

Sub-Global Assessment Network



5th Sub-Global Assessment Network Meeting
Dubai, United Arab Emirates
26th – 28th October, 2014
Meeting Report



**Hosted by the SGA Network Secretariat in partnership with the United Arab Emirates
Ministry of Environment and Water**

Report compiled by:

Annabel Crowther and Matthew Ling

Email: assessment@unep-wcmc.org

Website: www.ecosystemassessments.net



**UNITED ARAB EMIRATES
MINISTRY OF ENVIRONMENT & WATER**



UNEP



WCMC

Contents

| | |
|---|----|
| 1. Summary of 5 th Sub-Global Assessment Network Meeting..... | 4 |
| Challenges faced: | 5 |
| 2. Opening Session..... | 5 |
| 3. Introduction to the SGA Network | 6 |
| 4. A focus on West Asia..... | 7 |
| 4.1 Biodiversity related MEAs implementation and progress towards AICHI targets in West Asia: Diane Klaimi (UNEP ROWA)..... | 7 |
| 4.2 <i>Biodiversity village award – ‘baldati bi’ati’</i> : Salma Talhouk (American University of Beirut) 7 | |
| 4.3 Initial assessment of the economic value of wetlands in West Asia: Florian Eppink (Landcare Research)..... | 7 |
| 5. National Assessments | 8 |
| 5.1 Evaluating social economic and biophysical values domains in ecosystem services assessments; Fernando Santos Martin (Autonomous University of Madrid)..... | 8 |
| 5.2 Implementing the Arctic Biodiversity Assessment: follow-up actions to the most comprehensive Arctic-wide assessment of status and trends: Courtney Price (Conservation of Arctic Flora and Fauna) | 8 |
| 5.3 National assessment of ecosystem services in New Zealand: Anne-Gaelle Ausseil (Landcare Research) | 8 |
| 6. IPBES – the Intergovernmental Platform on Biodiversity and Ecosystem Services..... | 9 |
| 7. Valuation tools and ecosystem assessments..... | 9 |
| 7.1 Abu Dhabi Blue Carbon and Ecosystem Services – lessons learnt and findings: Jane Glavan (AGEDI)..... | 10 |
| 8. Capacity Development Assessment Tool (CDAT)..... | 10 |
| Introduction to the Capacity Development Assessment Tool: Will Banham (UNEP-WCMC)..... | 10 |
| 9. Ecosystem Assessment Mainstreaming..... | 11 |
| 9.1 The ValuES Project - Presenting the methods inventory and showcasing training courses on ecosystem service biophysical assessment, policy advice and economic valuation: Alejandro von Bertrab (GIZ) | 11 |
| 9.2 Implementation of ecosystem services as indicators for landscape management in the Basque Country, Spain: Miren Onaindia (University of the Basque Country) | 11 |
| 9.3 Developing a pilot model on payments for coastal wetland ecosystem services in Mui Ca Mau National Park in the context of climate change contributing to poverty reduction in local communities: Huynh Thi Mai (Vietnam Environment Administration) | 12 |
| 10. Update and reflection on the ‘SGA lessons learned’ document..... | 12 |
| 11. The Regional Hub Approach | 13 |

| | | |
|------|---|----|
| 11.1 | <i>The Traditional Ecological Knowledge (TEK) thematic hub: Kamaljit Sangha (University of Southern Queensland) and Gabriela Mora Camac (Asociación Ixacavaa for indigenous information and development)</i> | 14 |
| 12. | The SGA Network Mentoring Scheme | 14 |
| 12.1 | Hydrologic ecosystem service assessments through InVEST and RIOS modelling to recommend sustainable land management strategies to policy-makers and Payment for Ecosystem Services (PES) scheme developers in the tropics: Brian Kastl (International Consultant – Environmental Management)..... | 15 |
| 12.2 | Accounting for the capacity and flows of ecosystem services (ES) in a small island state – the case of the Maltese Islands: Mario Balzan (Institute of Applied Science, Malta College of Arts, Science and Technology (MCAST))..... | 16 |
| 12.3 | Assessing ecosystem services for informed spatial planning in forested landscapes presented by Himlal Baral (CIFOR) – mentor to Ardavan Zarandian (Department of Environment, Iran) | 16 |
| 13. | Training Session – Understanding valuation, economics and ecosystem assessments | 17 |
| 13.1 | Introduction to session: motivation and rationale of economic valuation of marine ecosystem services presented: Maria Loureiro (University of Santiago de Compostela) | 17 |
| 13.2 | The concept of Total Economic Value: Dolf de Groot (University of Wageningen) | 18 |
| 13.3 | Economic Valuation of Marine Ecosystem Services – relevant aspects: Maria Loureiro (University of Santiago de Compostela) | 18 |
| 14. | Capacity Building Workshop – Delivering and using scenarios for ecosystem assessments.... | 19 |
| | Workshop Overview..... | 19 |
| | <i>Briefing Session 1: How do scenarios fit into an assessment?</i> | 19 |
| | <i>Briefing Session 2: Identifying focal questions and visions</i> | 19 |
| | <i>Briefing Session 3: Developing scenarios and using them</i> | 20 |
| | Concluding observations..... | 21 |
| 15. | Poster presentations..... | 21 |
| 16. | Conclusion, and the way forward | 23 |
| 17. | Evaluation | 23 |
| 18. | Acknowledgements..... | 23 |
| | Appendix 1: Meeting agenda | 24 |
| | Appendix 2: Agenda for Day 3 – <i>Scenarios workshop</i> | 32 |
| | Appendix 3: Participants list | 33 |

1. Summary of 5th Sub-Global Assessment Network Meeting

The 5th Sub-Global Assessment (SGA) Network meeting was held at the Hyatt Regency Hotel Dubai United Arab Emirates from the 26th – 28th October 2014. The meeting was hosted and convened by the SGA Network Secretariat, and supported by the UNEP Regional Office for West Asia, and the United Arab Emirates Ministry of Environment and Water (MoEW).

This meeting brought together more than forty ecosystem assessment practitioners from across the globe to discuss the progress of the SGA Network in 2013 and 2014, recent advances in the field of ecosystem assessment, and the plans for the future as the Network continues to move forwards.

The meeting sought to:

1. Showcase progress and achievements of the Network and its members throughout 2013 and 2014;
2. Share information, lessons learned and experiences of undertaking ecosystem assessments;
3. Highlight emerging tools, methods, concepts and issues in the evolving field of ecosystem assessment;
4. Provide a platform for peer to peer learning;
5. Provide an opportunity for networking amongst the Network members; and
6. To provide an opportunity to discuss the future of the Network.

The meeting took place over three days and involved a combination of presentations, discussions and interactive sessions, ending with a scenarios training session on the final day.

In summary, 2013 and 2014 have been busy and successful years for the Network and its members: the Network has continued to grow in size; its role as a mechanism, through which the capacity and training needs of its members can be met, was expanded further through the delivery of a number of regional workshops, training sessions and participation in collaborative processes and meetings, and the Network's first mentoring scheme and webinar series were launched.

One of the substantive objectives of the 5th meeting was the highlighting of emerging tools, methods, concepts and issues in the field of ecosystem assessment. Over the course of the meeting the participants shared results, experiences, and lessons learned from their assessment work. These experiences, coupled with facilitated plenary and group sessions, looked at the nature and usage of tools for ecosystem assessments, and the various ways in which the science-policy interface can be strengthened through improved mainstreaming of assessment findings and results.

Poster sessions were held during the coffee-breaks which allowed participants to showcase and discuss their work in more detail. On the first evening of the meeting a poster-presentation session and drinks reception was held.

In addition, an 'ideas board' was also made available for participants to contribute comments and suggestions throughout the meeting.

The 5th SGA Network meeting served as an avenue for reflection on the Network itself and what is needed from the Network by the members. The Secretariat outlined its planned activities for strengthening of existing networking and communication methods; considered the Network's role and partnership with IPBES; and outlined new activities and methods of engagement for capacity building. The ways in which the SGA Network can provide a supporting mechanism to IPBES will continue to be a priority of the Secretariat in 2015.

This document seeks to summarise the presentations and various sessions covered at the 5th SGA Network meeting; distilling conclusions and feedback provided by the participants of the meeting, and identifying the relevant actions for the Secretariat to follow-up on.



Meeting participants receiving assessment updates and lessons learned

Challenges faced:

A number of scheduled presenters were unable to attend the meeting, as they were unable to obtain a visa in time. Therefore, in the summaries below, we have acknowledged this by including reference to these missing presentations as *'in absentia'*.

2. Opening Session

The meeting was formally opened by the UAE MoEW, UNEP ROWA and UNEP-WCMC. The representatives of these institutions were:

- His Excellency Sultan Abdulla Bin Alwan Alhebsi (UAE MoEW);
- Dr Hilary Allison (UNEP-WCMC);
- Ms Diane Klaimi (UNEP ROWA).

