Sub-Global Assessment Network

IUCN WORLD CONSERVATION CONGRESS
--- Conservation Campus ---
Tools and techniques for undertaking and using ecosystem assessments

On Tuesday 11th September 2012, the SGA Network Secretariat convened and facilitated a one day capacity building conservation campus as part of the IUCN World Conservation Congress in Jeju, South Korea. The training aimed to build capacity for undertaking and using ecosystem assessments through developing skills for measuring and valuing ecosystem services.
The Secretariat worked with a number of partners from related initiatives including the Ecosystem Service Partnership, The Natural Capital Project, TEEB, UNEP and IUCN to deliver the training through a combination of presentations; interactive, practical exercises; and facilitated discussions.

Objectives

The overall objective of the conservation campus was to build capacity for undertaking and using ecosystem assessments, with a specific focus on tools and techniques for measuring and valuing ecosystem services.

We aimed to achieve this through

1) Improving awareness of widely recognized and understood tools and techniques
2) Providing practical training in how to use these tools in an ecosystem assessment, through hands-on exercises using data from real case studies.
3) Establishing their usefulness in decision-making processes and demonstrating how they can be used to translate science into policy-relevant information.

Summary

Introductions

The conservation campus began with a round of interactive introductions for all attendees to get to know each other and share their initial thoughts, experience and objectives. This was followed by a brief introductory presentation from Hollie Booth (UNEP-WCMC/SGA Network Secretariat) on tools and techniques for undertaking ecosystem assessments.

Figure 1: Interactive introductions: "If I was an ecosystem service I would be… because…"

Measuring ecosystem services

After setting the scene for the conservation campus, the morning session focused on measuring and mapping ecosystem services. This training was delivered by Gregg Verutes and Choong-Ki Kim from the Natural Capital Project, who introduced the uses of the InVEST (Integrated Valuation of Environmental Services and Tradeoffs) mapping tool. A participatory mapping exercise based on the coast of Belize was used as an interactive warm-up. Areas for coastal development, fisheries and protected areas were identified, with participants exploring synergies and trade-offs, stakeholder conflicts, and possible solutions.

Figure 2: 'Best Coast Belize' mapping exericse

Both marine and terrestrial spatial planning was explored in more detail through group exercises based on real life case-studies in Canada and Sumatra. Participants used maps from these case-studies to identify priority areas and management options. This was followed by a practical demonstration of mapping and modelling data using InVEST, with participants gaining hands-on experience of how to use the tool.

Figure 3: Group discussion on InVEST mapping scenarios

The session concluded with group discussions and feedback to plenary, on the various uses and limitations of mapping and modeling ecosystem services. Wrap-up and concluding remarks were given by Dolf de Groot (Wageningen University/ESP). Key points included:

- Models and maps can serve a multitude of purposes throughout the assessment process:
    - Communicating the benefits of nature
    - Stimulating discussions amongst different stakeholders
    - Assessing and monitoring ecosystem services
    - Exploring how the delivery of services might change under different scenarios, and how this might affect different stakeholder groups
    - Informing and presenting options for decision-makers
- Engaging local stakeholders from the outset is crucial for producing meaningful information
- Even meaningful, robust scientific information is not always enough to generate action – it is imperative to speak the language of decision-makers
- Maps and models rely on a number of assumptions and uncertainties – awareness of these limitations is vital during interpretation and analysis
- Mapping tools are only one method for reaching consensus among stakeholders – not the final solution

Valuing ecosystem services

The afternoon session focused on valuing ecosystem services. The session opened with an introductory talk from Pavan Sukdhev (TEEB Study Leader) on the TEEB valuation approach, which aims to address the economic invisibility of nature. Pavan introduced valuation as a 'human institution' – something we do every day regardless of terms and metrics (e.g. monetary vs. non-monetary), but since our current socio-economic system fails to effectively recognize, demonstrate and capture the value of ecosystem services and biodiversity, they remain over-exploited. Successful demonstration of the importance of biodiversity and ecosystem services is possible *without* economics and markets, but understanding the value of nature and its links to the economy enables us to speak the language of decision-makers. Further, valuation requires a broad mixture of skills, not just economics by anthropology and sociology - community and stakeholder engagement is the first step towards indentifying values.

Figure 4: "Robust biophysical ecosystem assessments are the building blocks of valuation studies"

Pavan went on to illustrate the links between ecosystem assessment and valuation, highlighting the importance of robust biophysical ecosystem assessments as the scientific 'building blocks' of valuation and decision-making processes.

Following this introduction, an overview of different valuation methodologies was given by Vanja Westerberg (IUCN). The use of valuation studies in decision-making was illustrated by a case-study example on the value of social and ecological functions on a wetland in southern France. This demonstrated how addressing the values of

the local community persuaded decision-makers to implement a new management plan, which restored the wetland, conserved nature and enhanced ecosystem service provision.

Participants undertook individual valuation choice experiments, based on the case-study. Feedback on perceptions of the methodology was given, with a discussion on advantages and disadvantages of the methodology. Vanja went further into the case study to outline the options and approaches used; follow-up questions prompted discussion on how different methodologies are suited to different questions and scenarios. Key points established included:

- Valuation studies can highlight unexpected benefits of biodiversity and ecosystem services to better inform planning and decision-making.
- In order to generate meaningful information, valuation studies need to be adapted to specific ecological, social and economic contexts. This can be achieved through stakeholder engagement and a good understanding of local knowledge.
- Similar to maps and models, valuation also involves multiple assumptions and uncertainties which need to be taken into account – numbers should be treated with caution. Nonetheless, as biodiversity and ecosystem services are currently valued at zero, it is better to be "incorrectly right than completely wrong" in order to encourage action.

Figure 4: Discussion on stakeholder engagement – key for recognizing values

Feedback

Overall, participants felt the training had been a success – they had developed their understanding of measuring and valuing ecosystem services, and how to design an ecosystem assessment to produce meaningful information and influence decision-making. The conservation campus also generated lively discussion around assessments, tools and approaches, and challenges. Experiences were shared and the participants began to relate what they had learned to their individual needs and contexts.

Next steps for the SGA Network

The SGA Network hopes to use the materials and lessons learned from this Conservation Campus to develop further capacity building resources, with the hope that additional, in-depth workshops can be rolled out in the future. With outstanding interest and support from our participants and partners, we will continue to identify and build synergies, and together equip ecosystem assessment practitioners worldwide with the capacity and tools they need to lead robust and effective ecosystem assessments.

Acknowledgments

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More information can be found on the IUCN Conservation Campus webspace.

All presentations are available on the SGA Network website.

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