Capacity Building Workshop for Undertaking Ecosystem Assessments

Workshop Report

29 October – 2 November 2012

Forest Research Institute of Malaysia, Kepong, Malaysia

A Sub-Global Assessment Network workshop co-convened by UNEP-WCMC, ASEAN Centre for Biodiversity (ACB), Forest Research Institute of Malaysia (FRIM) and the Ministry for Natural Resources and Environment of Malaysia, with the support of the Norwegian Directorate for Nature Management

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Government of Norway

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1. Summary

In collaboration with the ASEAN Centre for Biodiversity (ACB), the UNEP Regional Office for Asia Pacific (ROAP), the Forest Research Institute of Malaysia (FRIM), and with support from the Norwegian Directorate for Nature Management, members of the SGA Network Secretariat convened a five-day capacity building workshop for representatives of the ten countries of the ASEAN Member States (AMS). The aim of this workshop was to enhance the familiarity with, and understanding of, the ecosystem assessment concept and methodology, such that the participants would have an increased understanding of how their individual countries can engage with the Inter-governmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES) process.

2. Background

People everywhere depend on ecosystems for their well-being. The services provided by ecosystems range from those easily recognised, such as provision of food and timber, to those less recognised, such as flood protection, carbon sequestration and spiritual benefits. These services collectively support human well-being (HWB) and allow for the achievement of long-term development goals, such as the Millennium Development Goals (MDGs). The findings of the Millennium Ecosystem Assessment (MA), including several sub-global assessments (SGAs), confirmed the increasingly important contributions of ecosystem services to HWB. The MA went further, emphasising that those most vulnerable to the degradation of ecosystem services are the world's poor who are often directly dependant on ecosystem services. Following the release of the MA many countries have been undertaking ecosystem assessments at different scales. Additionally, The Economics of Ecosystems and Biodiversity (TEEB) initiative has also been undertaken. TEEB made a valuable contribution to forwarding the knowledge base and, in particular, the valuation of ecosystem services. Following TEEB, many countries have also initiated country level studies. In essence there are many similarities between an ecosystem assessment and a TEEB-like study.

Developing capacity is essential for many regions to be able to carry out their own ecosystem assessments and TEEB-like studies. Under the Intergovernmental science-policy Platform for Biodiversity and Ecosystem Services (IPBES), capacity building has been highlighted as an important component of any work programme that is to be developed under the Busan Outcome. A meeting jointly convened by the Governments of Brazil and Norway in 2011 to discuss capacity building and IPBES identified a number of key findings. Specifically, in relation to assessments, it was recognised that: i) there was potential to build on work already developing in the follow-up to the MA and TEEB; ii) SGAs have the potential to deliver meaningful results at the appropriate scale to decision-makers; and iii) and there is already an SGA network in place that can help support countries and improve access to existing experience and tools. The workshop further recognised that the assessment *process* was just as important as the product in terms of developing in-country capacity.

The activities of IPBES have a regional approach, and while they have yet to be formally defined and agreed, there is an agreement amongst countries for regional assessments to be carried out. The SGA Network is also currently supporting regional hubs of practitioners. At the 2012 IPBES meeting in Panama concerning IPBES and its establishment, only 4 countries from a total of 10 from the ASEAN region engaged. With a strong UNEP Regional Office, and potential partners such as the ASEAN Centre for Biodiversity and a small existing network of ecosystem assessment practitioners, the ASEAN region would potentially be able implement outputs from the project and utilise capacity developed to further carry out activities under IPBES.

3. Workshop Objectives

This primary objective of this workshop is to bring together participants from across the ASEAN Member States (AMS) to assist their engagement in the IPBES process through capacity building.

More specifically, the objectives of the workshop are for representatives of the AMS to:

1. Have an understanding of the basic concepts of an ecosystem assessment and be able to illustrate both the value and rationale for undertaking one.
2. Gain new ideas and inspiration about how an ecosystem assessment can be used to instigate policy and behavioural change.
3. Obtain information on how ecosystem assessments fit into the international scene, including IPBES and other international processes and obligations.
4. Have the opportunity to contribute to a 'needs assessment' of AMS that will help identify approaches for initiating national and regional assessments.

Day 1

4. Setting the scene

4.1 Welcome

The workshop was officially opened by the Undersecretary of the Biodiversity and Forestry Management Division of the Ministry of Natural Resources and Environment (Malaysia), Ms. Wan Hasmah Wan Mohd. Opening remarks were also presented by the SGA Network Secretariat; Dr Saw Leng Guan of FRIM; Dr Clarissa Arida of the ASEAN Centre for Biodiversity; and Dr Nina Vik of the Norwegian Directorate for Nature Management.

4.2 Introductions

Following on from the round of formal introductions to the workshop, the participants were asked to take part in an interactive self-assessment session to evaluate how they rated their personal understanding of the assessment process, and several questions exploring how 'ready' their individual countries were to carry out an ecosystem assessment. By voting with their feet, the workshop participants would form a 'human histogram' by positioning themselves along an imagined axis, depicting their answers to the questions asked. The following questions were posed to the group:

- Question 1: [Do] I understand what an ecosystem assessment is [?]
- Question 2: How much information is available in my country on ecosystem assessments and how they feed into regional/global processes?
- Question 3: How ready is my institution for implementing or contributing to an assessment?
- Question 4: How confident am I in taking an assessment forward in my country?

Some of the responses to these questions are shown in the slides below.

Self Assessment

Q2: How much information is available in my country on ecosystem assessments and how they feed into regional/global processes?

Very little — *Very rich information availability*

Self Assessment

Q4: How confident am I in taking an assessment forward in my country?