The opening speech was delivered by His Excellency Sultan Abdulla Bin Alwan Alhebsi (Assistant Undersecretary of Water Resources and Nature Conservation, UAE MoEW), stating the support for and commitment to the objectives of the SGA Network, and saying that the inputs to be gained from the SGA Network meeting will help further the MoEW's initiatives to protect the ecosystems of UAE. Following on from the MoEW opening address, Hilary Allison (UNEP-WCMC) and Diane Klaimi, addressed His Excellency and offered thanks to the MoEW for their hospitality and offered their greetings to the participants on behalf of the organisations they were representing.

4. A focus on West Asia

Diane Klaimi (UNEP ROWA) facilitated the first plenary session of the meeting, presenting a focus on ecosystem assessment activities and initiatives taking place in the West Asia region.

4.1 Biodiversity related MEAs implementation and progress towards AICHI targets in West Asia: Diane Klaimi (UNEP ROWA)

Diane Klaimi started proceedings with her presentation on '*Biodiversity-related MEAs and Achieving Aichi Targets in West Asia*'. This presentation discussed the driving processes for UNEP's biodiversity and ecosystems programme in the West Asia region, detailing information on the projects undertaken by the ROWA. Engaging 12 member states, ROWA promotes collaboration and partnerships with organisations to develop relevant programmes to guide policy-makers in developing innovative and equitable policies based on sound science. Stressing the heightened need for generating and sharing biodiversity data, increased engagement with the SGA Network was recognised as an opportunity to strengthen the portfolio of ecosystem assessments in the region.

4.2 Biodiversity village award – 'baldati bi'ati': Salma Talhouk (American University of Beirut)

Salma Talhouk presented on the '*Biodiversity Village Award*' project, as a platform for encouraging community members to engage in the conservation of biodiversity. Readily replicable across 50 villages, the project has necessitated local empowerment through community-based data generation; building consensus for promoting future sustainable planning, facilitated community-based conservation, and contextualised biodiversity within the environment people immediately respond to.

4.3 Initial assessment of the economic value of wetlands in West Asia: Florian Eppink (Landcare Research)

Florian Eppink delivered a presentation on a regional assessment of the economic value of wetlands in West Asia, as an application of ecosystem management. To conduct the quantitative assessment of wetland ecosystem services (ES), a benefits transfer study was undertaken to apply existing valuation studies of wetlands data to a valuation framework, creating scenario-based measures of ecosystem change (for which the loss was assumed linear for the entire period). Florian stated several key messages:

- Acknowledgement of the need for the recognition of valuing of ecosystem services, whereby ecosystem service valuation can be used as a mechanism for raising awareness of ecosystem change; and
- While economic value of ecosystems (wetlands) can be demonstrated, issues of data access and data availability remain as challenges to the integration of policy response into ecosystem assessment.

In absentia

***The League of Arab States – supporting the assessment agenda in the Arabian region:
Nermin Wafa (League of Arab States)***

Application of the ecosystem approach to the management of pearling in World Heritage Sites in the Kingdom of Bahrain: Fouad Abousamra (Senior Consultant in Water and Coastal Ecosystems)

5. National Assessments

Salvatore Arico, Programme Specialist for Biodiversity at UNESCO's Division of Ecological and Earth Sciences, facilitated the second plenary session of presentations on national and regional assessments. Salvatore acknowledged the SGA Network as a powerful mechanism for connecting assessment practitioners to share knowledge and experiences on assessments at all levels.

5.1 Evaluating social economic and biophysical values domains in ecosystem services assessments; Fernando Santos Martin (Autonomous University of Madrid)

Fernando Santos Martin delivered a presentation on 'Evaluating biophysical, social and economic values domains', drawing on the experiences of the Spanish National Ecosystem Assessment (SNEA). This presentation detailed the combination of differing assessment methods used to uncover, shape and define the complementary information relevant to the environmental decision-making process. Sharing the lessons learned from the SNEA process, stakeholder preferences and motivations were found to determine the 'utility' a person obtains from a service, while the ecosystem's capacity to supply a service defined the potential range of uses by society, adding to the complexity of integrating biophysical, social-cultural, and economic values into a comprehensive methodology. Fernando concluded that the development of a comprehensive methodology for integrating differing values remains a challenging scientific frontier. The establishment of such an integrative methodological framework in the future was called for, such that the multidimensional nature of ecosystem services could be contemplated more fully.

5.2 Implementing the Arctic Biodiversity Assessment: follow-up actions to the most comprehensive Arctic-wide assessment of status and trends: Courtney Price (Conservation of Arctic Flora and Fauna)

Courtney Price began her presentation by introducing CAFF – the Conservation of Arctic Flora and Fauna – the biodiversity working group of the Arctic Council. The presentation gave examples of major projects undertaken by CAFF to assess the status and trends of Arctic biodiversity, including: a summary of the processes and outcomes of the Arctic Biodiversity Assessment (ABA); detailed key findings on the TEEB for the Arctic scoping study; and an overview of the Arctic Migratory Birds Initiative.

5.3 National assessment of ecosystem services in New Zealand: Anne-Gaelle Ausseil (Landcare Research)

Anne-Gaelle Ausseil presented a progress report on the ecosystem service assessment in New Zealand (NZ ESA). Started in 2009, the ESA worked to assess conditions and trends through the development of spatially explicit models of ecosystem service (ES) indicators, to provide the decision-making tools for better matching of land-use with soil capacity. To build biodiversity into an ES-based approach for resource management, a tiered approach to classifying ES was used to map their status. This allowed for the scenario-based modelling to generate ES maps showing spatial optimisation of land-use, which was used to open up policy dialogues. Improved harmonisation of spatial databases (soil, land-use, biodiversity) has delivered model indicators of biodiversity and ES, and was found to further support environmental reporting and future ES assessment.

Noted discussion points

- Combining complementary (biophysical, economic and social) information can be used as a proxy for illustrating differing socio-economic issues, while spatial maps can provide the instrument for communicating to different audiences.

In absentia

Into the Deep – the marine component of South Africa’s National Biodiversity Assessment:
Prideel Majiedt (SANBI)

6. IPBES – the Intergovernmental Platform on Biodiversity and Ecosystem Services

A briefing on IPBES: Thomas Koetz (IPBES Secretariat)

Thomas Koetz (via Skype) provided an introduction, overview, and update on the IPBES process. Thomas provided summaries of:

- The institutional structure of the IPBES process; the four agreed functions (knowledge generation, assessment, policy-support tools and capacity building) of the platform; the Conceptual Framework; and the Programme of Work.
- Deliverable 2b – which, as requested by IPBES-2, sets out to run regional and sub-regional assessments from 2015 to 2018. As a result of the 2014 scoping process, it was decided to undertake five regional assessment units (within which a sub-regional focus is embedded) by one Technical Support Unit, with potential for a network of supporting institutions. The inclusion of the SGA Network within this ‘network of institutions’ was acknowledged as an opportunity to play a key supporting role in the facilitation/implementation of regional assessments.
- Capacity building: the SGA Network was suggested as a mechanism for contributing to the establishment of networks of institutions for fulfilling the *capacity building* function of the IPBES process, through which members of the SGA Network could become a formal part of the implementation of IPBES assessments.
- Next steps: the call for Technical Support Unit (anticipated before the end of 2014); IPBES-3 Plenary (12th-17th January 2015); call for Co-Chairs, CLAs and LAs (Quarter 1, 2015); and the start of the regional assessments (Quarter 2, 2015).

In conclusion, there was a call for all SGA Network members to input (or update) their assessments into the IPBES Catalogue of Assessments.

7. Valuation tools and ecosystem assessments

This session was facilitated by Maria Loureiro (Faculty of Economics, University of Santiago de Compostela). Maria gave a brief introduction to this session focussing on valuation and economics, including taking the opportunity to make the link to the scheduled workshop on ecosystem service valuation later in the agenda, then opening the floor up for report-backs from assessments focusing on this aspect of the assessment process.

7.1 Abu Dhabi Blue Carbon and Ecosystem Services – lessons learnt and findings: Jane Glavan (AGEDI)

Jane Glavan delivered a presentation on the key lessons learned from the Blue Carbon Services Contingent Valuation project of the Abu Dhabi region. It was stated that the objective of this project was to provide further localised valuation of associated blue carbon ecosystem services within two study areas to better inform management decisions. Jane outlined the habitat valuation protocol used in this work and illustrated the methodology for linking carbon storage with provisioning services of an ecosystem, allowing the rapid assessment of habitat condition, quality and ecological integrity. It was stated that by establishing a baseline for monitoring future ecosystem functionality, habitat valuation generates a functionality score allowing the practitioner to measure variability in ecosystem service provisioning capacity per habitat and per region. Scoring per habitat will be used in the Abu Dhabi Blue Carbon Valuation project to qualify the service capacity of different sites, informing management recommendations to improve conditions of specific habitat attributes that maintain ecosystem function and service provisioning. Findings of the project (which started in mid-August 2014), have helped structure a systematic approach to develop two future scenarios: scenario 1, the '2030 likely future' and scenario 2, '2030 Natural Capital Restoration' or 'elevated management'. Using these two scenarios, the size and condition of marine habitats were altered to reflect possible cumulative impacts of habitat transformation, elevated brine discharge, elevated waste water discharge, thermal pollution, elevated fishery management, growth of mangrove offsets, increased dredging and increased oil extraction, amongst others.

