

## ENSURING EFFECTIVE ACTION FROM ASSESSMENTS

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The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) is being established to provide essential information for decision-makers, including the many multinational environmental agreements. A major foundation of the work of IPBES will be the assessments that it undertakes to inform policy. These assessments are intended to be authoritative, independent, inclusive, peer-reviewed, policy-relevant, and based on all available sources of knowledge. They will be carried out at global, regional, and thematic levels.

The range of possible assessments that could be useful to IPBES is vast, requiring the IPBES Plenary to establish a credible methodology for selecting which assessments should receive the highest priority. Governments have agreed that the priorities should be established by the Plenary, responding to requests from governments, including the governing bodies of the multilateral environmental agreements related to biodiversity and ecosystem services. In addition, the IPBES Plenary should welcome suggestions from relevant United Nations bodies, other intergovernmental organizations, regional and international scientific organizations, and non-governmental organizations. By drawing on this wide and diverse range of perspectives, IPBES will maintain flexibility and ensure that the most important issues are being assessed. The assessments produced will therefore be relevant to a wide audience, and can guide action in many fields.

The most general assessments will address the global status and trends of biodiversity and ecosystem services, which will require that metrics be established for ensuring consistency over time; this will provide the necessary credibility to the assessed trends. More narrowly-focused assessment of trends on critical issues should also be conducted, addressing topics such as effective conservation, changes in the impacts of invasive alien species, restoration of degraded ecosystems, impacts of new biotechnologies, identification of priority sites for conservation, and status and trends of biodiversity in specific regions.

Given the uncertainty of future conditions, IPBES should also assess alternative scenarios that may reflect alternative approaches to managing biodiversity and ecosystem services. Finally, the IPBES assessments should be of interest to a wide range of audiences, including ministries of environment, agriculture, finance, trade, security, and many others. They should also contribute to other interests of IPBES, including capacity building and knowledge generation.

IUCN is ready, willing, and able to support the assessment work of IPBES. As a science-based organization with 1156 Member organizations (including 87 State Members and 117 Government Agency Members) and a global network of over 10,000 scientists, lawyers, and conservation practitioners, IUCN is uniquely placed to offer such support, at global, national, and local levels. It also has long experience in conducting various kinds of assessments at many levels. For example, it was a partner in the 1992 **Global Biodiversity Assessment**, the 2005 **Millennium Ecosystem Assessment**, and the 2010 assessment of **The Economics of Ecosystems and Biodiversity**. The **IUCN Red List of Threatened Species** is the standard reference on the global status of species, and has led to dozens of national assessments of species status; it is the most authoritative assessment of species status and trends and the global level. The **World Database of Protected Areas** and the **Global Invasive Species Database** provide the latest information on those themes. **ECOLEX**, in partnership with FAO and UNEP, provides a comprehensive guide to environmental legislation and regulation globally. All of these are possible due to the strong Commission networks that IUCN has supported and partnerships with organizations such as FAO, UNEP and others.

IUCN has also supported many governments in preparing national biodiversity strategies and action plans, including providing guidelines for carrying out such national-level assessments.

Lessons IUCN has learned in carrying out such assessments or contributing to them can help deliver IPBES assessments of the highest possible quality and utility. Reviews of factors involved in ensuring that scientific information is effectively delivered to decision makers indicate that the level of policy influence is related to “the extent that the information is perceived by relevant stakeholders to be credible, relevant and legitimate.” Scientists have tended to focus on ensuring credibility, but the other aspects are equally important to provide the information needed by policy makers (Cash et al., 2002). The IPBES assessments will be effective to the extent that they are able to combine all three of these qualities, requiring a synthesis of various disciplines and perspectives.

**Credibility** is based on the level of scientific confidence in the assessment results. It is the result of ensuring that the most appropriate methodologies are used, the best available evidence is included, and clear peer review procedures are in place.

**Relevance** ensures that the assessment undertaken responds to the questions or issues being posed and requires that IPBES assessments are based on clear specifications of needs and objectives.

**Legitimacy** indicates the political acceptability of the assessment, which requires an intergovernmental structure. Legitimacy will be further enhanced by building support from the scientific community and the communities likely to be affected by policies resulting from IPBES-supported policies. Thus legitimacy will also be based on which stakeholders were involved in the assessment as well as respect for the rights and responsibilities of the participants and users of the assessments.

*Adapted from Cash et al. 2002; EEA 2001*

**Box 1. Credibility, relevance and legitimacy: Crucial elements of successful assessments**

In addition to data and expertise in managing data, IUCN is recognized as an authority on synthesis and assessment of that data to address questions set by conservation policy makers (for example, the IUCN Red List Index, the World Heritage nomination process for natural sites and the IUCN/Traffic Analysis of Proposals to amend the CITES Appendices).

In this brief information document, IUCN shares perspectives on its own experience in undertaking assessments for intergovernmental processes. The assessment processes used as examples for this review have taught lessons that could be useful as IPBES establishes its own assessment procedures and processes.