Not at all confident ⟷ *Very confident*

4.3 Presentations

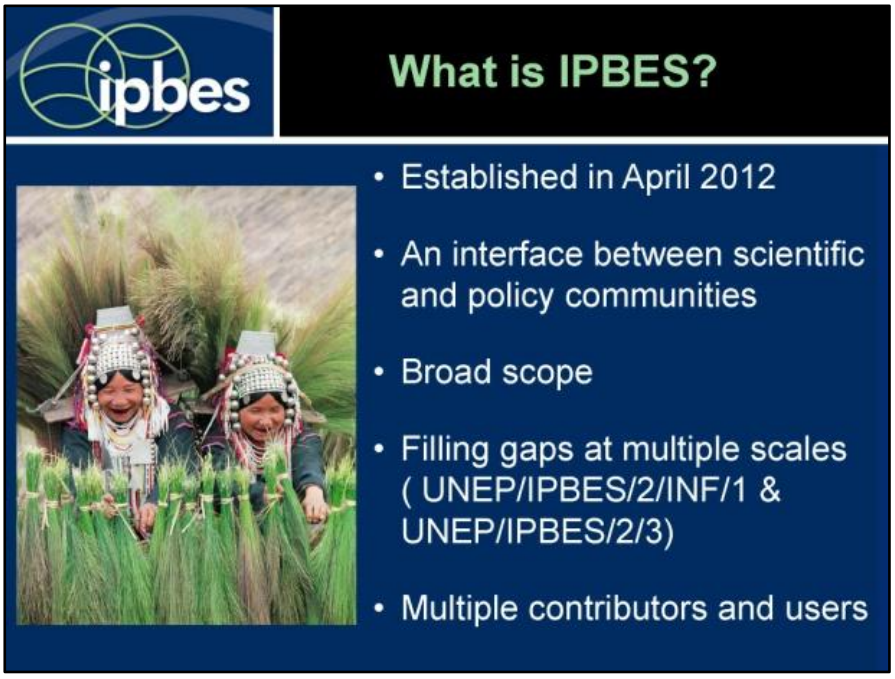
4.3.1 Setting the assessment landscape

Following the Opening Session participants heard a number of presentations which collectively aimed at setting the global context for the workshop.

Jinhua Zhang (UNEP-Regional office for Asia and the Pacific) gave a presentation on the Global Environment Outlook (GEO) process which provides a state and trends analysis of the global environment, outlooks and policy options to inform decision making. Jinhua highlighted the recent publication of the GEO5 report.

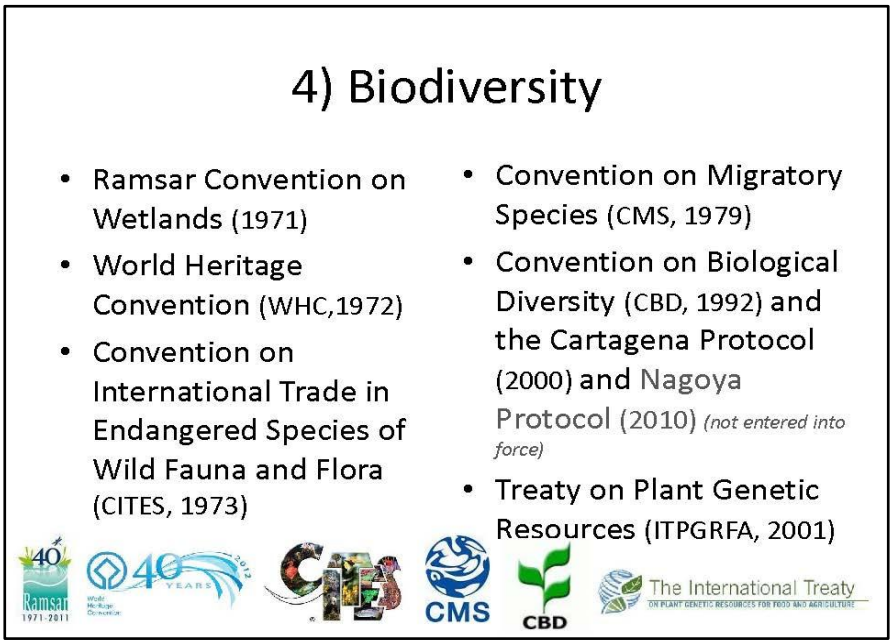
4.3.2 The Intergovernmental Platform on Biodiversity and Ecosystem Services

Due to technical difficulties Lucy Wilson (UNEP-WCMC) presented slides compiled by Solene Le Doze-Turvill (UNEP-DEPI) on the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES). A brief update was given on the recently established platform and gave an overview of potential activities that could take place under the four areas of work (knowledge generation, assessments, supporting policy formulation and implementation and capacity building) of IPBES.



4.3.3 Other Multilateral Environmental Agreements and the Sub-Global Assessment Network

A brief introduction to Multilateral Environmental Agreements (MEAs) was given by Nina Vik (Norwegian Directorate for Nature Management). MEAs form the over-arching international legal basis for global efforts to address particular environmental issues. MEAs were described in turn under the following categories: atmosphere, land, water, biodiversity, and chemicals and waste. The link between MEAs and IPBES was also outlined.



Lucy Wilson gave an overview of the Sub-Global Assessment Network, which is a platform for practitioners involved in ecosystem assessments at a range of scales to promote and facilitate improved capacity in undertaking and using assessments. Who the network is aimed at and the types of activities undertaken were outlined. These included understanding assessment approaches, communication and information exchange, regional hubs as well as supporting relevant global processes such as IPBES and the MEAs.