Noted discussion points

- While AGEDI acts as a facilitator of information, how the results will be used for decision-making in terms of policy implementation is up to the stakeholders themselves.
- Equating carbon value to ecosystem services is not a straightforward financial measure, but a valuation of traditional market and non-market values combined as one component.

In absentia

Forest ecosystems valuation used as a tool to drive national forest policy: Elsa Sattout (Conservation Leadership MPhil, Department of Geography, University of Cambridge)

Increasing the economic benefit of high value medicinal and aromatic plants to Pakistani communities – an analysis of current practices: Hassan Sher (Center for Plant Sciences and Biodiversity University of Swat)

8. Capacity Development Assessment Tool (CDAT)

Introduction to the Capacity Development Assessment Tool: Will Banham (UNEP-WCMC)

Will Banham introduced a tool developed by UNEP-WCMC to support capacity development design and evaluation, and proposed that the members of the SGA Network could use the approach for facilitating capacity development at the individual, organisation and Network-wide levels.

With regards to this tool the meeting participants were asked to think about:

- What are the key capacity issues that constrain your ability to conduct ecosystem assessments?
- What is your current level of capacity relative to your target level?
- Which capacity development needs can most easily be addressed?
- Which capacity development needs are the most important to address?

It was acknowledged that an individual SGA member's capacity depends upon their own knowledge and skills, while their ability to engage may be constrained by their institutional arrangement or the regional development of the assessment's locality. To accommodate such differences, the tool is aimed to guide the user through a systematic assessment of capacity development needs and priorities. The CDAT tool and relevant documentation was emailed to all meeting participants in order to gain an understanding of the capacity development needs and priorities of the Network members.

9. Ecosystem Assessment Mainstreaming

Dolors Armenteras (National University of Colombia) facilitated the first session of Day 2 of the meeting, which focussed on mainstreaming ecosystem services and assessments into policy.

9.1 The ValuES Project - Presenting the methods inventory and showcasing training courses on ecosystem service biophysical assessment, policy advice and economic valuation: Alejandro von Bertrab (GIZ)

Alejandro von Bertrab presented the ValuES Project: *Methods for integrating ecosystem services into policy, planning and practice* – a project implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in close collaboration with the Helmholtz Centre for Environmental Research (UFZ) and the Conservation Strategy Fund (CSF). The ValuES project supports practitioners, advisors and decision makers in government and civil society organisations in the integration of ecosystem services into decision-making and planning processes. With the integration of ecosystem services and their application into decision-making remaining a challenge, the ValuES project's main aim is to provide practitioners and decision-makers in environment-related ministries and organisations with the skills needed to effectively use biophysical/economic assessment methods to identify, prioritise, value and integrate ES into policy, planning and practice. Detailing the working inventory of methods and tools, Alejandro gave the participants an introduction to the ValuES website (www.aboutvalues.net), encouraging practitioners in the room to contribute content (methods, case studies, etc.) to the ValuES suite of tools and resources.

9.2 Implementation of ecosystem services as indicators for landscape management in the Basque Country, Spain: Miren Onaindia (University of the Basque Country)

Miren Onaindia presented on the experiences of the Basque Country, Spain, in integrating indicators of ES into landscape management and conservation planning. Engagement in networks and stakeholders' participation were found to aid the collaboration between researchers, technicians and politicians in developing sound land-use policies and actions. An index of landscape multi-functionality based on ES was used as the tool to develop a system of socio-economic compensation for the provision of ES at the municipality level. As a result, the realised contribution of municipalities to human well-being was recognised as having potential to improve the socio-economic situation and reduce the differences between principalities through integrated ES landscape management.

9.3 Developing a pilot model on payments for coastal wetland ecosystem services in Mui Ca Mau National Park in the context of climate change contributing to poverty reduction in local communities: Huynh Thi Mai (Vietnam Environment Administration)

Huynh Thi Mai presented findings and experiences from the development of a pilot model on Payment for Ecosystem Services (PES) in Vietnam, creating sustainable livelihoods for local households of the Mui Ca Mau National Park, with the overall objective to reduce poverty. A mechanism for facilitating interaction and conducting transactions between providers and users of coastal wetland ES was introduced which also improved the cost-efficiency of resource management and encouraging sustainable development. Implementation of the PES scheme (involving 20 selected households) acted to directly enhance the capacity of the participating partners, raise awareness, and establish long-term co-operation of international relationships. The Vietnamese case further contributed to strengthening biodiversity protection, linking scientific research with the management of policy and practice, and created models of sustainable finance, providing the socio-economic benefit of reducing poverty of the local communities involved. This represents a successful example of strong national biodiversity legislation, supported by a PES scheme in action.

Noted discussion points

- Regarding the payments for coastal wetland ecosystem services in Vietnam, a delegate asked how much each household in the scheme received. The response was given that each household receives USD \$5000 per year for implementing the project.
- This triggered further questions around the PES scheme, notably that USD \$5000 is a lot of money to poor communities, and whether or not these payments represent a threat to the national park, for example, by enticing more people to live in the national park, or to their livelihoods? However, it was stated that 20 households from more than 3000 in the restoration area were carefully selected to pilot and implement the PES project. Others outside the scheme cannot be involved or participate.

In absentia

The impact of local level efforts on national decision-making, through the use of mainstreaming tools such as PES: Keisha Garcia (University of the West Indies) and Sue Yen Carrera (Caura Valley Village Council)

10. Update and reflection on the 'SGA lessons learned' document

Claire Brown (SGA Network Secretariat) introduced participants to the SGA Network 'Lessons Learned' document – *Lessons learned from carrying out ecosystem assessments: Experiences from members of the Sub-Global Assessment Network* – developed as a result of the 3rd Annual meeting of the SGA Network held in Bilbao, Spain in 2011. Split by four separate challenges, the eight lessons learned (as listed below) were reconsidered and discussed among participants to test whether they still hold true and if there were any new lessons learned.

Challenge: *Assessments are complex, cover a variety of topics, scales, approaches, and knowledge and perspectives*

Lesson 1: Define clear, policy relevant questions

Lesson 2: Carefully plan and set clear boundaries of scope and scale

Challenge: *The ecosystem approach is multi-layered and complex: coordination and integration of all components, with well-balanced inputs and resource allocation is critical*

Lesson 3: Be inclusive

Lesson 4: Apply a clear governance structure

Challenge: *Securing buy-in from stakeholders is difficult to get and difficult to maintain*

Lesson 5: Promote the assessment concept

Lesson 6: Understand the decision-making context

Challenge: *Assessments are complex and multi-disciplinary and require scientific expertise across numerous lines of research*

Lesson 7: Exchange with experts

Lesson 8: Appreciate the need to understand, use and present different types of information

Based on the report back from groups the SGA Secretariat will update the Lessons Learned document.



Meeting participants discussing and considering their lessons learned from carrying out ecosystem assessments

11. The Regional Hub Approach

In 2012 the SGA Network piloted a regional hub approach in the Latin America Caribbean region with a regional hub based at The Cropper Foundation in Trinidad and Tobago. The regional hub approach was developed as a way to move from the global level to the regional, to aid capacity building and allow for regional engagement between members, with the global support mechanism remaining. In addition, a thematic hub was also launched following discussions at the 2012

Stellenbosch meeting. This component of the agenda had planned to deliver presentations from regional hub representatives, to introduce the SGA Network's regional hub approach in Southern Africa (the newly established Southern Africa Development Community (SADC) regional hub based out of the Council for Scientific and Industrial Research (CSIR), South Africa) and Latin America and Caribbean (the re-launched LAC hub based out of the Humboldt Institute, Colombia).

11.1 *The Traditional Ecological Knowledge (TEK) thematic hub: Kamaljit Sangha (University of Southern Queensland) and Gabriela Mora Camac (Asociación Ixacavaa for indigenous information and development)*

By integrating traditional ecological knowledge into assessments, the group aims to understand how TEK might strengthen mapping conditions and trends of ecosystems, and their links to human well-being. As such the assessments are based on a mutual interest with indigenous communities.

Kamaljit Sangha reported on the activities undertaken by the TEK thematic hub thus far:

- ESP 2014 workshop session (Sept. 2014) *'Ecosystem services and Indigenous well-being: Current measures and methodologies'*
- Proposal to establish a Working Group within the ESP network
- The 14th Congress of the International Society of Ethnobiology (Meriem Bouamrane, UNDP)

Future plans include inviting more SGA Network members to join, collaborating with researchers of indigenous peoples and feeding into global forums (e.g. IPBES indigenous forum) to gain momentum of the group.

Gabriela Mora Camac reported back on the TEK session presented at this year's ESP conference in San José, Costa Rica. The ESP formed a Working Group on traditional and indigenous knowledge, to develop communications and methods for incorporating indigenous perspectives and understanding on traditional practices, as an evidence-based approach to assessments of ecosystem service. The topics and outcomes that arose from the TEK Working Group at the 7th ESP conference in September 2014, included:

- How to measure ecosystem services?
- How to define life-quality and well-being?
- How can we ensure assessments are useful for all in equal terms?
- How can mutual respect for the validation of traditional and indigenous knowledge systems be created?