## LESSONS FROM IUCN ASSESSMENT PROCESSES

IUCN assessments are regularly reviewed, seeking improved quality, accuracy, balance, and relevance. As the conservation movement has matured, the quality of science has also improved, providing the basis for more useful assessments. IUCN has also found that participating with numerous partners in major assessments (such as the **Millennium Ecosystem Assessment**, the periodic assessments of the **Intergovernmental Panel on Climate Change**, and **The Economics of Ecosystems and Biodiversity**) has provided opportunities for improving methodologies for other, more limited, assessments, for example of species or ecosystems (such as coral reefs), or at the national or local level.

- **Comprehensiveness.** While IUCN assessments have never been as comprehensive as it would have liked, considerable efforts have been taken to include as many taxa and ecosystems as possible, including freshwaters (Garcia et al., 2010), coral reefs (Wilkenson, 2002), the high seas (Gjerde and Breide, 2003), plants (Radford et al., 2011), and many others. These different components of biodiversity often require somewhat different approaches, indicating the value of some flexibility in approach.
- **Review process.** IUCN has sought to incorporate strong and independent peer review processes in its assessments, and seeks to reflect alternative perspectives where observations or conclusions are controversial. While peer review can be time-consuming and expensive, it is essential to maintaining credibility of the assessment.
- **Characterizing and communicating uncertainty.** While science can often provide fairly conclusive results, these are often better presented as probabilities rather than certainties; for example, species that were assessed as extinct have sometimes reappeared even a century after they have last been seen, leading IUCN to use “possibly extinct” as a more accurate term (Butchart et al., 2006). Quantitative probabilities (on a likelihood scale) can be used to describe the probability of well-defined outcomes when the evidence warrants such caution (InterAcademy Council, 2010).
- **Communications.** Assessments need to be accompanied by a strong communications strategy that reaches the target audience effectively, emphasizes transparency, provides rapid and thoughtful responses, and emphasizes relevance to stakeholders. It is also helpful to identify who can speak on behalf of the assessment so that its key messages do not become confused if the media reach out to someone who is not fully informed.
- **Transparency.** IUCN has found it helpful to publish in advance the methodologies that are being used to conduct its assessments, and major multi-stakeholder assessments like the Millennium Ecosystem Assessment have published the proposed approach well in advance of the assessment being conducted (Alcamo et al, 2003).
- **Original research.** During the process of preparing assessments, IUCN has often identified major gaps in knowledge. While the assessments avoid carrying out original research, they are often useful in identifying priorities for new research that could be carried out by relevant research institutions, with the resulting

published findings available for subsequent assessments. This provides a link to the knowledge-generating component of IPBES.

- **Identification of new methodologies.** In the process of preparing assessments, IUCN has often identified new approaches to compiling and presenting data. These methodologies can be effective in enhancing the credibility or relevance of the assessment; for example, the guidelines for preparing the **IUCN Red List** have been significantly modified over time, as the quality of science available has improved (IUCN Standards and Petitions Subcommittee, 2010). These improvements have also been applied to the preparation of Red Lists at the national and regional levels (for example, the 2010 Red List of Finnish Species)..
- **Implications for funding and capacity-building.** While the assessments themselves are not designed to influence funding decisions or indicate where capacity building is required, the agencies using the assessments may find that the assessments provide useful support for raising and allocating funds to some of the key issues identified by the assessment, or building capacity to address key priorities. The assessments do not identify priorities, they often do provide useful information that can be used by decision-makers. One example is the use of the Red List and the Protected Areas List in helping conservation organizations determine biodiversity hotspots. Assessments of Important Bird Areas can help local governments inform land use decisions.
- **Applications to policy.** Many of the IUCN assessment products are designed to be policy relevant. As just one example, the IUCN system of protected area categories has recently been used to prepare an empirical evaluation of what works for threatened species recovery in Australia (Taylor et al., 2011). This example shows that well-prepared and flexible assessments can be applied to policy at the national level in multiple ways, some of which may not have been considered when the assessment was being prepared.
- **Keeping up to date.** A major problem with global assessments is that they tend to be out of date by the time they are published. For example, the last version of the **IUCN Red List of Threatened Species** to be published as a hard copy was in 2004 (Baillie et al., 2004). The flow of new information on species status and trends has been so rapid that IUCN has decided to make its assessments available much more frequently, as often as 3 or 4 times per year, on the Internet (<http://www.iucnredlist.org>). This more flexible form greatly accelerates production of the Red List and makes the information available in an electronic form that can be applied in many ways.

## CONCLUSIONS

IUCN warmly welcomes IPBES as an important new mechanism for providing policy-relevant information on biodiversity and ecosystem services to a wide range of potential users of such information. While the international environmental agreements (such as the CBD, CITES, Ramsar, World Heritage, Climate Change, and Desertification) are often the most important users, assessments are also relevant to many other interest groups. These include the private sector, the World Trade Organization, government agencies from virtually all sectors, non-governmental organizations, and the general public. IUCN has decades of experience in preparing assessments of various aspects of biodiversity and ecosystem services, and welcomes the opportunity to work with IPBES to make such information widely available, in a variety of forms that can be used by the numerous potential users of such information. Making policy-relevant information freely and widely available may be one of the most useful contributions the scientific community can make to ensure a sustainable future for Planet Earth.

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