5. What is an Ecosystem Assessment?

5.1 Introduction

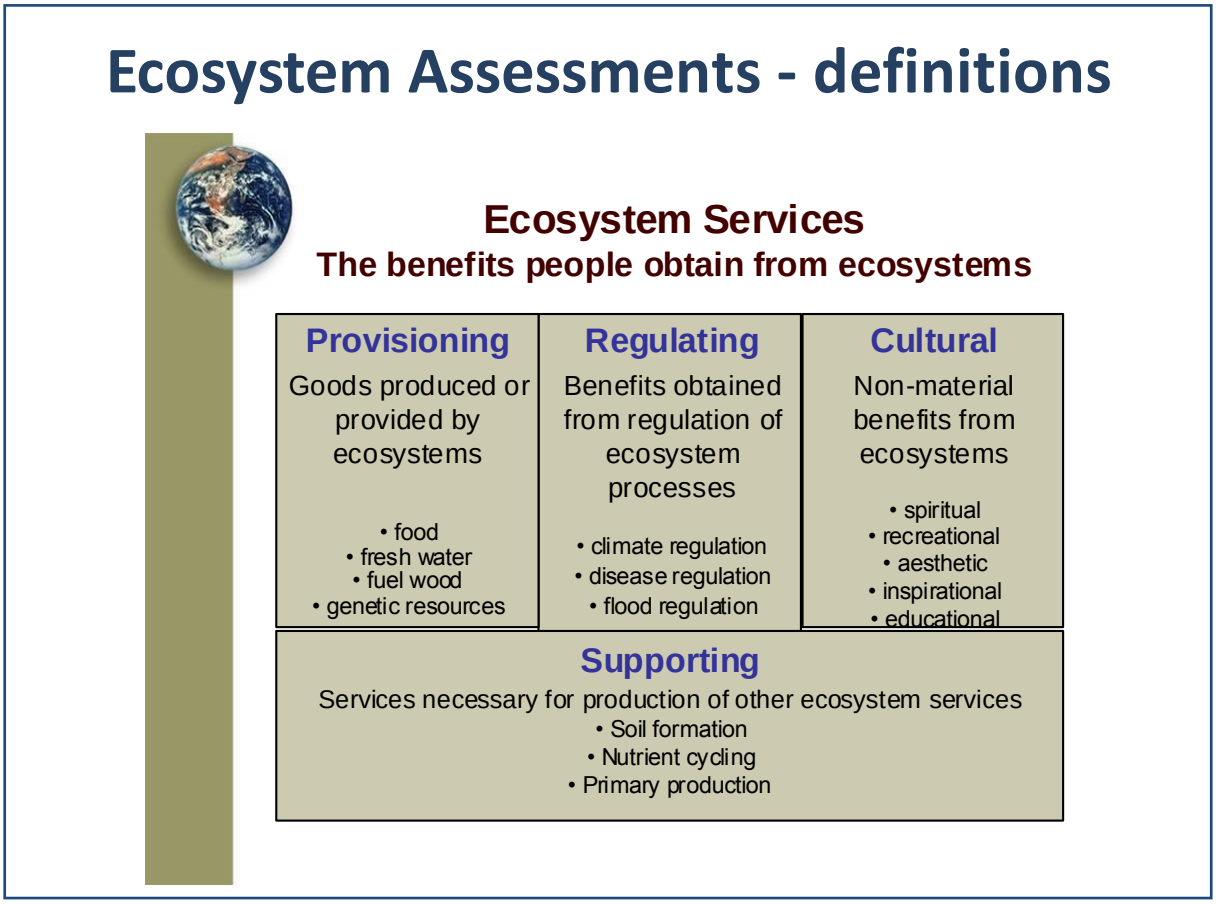
Megan Tierney opened this session by introducing a short exercise for the meeting participants to carry out. The exercise was designed to allow participants to share their thoughts on what ecosystem service assessments are and what constitute their key components. Specifically, the participants were asked to identify their thoughts and understanding of:

- A definition of an ecosystem service assessment.
- Why might an ecosystem assessment be undertaken – i.e. how might the results be used?
- What might be some key data types that are needed to undertake an assessment?
- Who might be involved in undertaking an assessment?
- How are ecosystem services and human well-being linked?

The participants were asked to write their answers to these questions on different coloured index cards. This was followed by a report back session where participants were able to volunteer their thoughts to the rest of the group.

Following on from this exercise, Megan worked through some of the key concepts and definitions of ecosystem services and ecosystem service assessments, making reference to the accepted standard key terms such that all participants shared a common understanding. Included within this section

was a brief outline of the four categories of ecosystem service – provisioning, regulating, supporting and cultural – defining how they are classified and providing some examples of each type of ecosystem service (as shown in the slide below). In addition to these definitions, some information framing the need to conduct ecosystem assessments, the benefits they deliver, the role they play in decision making, and the conceptual link between ecosystem services and HWB were outlined.



The introduction to "What is an ecosystem assessment?" was concluded by presenting the ecosystem assessment framework (see Fig. 1). Megan briefly ran through the key components of the framework, presenting the stages that would be focused upon over the remainder of the workshop: the exploratory, design, and implementation stages, and communication and outreach.