In absentia

The Southern African Development Community (SADC) regional hub: Luthando Dziba (CSIR)

The Latin America and Caribbean (LAC) regional hub: German Ignacio Andrade (Humboldt Institute)

12. The SGA Network Mentoring Scheme

Matthew Ling (SGA Secretariat) delivered an introduction to the scheme, which aims to catalyse relationships between early career stage assessment practitioners and well-established researchers and academics in the field.

Twenty-six applications were submitted to the Mentoring scheme, and five applications were selected. The successful applicants were as follows:

Mentee: **Mr Brian Kastl**, University of California, Santa Barbara, USA.

Mentored by: **Mr Juan Sebastian Lozano**, The Nature Conservancy, Colombia.

Mentee: **Dr Mario Balzan**, Malta College of Arts, Science and Technology, Malta.

Mentored by: **Dr Marion Potschin**, School of Geography, University of Nottingham, UK.

Mentee: **Miss Patricia Falk-Fernández**, Asociación Calidris, Colombia.

Mentored by: **Miss Isadora Angarita-Martínez**, BirdLife International (Americas Secretariat), Ecuador.

Mentee: **Mr Ardavan Zarandian**, Department of Environment, Sustainable Development and Environmental Economy Bureau, Iran.

Mentored by: **Dr Himlal Baral**, Centre for International Forestry Research, Bogor, Indonesia.

Mentee: **Ms Maria Rowena Beatriz Q. Inzon**, University of the Philippines Los Baños (UPLB), Philippines.

Mentored by: **Dr Koji Nakamura**, United Nations University Institute of Advanced Studies, Japan.

A selection of the mentees and mentors then provided some perspectives from their involvement in this scheme.

12.1 Hydrologic ecosystem service assessments through InVEST and RIOS modelling to recommend sustainable land management strategies to policy-makers and Payment for Ecosystem Services (PES) scheme developers in the tropics: Brian Kastl (International Consultant – Environmental Management)

Brian Kastl presented on his experience working with Juan Sebastian Lozano to gain experience and insight on both the InVEST (Integrated Valuation of Environmental Services and Tradeoffs) and RIOS (Resource Investment Optimization System) tools, for carrying out his own study of the compromise made on ecosystem services under the competing land-uses of tourism and agriculture in Barbados.

Brian summarised his experience in the SGA Network's mentoring scheme as a valued opportunity with the following take home messages:

- Invaluable skills gained from direct learning on InVEST and RIOS;
- Partnership-building, and a continued sharing of experiences and knowledge through the established mentorship relationship;
- Multiple effects – gained potential to contribute to other ecosystem assessment and developed the knowledge on the models to mentor other students;
- Foundation for PhD – a project which will explore the role policy partakes in ES assessment.

12.2 Accounting for the capacity and flows of ecosystem services (ES) in a small island state – the case of the Maltese Islands: Mario Balzan (Institute of Applied Science, Malta College of Arts, Science and Technology (MCAST))

Mario Balzan (mentored by Marion Potschin) presented an overview of his work on developing multidisciplinary techniques to map the ecosystem services of the small island state of Malta. Mario first presented the objectives of his work, which included:

- 1) Develop a methodology for mapping ecosystem services (ES) in a small island state;
- 2) Develop and apply a framework for ecosystem accounting in a small island state;
- 3) Apply biophysical and social assessment methods for mapping ES;
- 4) Distinguish between different valuation tools;
- 5) Implementation of developed ecosystem accounting framework for a broad range of ES

He went on to conclude that:

- Sustainability of small islands is likely to be achieved if, rather than focusing on a single ecosystem service/benefit (e.g. fisheries/crop yield or the cultural values associated with island landscapes), the flow of a broader set of ES is maintained.
- There is a need for ecosystem assessments that investigate the capacity of ecosystems to provide bundles of ES, the flow of these to island communities and associated trade-offs.

12.3 Assessing ecosystem services for informed spatial planning in forested landscapes presented by Himlal Baral (CIFOR) – mentor to Ardavan Zarandian (Department of Environment, Iran)

Himlal Baral presented on his experience in the SGA Network's mentoring scheme from his perspective as a mentor.

Himlal hosted Ardavan Zarandian as an intern at CIFOR, Bogor, Indonesia. Ardavan had specifically sought the support of Himlal under the SGA Network mentoring scheme in order to learn how to use readily available data and tools to apply differing approaches to ES assessment; work which will contribute to his research in assessing ES for informing spatial planning in forested landscapes in northern Iran. Himlal reported that he was able to provide guidance on qualitative assessment, expert opinion and professional judgement on biophysical quantification and field measurement, and economic valuation. Ardavan's research has motivated the joint publication of this ES assessment work. Himlal's concluding comments reflected on his perspective as a mentor, stating that it has allowed him to work in a different context, and has given him the opportunity to help contribute to capacity building and initiate the collaboration of new partnerships with both UNEP-WCMC and Department of Environment, Iran.

In absentia

An assessment ecosystem of the ecosystem services provided by 'La Bertha' using the Toolkit for Ecosystem-based Service Sit Assessment (TESSA): Patricia Falk Fernandez (CALIDRIS Association)

Adapting the Satoyama-Satoumi (SS) Approach of Ecosystems and Human well-being Assessment for Sustainable and Green Town Development of Mulanay Quezon, Philippines: Maria Rowena Beatriz Q. Inzon (University of the Philippines Los Baños (UPLB))

Noted points of discussion

- *Based on the experience (as a mentee), how could the scheme be improved?*
The scheme allowed flexibility to structure the project within the timeframe available as the mentee wishes, but the time period was relatively short. It was agreed that a longer duration would have been preferred, as it would have encouraged greater engagement and more training opportunities between the mentee and mentor.
- *To what extent did the SGA Network help facilitate these relationships to happen? Would the mentoring relationships have taken place anyway?*
Marion Potschin stressed the value of the status that the SGA Network gave to the mentoring scheme, in pushing to establish the mentee-mentor relationships. Attaching the inquiring mentee to a recognisable and reputable initiative was more beneficial than simply receiving a request from 'Mario of Malta'.
- It was noted that the mentees involved in this scheme should remember their own involvement in the experience and pass on similar knowledge, expertise and skills to early-career practitioners in the future.

The SGA Network Secretariat concluded that, from their perspective, the mentoring scheme's successful outcomes, with both tangible outputs and the establishment of lasting relationships, represent a project with the potential and scope to develop further and roll out again in the future.

13. Training Session – Understanding valuation, economics and ecosystem assessments

The final session on Day 2 was a training session focused on delivering an introduction and overview on valuation, economics and ecosystem assessments. This session was presented by Maria Loureiro (University of Santiago de Compostela) and Dolf de Groot (Wageningen University).

13.1 Introduction to session: motivation and rationale of economic valuation of marine ecosystem services presented: Maria Loureiro (University of Santiago de Compostela)

Maria Loureiro presented on the concept, economic methodology and framework of valuation and accounting of marine ecosystem services. The presentation gave an introductory explanation of the techniques of valuation and various methodological tools available:

- Supply-based validation methods (market values)
 - Production function
- Demand-based methods (market values)
 - Market prices
 - Travel cost
 - Hedonic pricing
- Cost-based method (market values)
 - Replacement cost
 - Mitigative/avertive expenditures
 - Avoided damage cost

It was stated that, where there may be more than one method suitable for the valuation of certain Measurements of Ecosystem Goods and Services (MEGS), adopting a hybrid economic valuation approach can aid approximating a cost analysis of value-transfer. Economic valuation can help contribute to the quantification of inventories, compensate for the foregone benefits of the built environment, and feed into policy instruments (taxes, subsidies, etc).

The limitations and caveats of economic valuation were noted as:

- Sensitivity of estimates (outliers);
- Valuation of flows (not stocks);
- Valuation on marginal terms: Acknowledgement to valuation exercises being based on how people make trade-offs between resources; and
- Valuation of linear effects versus non-linear effects.

13.2 The concept of Total Economic Value: Dolf de Groot (University of Wageningen)

Dolf de Groot delivered a presentation on the measurement of 'Total Value', explaining the calculation of 'value' can be used to quantify importance of the ecosystem; better understanding of 'total value' could therefore help demonstrate the importance of conserving natural ecosystems. More complete cost-benefit analysis is needed to identify and expose the trade-offs, to add value to the inclusion of measurement of ES within the decision-making process and management. However, conservation is still seen as a cost, whereby 'the total economic value of managing ecosystems more sustainably is often higher than the value associated with conservation' (Balmford et al., 2002). Alluding to the cost-benefit ratio of ecosystem restoration, and arguing the case for honest cost-benefit analysis, Dolf concluded by stating that ecosystems are already paying the price with the take home message being that 'investment in nature (restoration) pays', and 'doing nothing costs'.

