrated management. The ‘new commons’ approach expounded in the Japan Satoyama-Satoumi Assessment is one example that illustrates how new socio-ecological systems can sustain functions that provide services best suited to regional needs through cooperation of local governments, private sector organizations, and non-governmental organizations (JSSA, 2010). This necessitates the development of new social contracts with all actors to foster public consciousness that embrace decentralized, regional, and local initiatives.

17. However, only one third of IPBES Catalogue assessments undertook explicit stakeholder engagement processes, usually with governments, researchers, and other experts. Targeted efforts to engage ‘non-elite’ stakeholders were not commonly reported, such as specific inclusion of the private sector, indigenous groups, trade unions, or women stakeholders. Stakeholder processes were also rarely used to understand different resource uses for trade-off and conflict resolution. Building better networks with complimentary non-governmental regional organizations, civil society, and private sector associations can provide excellent sources of knowledge, tools, and processes for redressing these imbalances.

iii. Capacity building actions should:

Key Message 5: Facilitate common data storage and sharing of knowledge to track changes over time

18. Lack of common data formats may raise potential difficulties in tracking changes over time, an important component of assessments, especially considering the often raised problem of limited intergovernmental data sharing and availability complicating the capacity of new assessments to develop existing work at later dates. Through developing common data protocols, general criteria, and basic sharing facilities IPBES can build capacity for honed data curation in conjunction with existing regional organization efforts and reporting requirements, helping build common scenario tools and databases.

Key Message 6: Address most commonly identified capacity building needs - improved practitioner skills for ecosystem assessment and methods for integrating cross-scale stakeholder knowledge and priorities

19. Assessments integrated capacity building actions on *pre-existing* issues in over a third of cases, primarily through workshops, networking, and sharing experiences. However, few assessments in the IPBES Catalogue specifically record *newly identified* capacity needs, making it difficult to prioritize and target enhancements required for future assessment processes in the region. Where they are noted, the area most commonly identified for capacity development was fundamental practitioner skills to understand and implement ecosystem assessment concepts. The capacity of assessments to effectively integrate cross-scale stakeholder knowledge and priorities was also highlighted as a major capacity development need. Formal training, fellowships, exchanges, secondments, and mentoring were the least commonly reported capacity building actions in the Asia-Pacific cases of the IPBES Catalogue of Assessments.

iv. Knowledge generation actions should:

Key Message 7: Expand scope to cover gaps in Western Asia, Polynesia, and Eastern Asia sub-regions

20. Almost half of the 81 countries and territories of the Asia-Pacific region are not represented in any assessments collated by the IPBES Catalogue, with particularly low representation from Western Asia, Polynesia, and Eastern Asia. However, presumptions that non-participating countries were thus weak in generating knowledge were often countered during workshop proceedings, which revealed significant biodiversity and ecosystem assessments not included in the IPBES Catalogue, especially from regional organizations such as SPREP, IUCN Asia, and AP-BON. This highlights the need for concerted centralization by IPBES of existing regional knowledge to avoid duplication and focus on true gaps in regional assessments, such as out-of-date or missing assessments in Western Asia.

Key Message 8: Address gaps in assessments on urban and dryland ecosystems

21. On average, biodiversity and ecosystem assessments generated knowledge for three different ecosystem types, most commonly including forest or cultivated lands. Urban and dryland ecosystems were least commonly integrated into biodiversity and ecosystem service assessments. These are important areas of attention for the Asian region as 40 per cent of its land area is classified as drylands (MA, 2005) and much of the region is undergoing rapid urban expansion.

Key Message 9: Create advanced knowledge systems across scales and institutional levels through the integration of social science, citizen, private sector, indigenous and local knowledge with contemporary science

22. Assessments were commonly a product of combined scientific and resource expert knowledge, but citizen science was rarely integrated and traditional and local knowledge was integrated in only around a fifth of all assessments. Local resource managers and indigenous groups often have developed unique understandings of complex socio-ecological relationships through generations of interaction with the environment, and private sector actors often have accomplished methods for assessing resource and ecosystem service dynamics to help link regional and global scales, such as in international supply chain management systems.

23. Furthermore, IPBES assessments and discussions to date lean towards the natural sciences, and require greater integration with social science methods. The relationship of human well-being is often missing from current assessments, such as the way humans perceive, behave, and act towards biodiversity and ecosystem services as opposed to other goods and services. IPBES knowledge generation activities can integrate important social science issues such as culture, language, local knowledge, and history to address this gap.

v. **Policy-relevant tools and methodologies should:**

Key Message 10: Develop scientific methodologies for trade-off resolution that engages cross-scale, non-elite stakeholders

24. Trade-off resolution can be complicated by difficulties in quantifying some ecosystem services that remain important to different stakeholders, evident in a relative lack of socio-economic and cultural data. Practical tools and methodologies need to be created to assess comparable synergies for trade-offs and co-benefits, such as relationships between maintenance of ‘natural’ environments, commercial intensification, and mental health. Tools for geographically-based comprehensive valuation such as InVEST and TEEB illustrate useful typologies of trade-offs that IPBES assessments could incorporate, including:

- (a) Service trade-offs: managing for one service at the cost of another;
- (b) Spatial trade-offs: benefits in one place, costs in another;
- (c) Temporal trade-offs: benefits now, costs in future; and
- (d) Beneficiary trade-offs: some win, others lose. (Ring et al., 2010)

IPBES can also provide institutional oversight to encourage evidence-based equity in access to resources and benefits from proposed trade-offs.

Key Message 11: Develop verifiable criteria for holistic policy impact monitoring and reporting

25. Understanding the impact of biodiversity and ecosystem assessments on policy is still not clearly understood, with IPBES Catalogue assessments largely focused on cataloguing information on biodiversity and ecosystem services, and rarely reporting policy impacts, knowledge gaps, or capacity needs. Less than a fifth of assessments in the IPBES Catalogue reported the policy impacts of biodiversity and ecosystem service assessments, such as to develop local interventions, prevention of ecologically damaging projects, incorporation into national development strategies, or raising policy-maker awareness. This also highlights issues of policy incoherence and imbalanced power of delivery agencies, such as in biofuel assessments where the priorities of one government agency to promote biofuel production may collide with the environmental priorities of another to protect and regulate land transformation. Criteria for policy impact assessments can clarify implementation capacity needs, monitoring gaps, or governance concerns in translating biodiversity and ecosystem service knowledge into effective policy.

Key Message 12: Provide communications assistance for policy support tools

26. The diversity of culture and languages across the Asia-Pacific presents a significant problem to build policy outcomes, especially at local levels. Communications tools are required to translate complicated concepts for implementation by policy makers, local decision makers, and the private sector. Scientific, policy, and finance support is often identified as a need, but communication support is frequently overlooked. A role for IPBES in communicating the utility of proposed policy support tools to all stakeholders is essential to ensuring its relevance.

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Appendix 1: List of participants (* denotes co-chair)

Name	Title	Affiliation	Nationality
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Name	Title	Affiliation	Nationality
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Naohisa Okuda	Mr./Director	MOE, Japan	Japan
Michiko Okumura	Ms./Consultant	Interim IPBES Secretariat, UNEP, Kenya	Japan
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