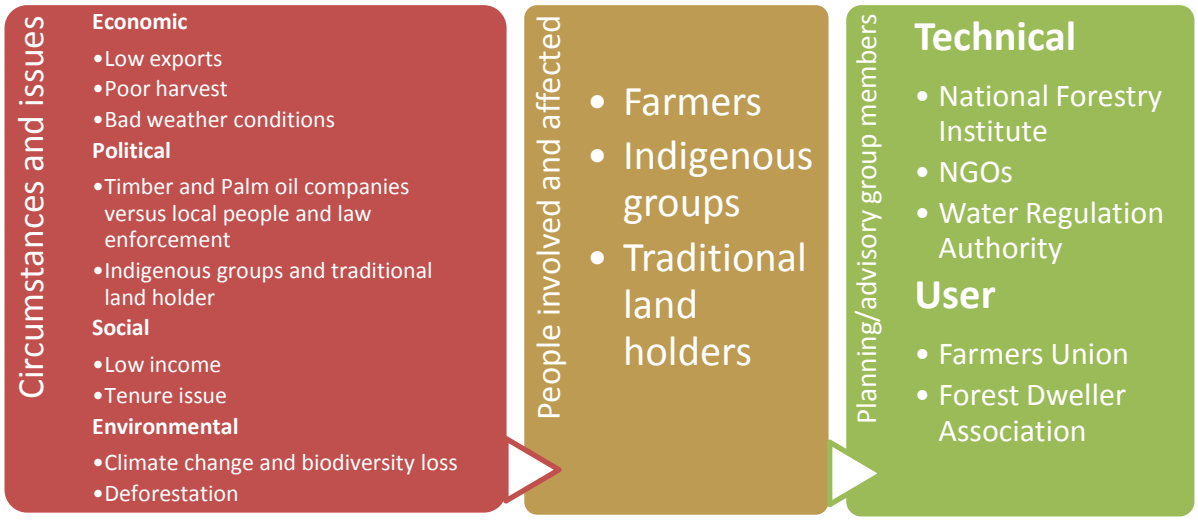
6. Workbook 1: The Exploratory Stage

The final session of Day 1 focussed on the first stage of the ecosystem assessment framework: the exploratory stage. The main components of the exploratory stage were outlined, and special emphasis was placed on the importance of setting the scope of the assessment, thus ensuring that the process remains demand-driven and relevant to policy needs.

6.1.1 Exercise 1.1 Determining the need for an assessment

Following on from this brief opening, the workshop participants were introduced to their fictional countries – Bromava, Ellensia, Panlusia, Samlo and Tandino – these would serve as the breakout groups of the workshop for the remainder of the week. In these groups the workshop participants were set various tasks all relating to 'Azwen Phan', a fictitious scientific advisor from the Ministry of Environment of their respective countries, for example, Panlusia.

In the first exercise, participants were tasked with considering the most important circumstances and issues relating to their countries; who might be affected by these factors; and what types of people might be considered for inclusion on planning and advisory groups for any potential ecosystem assessment: this information was presented to the participants in country fact-files. Below are the responses/answers put forward by Panlusia.



6.1.2 Exercise 1.2 Determining stakeholder priorities

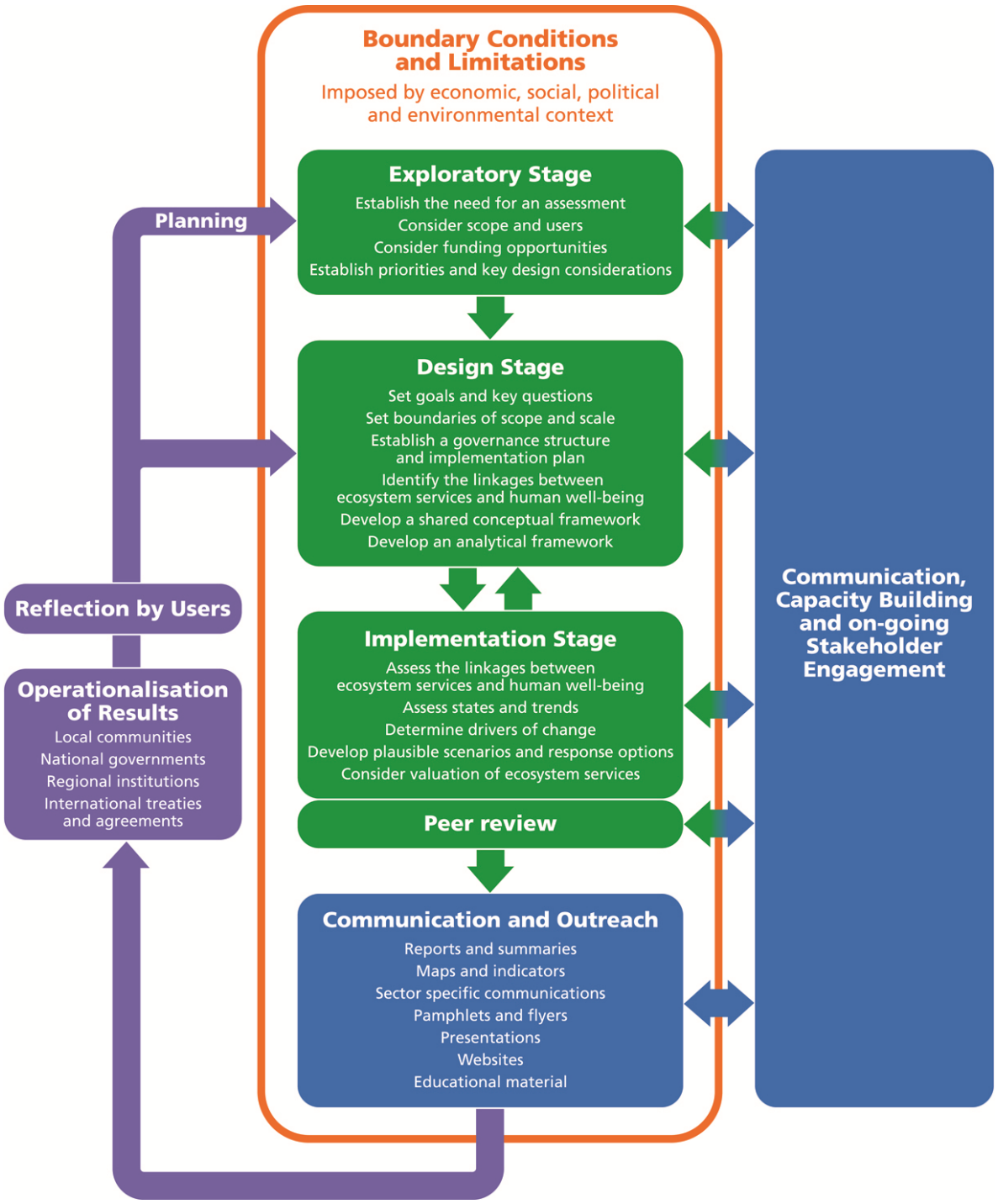
Working through the exploratory stage, the participants were next introduced to the concept of stakeholder priorities and made aware of its importance, emphasising that "an assessment can be defined by its intended audience and users". Reference was also made to the importance of stakeholder engagement and securing their 'buy-in', factors that are central in generating ownership of the assessment, which consequently leads to a sense of value and uptake.