13.3 Economic Valuation of Marine Ecosystem Services – relevant aspects: Maria Loureiro (University of Santiago de Compostela)

Case Studies:

- 1) Valuing damages caused by oil spills in litigation**
- 2) Impacts of Jelly fish outbreaks on recreation and tourism**
- 3) New horizons in valuation: empirical applications**

Maria Loureiro concluded the session by presenting several differing case studies of example methods used to calculate and communicate ES value in economic terms, to demonstrate the importance of conservation action. The first summarised the assessment of the total economic value of damages caused by the Prestige oil spill in Spain, 13th November 2002. The second gave an analysis of beach recreationists' preferences for the reduction of jellyfish outbreaks (as a 'Stated Choice Experiment') in Catalonia, Spain. Both examples used a contingent valuation technique, establishing a Total Economic Value (TEV) for the assessment by asking individuals how much they would be willing to pay to finance a prevention program, an alternative method of ES valuation to carrying out cost-benefit analyses. Maria finished up her presentations by discussing how the experiences with the analysis of jellyfish outbreaks lead to the development of a 'smart app' for the *iPhone* – *iMedJelly*.

14. Capacity Building Workshop – Delivering and using scenarios for ecosystem assessments

A capacity building workshop on developing scenarios as part of an ecosystem assessment was delivered on the final day of the meeting by Prof. Roy Haines-Young and Dr Marion Potschin (University of Nottingham). A summary of the day is provided below.

Workshop Overview

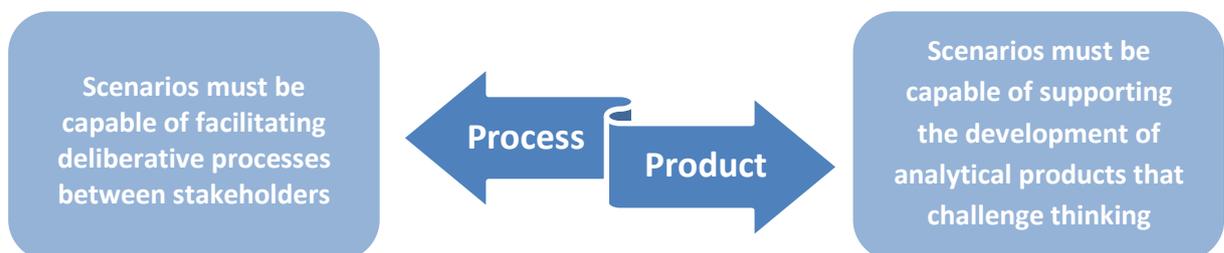
- How do scenarios fit into an assessment?
- Identifying focal questions and visions.
- Developing scenarios and using them in sub-global assessments.

Designed as an interactive session of role-play based exercises, the workshop delivered an understanding on the process of developing scenarios. The following take home messages were presented:

1. *The process of building scenarios is as important as the product at the end.*
Assessments are social processes, enabling us to understand the status and trends of today. Acknowledging process is important for helping design the dynamic taking place in the present, rather than becoming fixated on the future end product.
2. *By thinking about the future, we are simply trying to grasp an idea of today.*
Scenario assessment is as much about understanding today's current status, as trends in the future. Scenarios are the tool used to help make sense of the situation in the present.

Briefing Session 1: How do scenarios fit into an assessment?

- Assessments include scenarios to consider possible future results/effects/situations to help develop better strategies for today.
- Scenarios are not predictions but simply projections of what could likely happen in the future as a result of the scenario tested.
- Within scenario assessment, balance is needed between uncertainty and complexity for ensuring reasonable projections of future status.
- An understanding of scenarios as projections needs to be communicated to engaged stakeholders from the beginning, to blend differing tensions through adopting a process-product dimension of assessment.
- Communication is key, as it is easy for stakeholders to interpret scenarios as choices for different futures. Scenarios are not choices but projections, applied and reframed to the context in question.



(Diagram taken from Roy Haines-Young's Presentation 'Scenarios and Ecosystem Assessments')

Briefing Session 2: Identifying focal questions and visions

Recognising that scenarios can be used as the process through which people define/identify values, focal questions are important in:

- Helping to establish relevance and saliency of scenarios work.
- In the context of exploratory scenarios they help us to identify the direct and indirect drivers of changes and associated uncertainties, to build into scenario assessment.
- Engaging stakeholders and addressing their needs.

Example: UK National Ecosystem Assessment (UK NEA)

The UK NEA was a learning process, during which focal questions acted as the facilitators to start the process, to identify the drivers of change, and then consequently to engage stakeholders, to structure and build the complexity of the scenario 'geometry'.

Handling the time dimension

'The time horizon of a scenario should be based on what is a reasonable amount of time for the main issues of concern to be explored or managed' (Henrichs, et al. 2010). Therefore, it was recommended to place the scenario product further into the future, in an attempt to divorce the assessment from the present day's issues. Considerations to note:

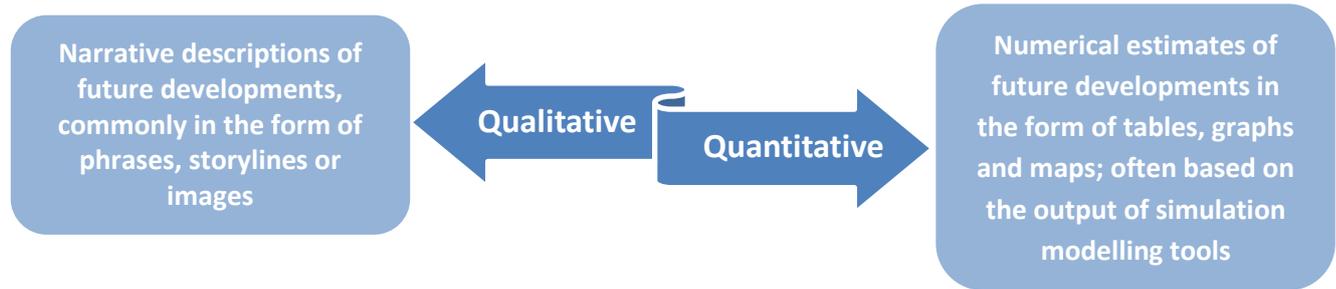
- Time-spans have political implications and cannot always be selected in advance of the initial exploration of issues with stakeholders about policy cycles and information needs;
- Be wary of pressures from decision-makers for shorter assessment periods;
- Difficult for some stakeholders to picture the future – time by generations could prove more engaging;
- Timelines vs. end states.



Meeting participants taking part in the capacity building workshop on developing scenarios as part of ecosystem assessments

Briefing Session 3: Developing scenarios and using them

Building the process-product dimension into scenario assessment helps develop scenario storylines of plausible outcomes. Storylines can be:



Concluding observations

- Scenarios can stimulate social learning – a tool for adding validity to research, giving stakeholders understandable information on the future options.
- It is important to identify the key people for inclusion within the participatory relevant process before undertaking a scenario assessment, a process of reflection.
- Stakeholder engagement can be conflicting – scenario assessment can bring out conflicting opinions. Participatory processes can expose conflict as well as resolve it.
- Participation as an important element of assessment requires taking into account the views and values of those involved. But the views and values of participating stakeholders are not fixed in time, but are also conditioned on what may take place in the future.
- Scenarios ultimately encourage change to present strategies and assumptions, while embed ES concepts and values into current practice.

15. Poster presentations

Poster presentations were exhibited for the duration of the meeting; the following posters were presented:

Florian Eppink (Landcare Research) – *A preliminary assessment of the economic value of coastal and freshwater wetlands in West Asia*

Garo Haroutunian (Ministry of Environment, Lebanon) – *Safeguarding and restoring Lebanon's woodland resources, 2009-2014*

Huynh Thi Mai (Vietnam Environment Administration) – *Evaluating alternatives for designing a payment for ecosystem services (PES) structure for mangrove ecosystems in Mui Ca Mau National Park, Vietnam*

Humood Naser (University of Bahrain) – *Marine ecosystems in the Arabian Gulf: services and threats, an example from Bahrain*

Kamaljit Sangha (Charles Darwin University) – *Assessing the role of ES in indigenous well-being: a mix of capability and MA approaches*

Paulo Sinisgalli (Oceanographic institute of the University of Sao Paulo) – *Brazil coastal assessments – identification and valuation of the ecosystem services provided by the Araca Bay (Sao Sebastiao, Sao Paulo, Brazil)*

Lida Teneva (Conservation International) – *New metrics for seafood security assessments in coastal fisheries*

In absentia

Abdelwahab Afefe (Egyptian Environmental Affairs Agency) – *Study of human impacts on mangrove habitats in Egypt*

Aliou Diouf (Enda Energie-Environnement-Developpement) – *Terrestrial ecosystem dynamics in central-eastern Senegal's agro-silvopastoral zone, 1950-2000*

Utkarsh Ghate (Covenant Centre for Development) – *Sustainable consumption-production metering needed for global prosperity*

Leena Gupta (Society for Promotion of Wastelands Development) – *Adaptation to change in interlinked cultivated and wetland ecosystem: a study in Western India*

Hema Kulkarni (Covenant Centre for Development/Govt. N. C J. College, Dalli Rajhara, Chhattisgarh) – *Medicinal plant garden & education for global well being*

Naglaa Loutfy (Suez Canal University) – *Ecosystems and human well-being, El Maghara, Sinai, Egypt: a dry land, community based assessment*

Elaine Rodrigues (Instituto Florestal) – *Ecosystem services and human well-being in the Sao Paulo city green belt biosphere reserve*

Nermin Wafa (League of Arab States) – *The economic valuation of some wetland in the Arab countries*



Participants discussing the posters presented at the 5th SGA Network meeting

16. Conclusion, and the way forward

The meeting was closed by Hilary Allison (UNEP-WCMC) and Neville Ash (UNEP) who reflected on the meeting and its outcomes and the SGA Network members.