Exercise 1.2 painted a scenario whereby Azwen and her team had organised a stakeholder workshop in order to present the ecosystem assessment concept and to provide an opportunity for stakeholder engagement to garner thoughts, ideas and concerns. The workshop participants were tasked with considering the opinions of the stakeholders and suggesting as to how the proposed ecosystem assessment could meet each of their needs. Some example answers from the participant's of Samlo are shown in Table 1 below.

Stakeholder	[Ecosystem Assessment] Use
WWF	Reduce loss of Nanka Deer (a national heritage)
Traditional Forest Dwellers Association	Resolve the problems of land tenure rights
Ministry of Economic Development and Trade	Increase GDP
Water Regulation Authority	Watershed management
Farmer's Union	Land use management, soil and water management, improve productivity and reduce costs
National Forestry Institute	Sustainable forest management

Table 1: Responses to Exercise 1.2 from the participants of 'Samlo'

Figure 1: The ecosystem assessment framework

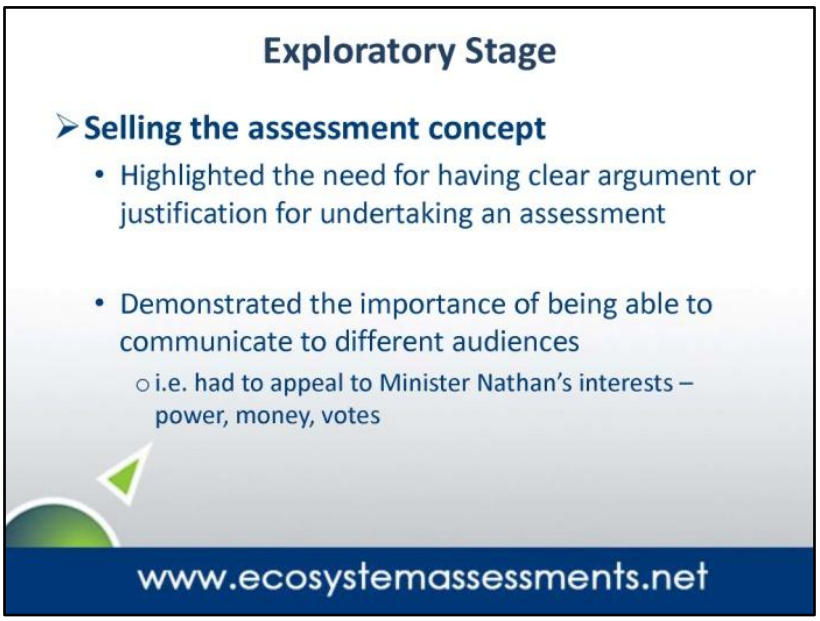


Day 2

6.2 The Exploratory Stage Continued

6.2.1 Exercise 1.3 Selling the assessment concept

To introduce this exercise Lucy Wilson gave examples of why there might be a need for an ecosystem assessment, for example, due to poor levels of governance of natural resources. It was highlighted that selling the assessment concept is key to generating awareness and interest and for the stakeholders to feel ownership from the early stages. Gaining high-level buy-in as a potential source of funding is also especially valuable.



Participants were asked to plan a one-minute-long, persuasive speech to sell the concept of an ecosystem assessment in their fictional country to a high-level Government figurehead they bumped into in an elevator. Each group then took it in turns to play out their role play.

A range of responses were given during the exercise drawing on the country's current environmental, social and economic issues. Table 2 provides a selection of these responses.

Table 2: Reasons for conducting an ecosystem assessment

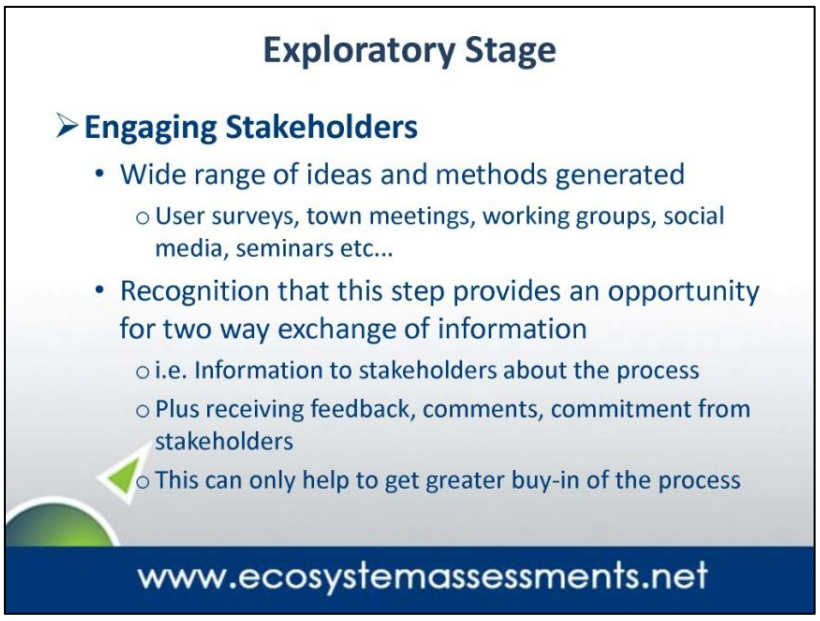
An ecosystem assessment should be conducted because.....
an improved understanding the state of the ecosystems would enable proper / sustainable management of natural resources
it would enable a value to be put on natural capital which is linked to people's well-being and happiness....which would get you votes in the next election
it would provide a data inventory
it would build confidence amongst stakeholders and avoid conflicts
it would address flooding through a watershed management approach
it would help to promote ecotourism by conserving biodiversity and therefore boost the economy
it would provide more information on issues such as water and land tenure

A member of the Tandino group questioning a 'Minister'

Bromava conducting their role play

6.2.2 Exercise 1.4 Stakeholder engagement

Having successfully convinced the high-level Government figurehead to fund further exploration of conducting an ecosystem assessment the next step in the Exploratory Stage is to define the key questions an assessment hopes to address. Participants learnt that the questions should be identified in close consultation with stakeholders so the outcomes of the process would be of most use to those drawing on the findings. Participants were asked to discuss in their groups possible techniques for consulting with stakeholders.

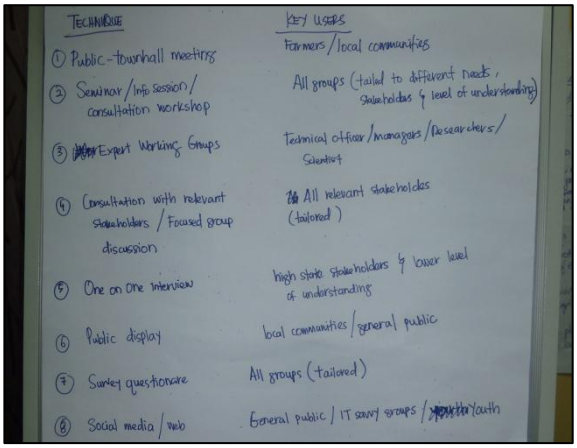


The groups reported a variety of techniques. Some groups considered more technical methods such as a survey of land use conversion and GIS remote sensing. Table 3 shows a selection of ways different stakeholders could be consulted.

Table 3: Consultation of Stakeholders

Technique	Key users engaged
One-to-one interview	High state stakeholders with lower level of understanding
Public town hall meeting	Farmers / local communities
Workshop / seminar	Researchers and academics
Participatory techniques	Key sectors
Questionnaire	Local communities

The Samlo Group discussing techniques for consulting stakeholders

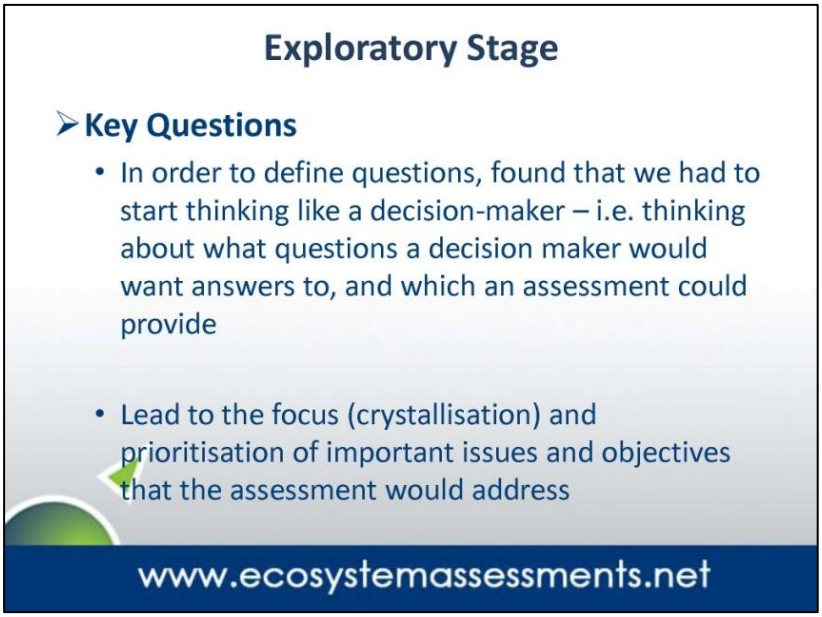


Bromava's list of techniques and key users

6.2.3 Exercise 1.5 Key questions

The next exercise focused on the importance of ensuring key questions identified were policy relevant. Questions should be asked by a user group, an audience or a decision maker. Key questions from the UK National Ecosystem Assessment were shown to illustrate the point.

Participants were asked to consider the country's national priorities and key users' needs when suggesting possible key questions.



The groups suggested a wide range of questions, some being more high-level, over-arching questions about ecosystem services provision while others were much more specific, focusing on a particular economic or social problem where an ecosystem assessment could help to inform decision making around these issues. Table 4 lists some of the suggested key questions.

Table 4: Key questions identified by the participants

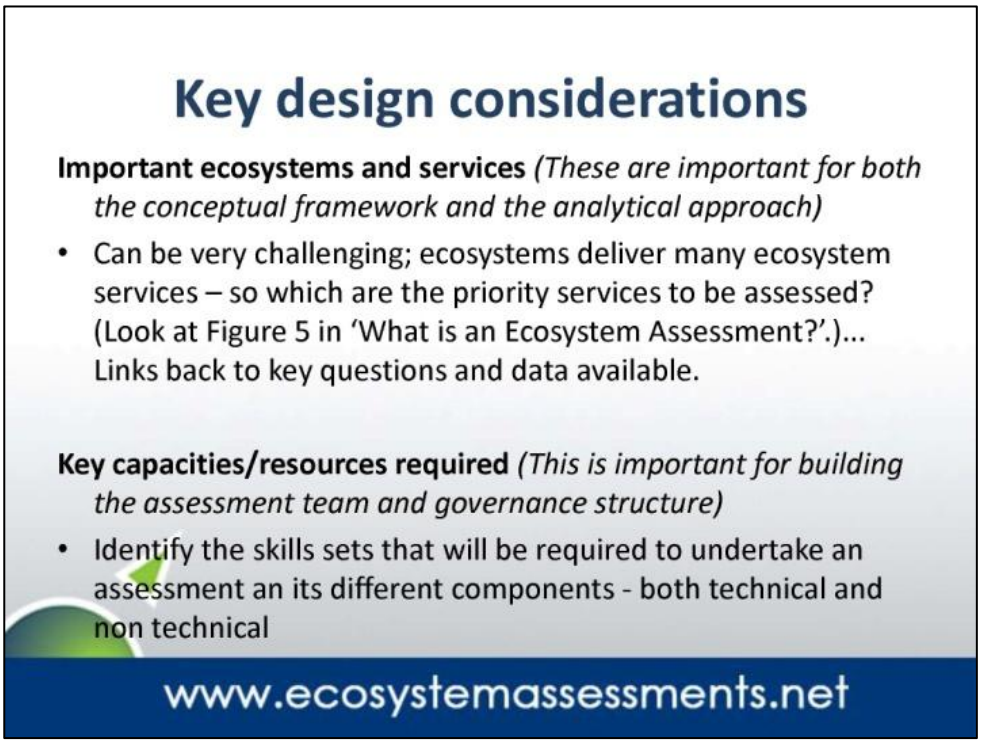
What is the trend and status of water quality and supply in Tandino?
What are the benefits of conducting sustainable tourism?
What is the potential of ecosystem services to enhance the economy in Ellensia?
How can we reduce our dependency on crop export?
How can we improve harvest in the long-term?
How can we secure land ownership?
How can we increase the value of Samlo's natural heritage to attract tourists?
What is the potential of the country's biodiversity in creating new revenue for its economy?