The SGA Network has continued to grow since the last meeting in Stellenbosch, 2012, with membership now in the region of 400 people. Outreach and engagement has continued to draw interest from individuals and organisations wishing to become more involved in the ecosystem services and ecosystem assessment landscape. As such, the SGA Network continues to have a place and function, providing support for our community, and providing opportunities to increase capacity to carry out and use ecosystem assessments.

Moving into 2015 and beyond, the SGA Network Secretariat will continue to investigate the best ways to provide these functions for its members. This will include understanding how the Network fits into the broader landscape and where there are synergies with other processes, and continuing to strategically position ourselves such that we can provide support to the IPBES process and other MEAs.

17. Evaluation

Evaluation forms were distributed as an online 'Survey Monkey' questionnaire in order to gain feedback on the organisation and content of the meeting and direction of future network meetings. Despite the travel difficulties faced by a number of participants, resulting in the meeting agenda requiring amendment to reflect these changes, there was a positive response to the overall organisation, structure and outcomes, with generous comments and support given to the SGA Secretariat.

18. Acknowledgements

The SGA Secretariat wishes to express their thanks and gratitude to all of the participants for their enthusiastic input throughout the whole meeting. We would also like to extend an additional thanks to those members, who were unable to join the meeting but who accepted the disappointment graciously and remained attentive to the meetings proceedings despite not being physically present. We are also grateful to the UNEP Regional Office for West Asia for their support of this meeting and to the UAE MoEW. We must also gratefully acknowledge the financial support for the SGA Network provided by the European Commission, the Swedish International Development Cooperation Agency, and the Government of Norway.

Appendix 1: Meeting agenda



Sub-Global Assessment Network



5th SGA Network Meeting, 26th – 28th October, 2014, Dubai, United Arab Emirates
---Meeting Programme---

Meeting Objectives

1. To showcase progress and achievements of the network and its members and outline a vision for the future of the Network.
2. To continue to share information, lessons and experiences of undertaking ecosystem assessments, providing a platform for peer to peer learning; and
3. To highlight emerging tools, methods, concepts and issues in the evolving field of ecosystem assessment.

Meeting location: All meeting sessions as detailed below will be held in the Crystal Ballroom B at the Hyatt Regency Hotel Dubai

| Sunday 26 th October 2014 (Day 1) | | | |
|--|--|--|---------------------------------------|
| 8.30-9.00 | Registration at Hyatt Regency Dubai (Crystal Ballroom C) | | |
| Plenary – Welcome and opening session | | | Facilitator: Claire Brown (UNEP-WCMC) |
| 9.00-9.10 | General welcome | | SGA Network Secretariat & MoEW |
| 9.10-9.20 | UAE Ministry of Environment and Water | | H.E. Rashid Ahmed Bin Fahad |
| 9.20-9.30 | UNEP Regional Office for West Asia | | Diane Klaimi |
| 9.30-9.40 | UNEP WCMC | | Hilary Allison |
| Introductions – getting to know your fellow meeting participants | | | Facilitators: SGA Network Secretariat |



| | | | |
|--|--|---|---|
| 9.40-9.55 | Round table introductions and report back | | N/A |
| Plenary – Progress of the network | | <i>Facilitator: Claire Brown (UNEP-WCMC)</i> | |
| 9.55-10.10 | Meeting objectives & introduction to the Network | Presentation with Q&A | Matthew Ling (UNEP-WCMC) |
| Plenary – A focus on West Asia | | <i>Facilitator: Diane Klaimi (UNEP ROWA)</i> | |
| 10.10-10.20 | Presentations delivering a focus on West Asia | Presentation: <i>Biodiversity related MEAs implementation and progress towards AICHI targets in West Asia</i> | Diane Klaimi (UNEP ROWA) |
| 10.20-10.35 | | Presentation: <i>Biodiversity village award – ‘baldati bi’ati’.</i> | Salma Talhouk (American University of Beirut) |
| 10.35-10.45 | | Presentation: <i>Application of the ecosystem approach to the management of pearling WHS in the Kingdom of Bahrain</i> | Fouad Abousamra (Senior Consultant in Water and Coastal Ecosystems) |
| 10.45-10.55 | | Q&A | |
| 10.55-11.20 | Coffee break (Crystal Ballroom C) | | |
| Plenary – National Assessments | | <i>Facilitator: Salvatore Arico (UNESCO)</i> | |
| 11.20-11.35 | Presentations delivering an update from selected national and regional assessments | Presentation: <i>Evaluating social economic and biophysical values domains in ecosystem services assessments</i> | Fernando Santos Martin (Autonomous University of Madrid) |
| 11.35-11.50 | | Presentation: <i>Implementing the Arctic Biodiversity Assessment: follow-up actions to the most comprehensive Arctic-wide assessment of status and trends</i> | Courtney Price (CAFF) |
| 11.50-12.05 | | Presentation: <i>National assessment of ecosystem services in New Zealand</i> | Anne-Gaelle Ausseil (Landcare Research) |
| 12.05-12.20 | | Presentation: <i>Into the Deep: the marine component of South Africa’s National Biodiversity Assessment</i> | Prideel Majiedt (SANBI) |
| 12.20-12.35 | | Q&A | |
| Plenary – IPBES | | <i>Facilitator: Claire Brown (UNEP-WCMC)</i> | |
| 12.35-13.00 | IPBES – the Intergovernmental Platform on Biodiversity and Ecosystem Services | Presentation with Q&A | Thomas Koetz (IPBES Secretariat) |



| | | | |
|--|--|--|--|
| 13.00-14.00 | Lunch (Shahrzad Restaurant, Hyatt Regency Hotel) | | |
| Plenary – Valuation tools and ecosystem assessments | | <i>Facilitator: Maria Loureiro (University of Santiago de Compostela)</i> | |
| 14.00-14.15 | Presentations delivering an update from selected assessments focusing on valuation and economics | Presentation: <i>Ecosystem services valuation – lessons learned and findings from association with blue carbon ecosystems</i> | Jane Glavan (AGEDI) |
| 14.15-14.30 | | Presentation: <i>Forest ecosystems valuation used as a tool to drive national forest policy</i> | Elsa Sattout (Biodiversity Conservation & Sustainable Development Professional & Researcher) |
| 14.30-14.45 | | Presentation: <i>Increasing the economic benefit of high value medicinal and aromatic plants to Pakistani communities: an analysis of current practices.</i> | Hassan Sher (Center for Plant Sciences and Biodiversity University of Swat) |
| 14.45-15.00 | | Q&A | |
| Plenary – Capacity Development Assessment Tool | | <i>Facilitator: Will Banham (UNEP-WCMC)</i> | |
| 15.00-15.30 | Introduction to the Capacity Development Assessment Tool | Presentation and participatory exercise | Will Banham (UNEP-WCMC) |
| 15.30-16.00 | Coffee break (Crystal Ballroom C) Documentary to be shown during coffee break: <i>Ecological and Social Review of Provisioning Ecosystem Service: A Case Study of a Sacred Forest</i> (Ankur Patwardhan, Dept. Of Biodiversity, Abasaheb Garware College) (Crystal Ballroom B) | | |
| Break out – Update and reflection on the ‘SGA lessons learned’ document | | <i>Facilitator: Claire Brown (UNEP-WCMC)</i> | |
| 16.00-16.10 | Update and reflection on the ‘SGA lessons learned’ document | Introduction to session | Claire Brown (UNEP-WCMC) |
| 16.10-16.25 | | Presentation: <i>Lessons learned from national biodiversity assessments in South Africa</i> | Fahiema Daniels (SANBI) |
| 16.25-17.25 | | Break-out exercises: <i>Update and reflection on the ‘SGA lessons learned’ document</i> | N/A |
| 17.25-17.30 | Housekeeping remarks | | |
| Evening: 18.00 | Drinks reception and poster presentation session (Crystal Ballroom C, Hyatt Regency Hotel) | | |