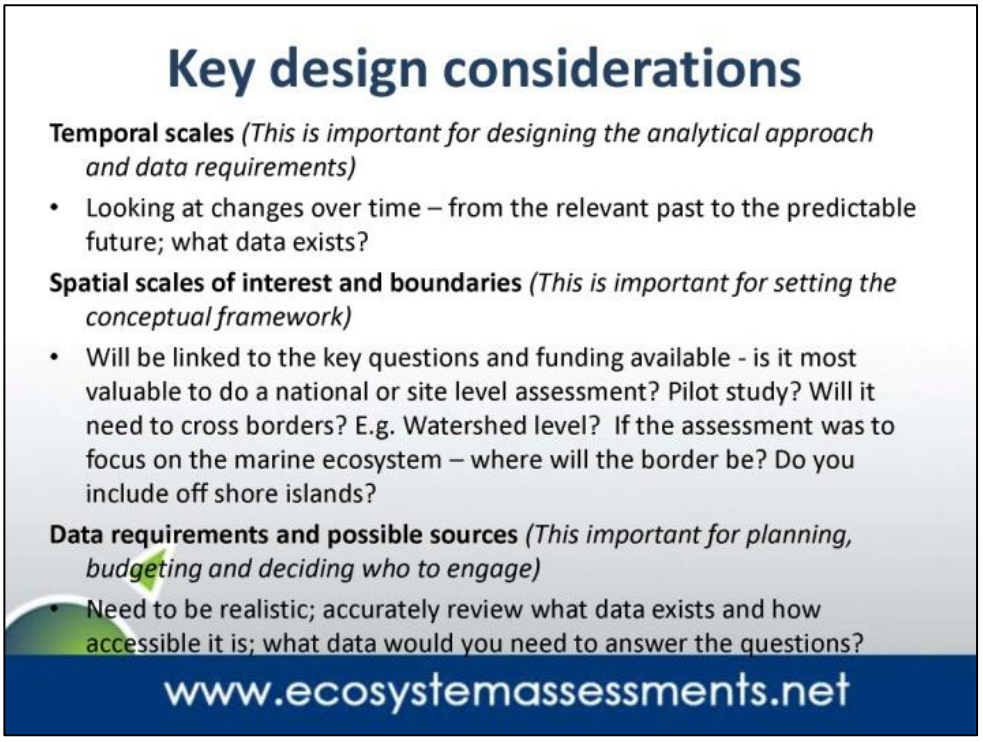
Groups discuss their policy-relevant key questions

Participants identify questions to address Samlo's economic issues

6.2.4 Exercise 1.6 Key design considerations

Participants were given insight into the many key considerations when designing an ecosystem assessment and that these should be discussed with established Technical and User Groups to ensure the plan is feasible and that the right stakeholders are engaged. Five considerations were introduced: *Key capacities / resources required*; *Spatial scales of interest and boundaries*; *temporal scales*; *important ecosystems and services*; and *Data requirements and possible sources*. Participants were then asked to discuss *important ecosystems and services* and one other consideration in more detail.





All groups selected Forest as one of their key ecosystems and most groups identified that a range of provisioning (P), regulating (R), supporting (S) and cultural (C) services would be important in the assessment. Four out of the five groups chose to discuss '*Data requirements and possible sources*' as their second consideration. This may have been because the key considerations were introduced quite briefly and more information may have been required to give the participants a greater understanding of the issues around each of the considerations. The data consideration was less unambiguous. Table 5 displays a selection of responses.

Table 5: Key design considerations

Important ecosystems and services		
Bromava	Forest & Agriculture	• Food, water, raw materials (P) • Climate regulation (R) • Moderation of water flows (R) • Erosion prevention (R) • Maintenance of genetic diversity (S) • Lifecycle maintenance (S) • Aesthetic enjoyment (C) • Recreation and tourism (C)
Data requirements and possible sources		
Panlusia	Have got	Climate data, land use data, socio-economic data, demographic data, tourism statistics, hydrology, soil maps, timber / agriculture production data
	Have not got	Maps of frequently flooded areas or areas with resource-use conflicts, uptake land ownership data, critical tourist sites, areas with legal/illegal logging, update on endangered species data
	Potential sources of data	Forestry & Agricultural Department, land authority, meteorological department, wildlife, trade and economic department, discharge rates and capacities
Key capacities/resources required		
Samlo	• GIS resources • Land survey dept, modelling, survey maps, funds • Manpower for project – project manager, GIS expert, economist, biologist, policy expert • Stakeholders – forest dwellers, local community • Multi-layer maps, topography, land use	

Samlo reporting back on the key ecosystems, services and capacities they would need to consider for an ecosystem assessment

7. Workbook 2: The Design Stage

7.1 The Design Stage

In the afternoon session of the second day Matthew Ling (UNEP-WCMC) delivered an introduction to the Design Stage of the assessment process (see the Ecosystem Assessment (EA) Framework – Fig. 1). This outlined the need for those in charge of organising the assessment to consider the governance structure, content, and process for implementing the work-plan, and emphasised the fact that a thorough design phase, including consideration of funding and the ongoing engagement of users, is a key step in eventual success of the assessment process.