| Monday 27 th October 2014 (Day 2) | | | |
|--|--|--|--|
| 8.30-9.00 | Registration at Hyatt Regency Dubai | | |
| Plenary – Welcome and opening session | | Facilitator: Claire Brown (UNEP-WCMC) | |
| 9.00-9.05 | Recap from Day 1 | | Claire Brown (UNEP-WCMC) |
| Plenary – Ecosystem assessment Mainstreaming | | Facilitator: Dolors Armenteras (National University of Colombia) | |
| 9.05-9.15 | Presentations delivering an update from selected assessments focusing on mainstreaming ecosystem services and assessments | Introduction to session | Dolors Armenteras (National University of Colombia) |
| 9.15-9.30 | | Presentation: <i>The ValuES Project: Presenting the methods inventory and showcasing training courses on ecosystem service biophysical assessment, policy advice and economic valuation</i> | Alejandro von Bertrab (GIZ) |
| 9.30-9.45 | | Presentation: <i>The impact of local level efforts on national decision-making, through the use of mainstreaming tools such as PES.</i> | Keisha Garcia (University of the West Indies) and Sue Yen Carrera (Caura Valley Village Council) |
| 9.45-10.00 | | Presentation: <i>Implementation of ecosystem services as indicators for landscape management in the Basque Country, Spain</i> | Miren Onaindia (University of the Basque Country) |
| 10.00-10.15 | | Presentation: <i>Developing a pilot model on payments for coastal wetland ecosystem services in Mui Ca Mau National Park in the context of climate change contributing to poverty reduction in local communities</i> | Huynh Thi Mai (Vietnam Environment Administration) |
| 10.15-10.30 | | Q&A | |
| 10.30-11.00 | Coffee break (Crystal Ballroom C) | | |
| Plenary and breakout – The regional hub approach | | Facilitator: Keisha Garcia (University of the West Indies) | |
| 11.00-11.15 | Introduction to SGA Network regional hub approach. An introduction and presentations from the hubs, followed by break-out exercises | Introduction to session and presentation on the regional hub approach | Keisha Garcia (University of the West Indies) |
| 11.15-11.20 | | Presentation: <i>The Southern African Development Community (SADC) regional hub</i> | Luthando Dziba (CSIR) |
| 11.20-11.25 | | Presentation: <i>The Latin America and</i> | German Ignacio Andrade (Humboldt) |



| | | | |
|---|--|--|--|
| | | <i>Caribbean (LAC) regional hub</i> | Institute) |
| 11.25-11.30 | | Presentation: <i>The Traditional Ecological Knowledge (TEK) thematic hub</i> | Kamaljit Sangha (University of Southern Queensland) |
| 11.30-12.30 | | Break-out: <i>Group work in regional and/or thematic hubs</i> | N/A |
| 12.30-13.00 | | Report back from break-out groups | |
| 13.00-14.00 | Lunch (Shahrazad Restaurant, Hyatt Regency Hotel) | | |
| Plenary – The SGA Network Mentoring Scheme | | <i>Facilitator: Matthew Ling (UNEP-WCMC)</i> | |
| 14.00-14.05 | Introduction to and report backs from, the participants of the SGA Network mentoring scheme | Introduction to the SGA Network mentoring scheme | Matthew Ling (UNEP-WCMC) |
| 14.05-14.15 | | Report back: <i>Hydrologic ecosystem service assessments through InVEST and RIOS modelling to recommend sustainable land management strategies to policy makers and Payment for Ecosystem Services (PES) scheme developers in the tropics.</i> | Brian Kastl (International Consultant - Environmental Management) |
| 14.15-14.25 | | Report back: <i>Accounting for the capacity and flows of ecosystem services (ES) in a small islands state: the case of the Maltese Islands</i> | Mario Balzan (Institute of Applied Science, Malta College of Arts, Science and Technology (MCAST)) |
| 14.25-14.35 | | Report back: <i>Assessing ecosystem services for informed spatial planning in forested landscapes</i> | Ardavan Zarandian (Department of Environment (DOE), Iran) |
| 14.35-14.45 | | Report back: <i>An assessment of the ecosystem services provided by 'La Bertha' using the Toolkit for Ecosystem-based Service Site Assessment (TESSA)</i> | Patricia Falk Fernandez (CALIDRIS Association) |
| 14.45-14.55 | | Report back: <i>Adapting the Satoyama-Satoumi (SS) Approach of Ecosystems and Human Well-being Assessment for Sustainable and Green Town Development of Mulanay, Quezon, Philippines</i> | Maria Rowena Beatriz Q. Inzon (University of the Philippines Los Baños (UPLB)) |



| | | | |
|--|--|---|---|
| 14.55-15.15 | | Q&A | |
| 15.15-15.45 | Coffee break (Crystal Ballroom C) | | |
| Training session: Understanding valuation, economics, and ecosystem assessments | | <i>Facilitator: Maria Loureiro (University of Santiago de Compostela). Chair: Dolf de Groot (Wageningen University)</i> | |
| 15.45-16.00 | Introduction and overview, with examples and case studies, of valuation, economics, and ecosystem assessments | Introduction to session: motivation and rationale of economic valuation of marine ecosystem services | Maria Loureiro (University of Santiago de Compostela) |
| 16.00-16.15 | | Economic Valuation of Marine Ecosystem Services: relevant aspects | Maria Loureiro (University of Santiago de Compostela) |
| 16.15-16.30 | | The concept of Total Economic Value and its application in Cost-Benefit Analysis | Dolf de Groot (Wageningen University) |
| 16.30-17.15 | | Case Studies: 1) Valuing damages caused by oil spills in litigation 2) Impacts of Jelly fish outbreaks on recreation and tourism 3) new horizons in valuation: empirical applications | Maria Loureiro (University of Santiago de Compostela) |
| 17.15-17.30 | | Q&A | |
| <i>Evening: 19.00</i> | Meeting banquet, Hyatt Regency Hotel Dubai (Golf Park) | | |



| Tuesday 28 th October 2014 (Day 3) Capacity Building Workshop on developing and using scenarios for ecosystem assessments | | |
|--|---|--|
| 09.00-09.10 | Introduction and objectives | Claire Brown (UNEP-WCMC) |
| <i>Facilitators: Prof. Roy Haines Young and Dr Marion Potschin (University of Nottingham)</i> | | |
| 09.10-10.00 | Briefing session 1* | Prof. Roy Haines Young and Dr Marion Potschin (University of Nottingham) |
| 10.00-11.00 | Exercise 1* | |
| 11.00-11.30 | Coffee Break (Crystal Ballroom C) | |
| 11.30-12.00 | Briefing session 2* | Prof. Roy Haines Young and Dr Marion Potschin (University of Nottingham) |
| 12.00-12.45 | Exercise 2* | |
| 12.45-13.00 | Debrief 1* | |
| 13.00-14.00 | Lunch (Shahrazad Restaurant, Hyatt Regency Hotel) | |
| 14.00-14.45 | Briefing session 3* | Prof. Roy Haines Young and Dr Marion Potschin (University of Nottingham) |
| 14.45-15.30 | Exercise 3* | |
| 15.30-16.00 | Coffee Break (Crystal Ballroom C) | |
| 16.00-16.30 | Exercise 4* | Prof. Roy Haines Young and Dr Marion Potschin (University of Nottingham) |
| 16.30-17.00 | Plenary – debrief and questions* | |
| 17.00-17.10 | Concluding remarks | Hilary Allison (UNEP-WCMC) |
| 17.10-17.20 | | Neville Ash (UNEP) |
| 17.20-17.30 | | Diane Klaimi (UNEP ROWA) |
| 17.30 | Meeting close | Secretariat |

**For detailed session breakdown of Day 3, please see attached programme from Roy Haines-Young*

Appendix 2: Agenda for Day 3 – Scenarios workshop

| Time | Session Theme | Content |
|---------------|---|--|
| 9.30 - 10.00 | <u>Briefing session 1:</u> The concept of scenarios and their role in an assessment exercise. | Introductory lecture; flag up process/product dimensions; introduce matrix of types of scenario. |
| 10.00 - 11.00 | <u>Exercise 1:</u> <i>How can scenarios help my assessment?</i> | Explore relevance of the different types of scenarios and their potential role in assessments. |
| Coffee | | |
| 11.30 - 12.00 | <u>Briefing session 2:</u> Identifying focal questions and visions, and how they shape the design of scenario work. | Briefing – the conventional two axis model vs morphological approach; forecasting vs backcasting methods; timelines. |
| 12.00 - 12.45 | <u>Exercise 2:</u> <i>Exploring focal questions and visions.</i> | Using a generic set of focal questions to identify direct and indirect drivers of change and associated uncertainties and trying some visioning methods. |
| 12.45 - 13.00 | <u>Debrief 1:</u> <i>Gathering insights on the morning session.</i> | Delegates should record their thoughts on the drivers of change and associated uncertainties relevant to their focal questions. |
| Lunch | | |
| 14.00 - 14.45 | <u>Briefing session 3:</u> Developing scenarios and using them. | Constructing storylines, the role of quantitative and qualitative methods in exploratory scenarios; families of scenarios; multi-scale scenarios and down-scaling. |
| 14.45 - 15.30 | <u>Exercise 3:</u> <i>Exploring outcomes and testing response options.</i> | Using scenarios to explore impacts and test policy responses. |
| Coffee | | |
| 16.00 - 16.30 | <u>Exercise 4:</u> <i>Downscaling</i> | Reflecting on how the set of archetypical scenarios link to your assessment. |
| 16.30 - 17.00 | Plenary | Debrief and questions |

Appendix 3: Participants list



Sub-Global Assessment Network



5th SGA Network meeting, 26th-28th October, 2014, Dubai, UAE
---Participants List---

| Name | Institution | Email |
|-----------------------------|--|--|
| Abdelwahab Afefe | Egyptian Environmental Affairs Agency (EEAA) | abdoafefe@hotmail.com |
| Abdou Chakour Chadhoulia | Biodiversity Comoros | chadhoulia5@yahoo.fr |
| Ahmed Yehia Ali | National Watershed Management Foundation | wam.yemen.serv@gmail.com |
| Alejandro von Bertrab | Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) | alejandro.bertrab@giz.de |
| Alexander Turra | Oceanographic Institute of the University of São Paulo | turra@usp.br |
| Aliou Gory Diouf | Enda Energie-Environnement-Développement | aliou.diouf@endaenergie.org |
| Ankur Patwardhan | Dept. of Biodiversity, Abasaheb Garware College, Pune | ankurpatwardhan@gmail.com |
| Anne-Gaëlle Ausseil | Landcare Research | AusseilA@landcareresearch.co.nz |
| Ardavan Zarandian | Department of Environment (DOE), Iran | azarandian@gmail.com |
| Belal Shqarin | Ministry Of Environment, Jordan | shqareen@yahoo.com |
| Bokang Theko | Ministry of Tourism, Environment & Culture, Lesotho | bokangtheko@ymail.com |
| Brian Kastl | International Consultant - Environmental Management | briankastl84@gmail.com |
| Corazon de Jesus | ASEAN Centre for Biodiversity (ACB) | cadejesus@aseanbiodiversity.org |
| Courtney Price | Conservation of Arctic Flora and Fauna (CAFF) | courtney@caff.is |
| Cristina Marta-Pedroso | IN+ Center for Innovation, Technology and Policy Research, Instituto Superior Técnico | cristina.marta@ist.utl.pt |



| | | |
|---------------------------|--|--|
| Diane Klaimi | United Nations Environment Programme, Regional Office West Asia (ROWA) | diane.klaimi@unep.org |
| Dolf de Groot | Wageningen University | dolf.degroot@wur.nl |
| Dolors Armenteras | Universidad Nacional de Colombia | dolors.armenteras@gmail.com |
| Edward Amankwah | Centre for Environmental Governance, Ghana | ekyai@yahoo.co.uk |
| Edwin Castellanos | Universidad del Valle de Guatemala | ecastell@uvg.edu.gt |
| Elaine Rodrigues | Instituto Florestal | elainearodrigues@gmail.com |
| Elsa Sattout | Geography Department, University of Cambridge | es633@cam.ac.uk |
| Fahiema Daniels | South African National Biodiversity Institute (SANBI) | F.Daniels@sanbi.org.za |
| Fernando Santos-Martín | Dpt. Ecology, Universidad Autónoma de Madrid | fernando.santos.martin@uam.es |
| Florian Eppink | Landcare Research | eppink@biodiv.de |
| Fouad Abousamra | Senior consultant in water and coastal ecosystems | fabousamra4@gmail.com |
| Gabriela Mora Camac | Asociación Ixacavaa for indigenous information and development | gmoracmc@gmail.com |
| Gamal Abdullah | Yemen Environment Protection Authority (EPA) | gamal05@gmail.com |
| Garo Haroutunian | Ministry of Environment, Lebanon | garo@moe.gov.lb |
| German Ignacio Andrade | Alexander von Humboldt Institute | gandrade@humboldt.org.co |
| Hassan Sher | Center for Plant Sciences and Biodiversity, University of Swat | hassan.botany@gmail.com |
| Hema Kulkarni | Covenant Centre for Development | ccdnorth@gmail.com |
| Himlal Baral | Center for International Forestry Research (CIFOR) | h.baral@cgiar.org |
| Humood Abdulla Naser | University of Bahrain | hnaser@uob.edu.bh |
| Huynh Thi Mai | Vietnam Environment Administration | maiht2004@yahoo.com |
| Isadora Angarita Martinez | BirdLife International, Americas Secretariat | Isadora.Angarita@birdlife.org |
| Jane Glavan | Abu Dhabi Global Environmental Data Initiative (AGEDI) | jglavan@ead.ae |
| Joeli Veitayaki | University of the South Pacific | joeli.veitayaki@usp.ac.fj |
| Juan Sebastian Lozano | King's College London | juanlozanov@gmail.com |
| Kamaljit Sangha | Australian Centre for Sustainable Catchments University of Southern Queensland | kamaljit.kaur@jcu.edu.au |
| Keisha Garcia | University of the West Indies, Trinidad and Tobago | kgarcia@thecropperfoundation.org |
| Kim Thi Thuy Ngoc | Ministry of Natural Resources and Environment (MONRE), Vietnam | kimthuyngoc@gmail.com |
| Koji Nakamura | Kanazawa University | kojink@staff.kanazawa-u.ac.jp |
| Leena Gupta | Society for Promotion of Wastelands Development (SPWD) | vlobo62@gmail.com |
| Lemohang Mtshali | Matsapha Town Council, Swaziland | lemo.mtshali@gmail.com |
| Lida Teneva | Conservation International | lida.teneva@gmail.com |



| | | |
|-----------------------------------|---|--|
| Lin Zhen | Institute of Geographic Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Sciences (CAS) | zhenl@igsnr.ac.cn |
| Luthando Dziba | Council for Scientific and Industrial Research, South Africa | LDziba@csir.co.za |
| Lyle Glowka | Convention on Migratory Species Office - Abu Dhabi, United Nations Environment Programme | LGlowka@cms.int |
| Mahmoud Soliman | Ministry of State for Environmental Affairs, Egypt | worldmody@hotmail.com |
| Maria Inzon | University of the Philippines Los Baños (UPLB) | mawen.inzon@yahoo.com |
| Maria Loureiro | Universidade de Santiago de Compostela | maria.loureiro@usc.es |
| Maria Victoria Espaldon | University of the Philippines Los Baños | voespaldon@yahoo.com |
| Mario Balzan | Institute of Applied Science, Malta College of Arts, Science and Technology (MCAST) | Mario.Balzan@mcast.edu.mt |
| Marion Potschin | School of Geography, University of Nottingham | Marion.Potschin@nottingham.ac.uk |
| Miren Onaindia | University of the Basque Country | miren.onaindia@ehu.es |
| Mohamed Ali Mlazaaha | Programme of Work on Protected Areas (PoWPA), Comoros | medaliml@yahoo.fr |
| NagLaa Lotfi Moustafa | Faculty of Agriculture, Suez Canal University | naglamag@yahoo.com |
| Nermin Wafa | League of Arab States | nermin.wafa@las.int |
| Neville Ash | UNEP | neville.ash@unep.org |
| Oudeika Ely | Ministry of Economic Affairs and Development, Mauritius | oudeika_ely@yahoo.fr |
| Patricia Falk-Fernandez | CALIDRIS Association | falkfernandez@gmail.com |
| Paulo Sinisgalli | Oceanographic Institute of the University of São Paulo | psinisgalli@usp.br |
| Prideel Majiedt | <i>South African National Biodiversity Institute (SANBI)</i> | P.Majiedt@sanbi.org.za |
| Rady Tawfik | King Faisal University | radytalaat@yahoo.com |
| Raed Bani Hani | Ministry of Environment, Jordan | ra_banihani@yahoo.com |
| Roy Haines-Young | School of Geography, University of Nottingham | Roy.Haines-Young@Nottingham.ac.uk |
| Saifeldin Hassan Mohamed Ahmed | League of Arab States | samyelfelaly@gmail.com |
| Salma Talhouk | American University of Beirut | ntsalma@aub.edu.lb |
| Salvatore Arico | UNESCO Biodiversity Initiative and UNESCO IPBES Team | s.arico@unesco.org |
| Sara Elfstrand | The Resilience and Development Programme (SwedBio), at Stockholm Resilience Centre, Stockholm University | sara.elfstrand@su.se |
| Sarala Khaling | ATREE Eastern Himalayas | sarala.khaling@gmail.com |
| Sue Yen Carrera | Caura Valley Village Council, Trinidad and Tobago | sueyen.carrera@gmail.com |
| Thong Mai Trong | Institute of Geography, Vietnam Academy of Science & Technology | thongmt@gmail.com |



| | | |
|-------------------------------|---|--|
| Tian-Xiang Yue | Institute of Geographic Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Sciences (CAS) | yue@reis.ac.cn |
| Utkarsh Ghatge | Covenant Centre for Development | ccdnorth@gmail.com |
| Victoria Esther Camac Ramirez | Asociación Ixacavaa for indigenous information and development | ecamac@gmail.com |
| Vytautas Narusevicius | Environmental Protection Agency, Lithuania | v.narusevicius@aaa.am.lt |
| Wahyu Indraningsih | Ministry of Environment, Indonesia | windraningsih@yahoo.com |
| Will Banham | UNEP-WCMC | Will.Banham@unep-wcmc.org |
| Xiangzheng Deng | Institute of Geographic Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Sciences (CAS) | dengxz.ccap@igsnrr.ac.cn |
| Zainab Khaleel Ibrahim | Center of sustainable management for natural ecosystems, Ministry of Environment, Iraq | Zainab_khaleel26@yahoo.com |
| Zhan Wang | Institute of Geographic Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Sciences (CAS) | wangz@igsnrr.ac.cn |
| Secretariat | | |
| Hilary Allison | UNEP-WCMC | Hilary.Allison@unep-wcmc.org |
| Claire Brown | UNEP-WCMC | Claire.Brown@unep-wcmc.org |
| Annabel Crowther | UNEP-WCMC | Annabel.Crowther@unep-wcmc.org |
| Matthew Ling | UNEP-WCMC | Matthew.Ling@unep-wcmc.org |