7.1.1 Exercise 2.1 Governance structure

Expanding on the Governance Structure component of the Design Stage, Matthew highlighted in his introduction the role which an effective governance structure can play during the ecosystem assessment process, the importance it can have in securing user engagement, raising funds and overseeing progress, and provided some examples of the types of individuals and organisations that might be included in a governance structure and how they may be organised (see Table 6 below).

Table 6: Examples of potential members and groups of the governance structure for an ecosystem assessment

Examples of individuals/groups to involve in the governance structure	Examples of sub-divisions of the governance structure
Village leaders	Technical steering committee
Scientists and scientific institutions	Assessment panel
Technical experts	User committee and board
Political leaders or representatives	Advisory group

Exercise 2.1 was then introduced, whereby the participants were invited to think about whom they might want to include in the governance structure for each of their fictional countries, what the roles and responsibilities of these people might be, and what skills and characteristics those individuals and organisations might possess and be able to bring into the assessment (see Table 7). Following on from the identification of the individuals and organisations and their respective qualities, the participants were asked to consider how these people might be grouped or organised and where, if at all, any linkages might exist between these groups (see Fig. 2).

Table 7: Some examples of responses from participants to Exercise 2.1

Group	Roles and responsibilities	Desirable skills and characteristics	Suggested by
Project manager	Co-ordination and management of project	Strong leadership, Experienced with good overall view of project	**Samlo**
Steering committee	Guidance, Monitor and oversee the process	Committed, up to date with the policy issue	**Ellensia**
Co-ordinating secretariat	Administration, Project management, Oversight	Independent project management experience,	**Tandino**

	of the assessment process	Good communicators	
Technical working group	Collate, process, summarise and report	-	**Panlusia**
Communication and outreach	Information dissemination and stakeholder engagement	Good public relations, innovative and creative	**Bromava**

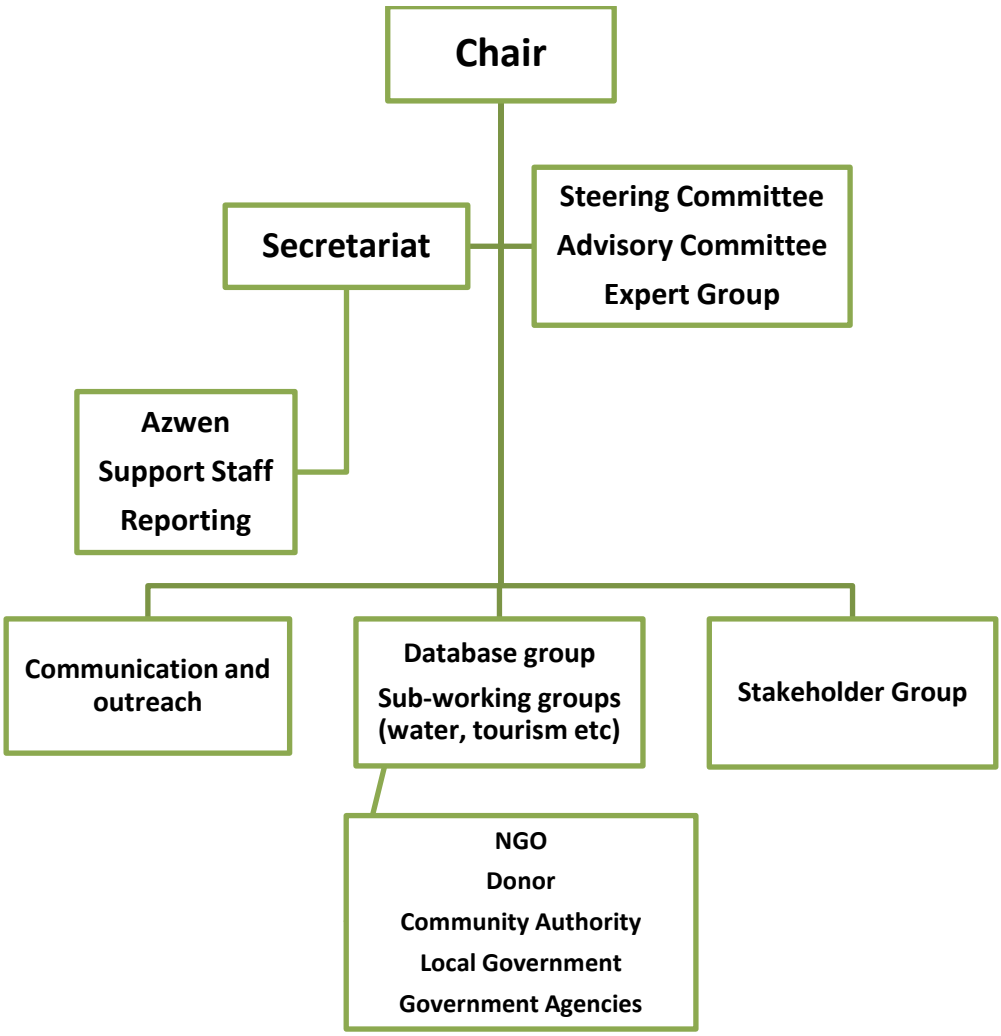


Figure 2: Governance structure (Exercise 2.1) for the ecosystem assessment of Bromava

Table 8: Governance structure (Exercise 2.1) for the ecosystem assessment of Ellensia

Group	Roles and responsibilities	Desirable skills and characteristics
Coordinating secretary		
Technical Group; Scientist; Economist; Academic	Undertaking the technical process	Professional and experts
Steering Committee; Government; Funders	Guidance Monitor and oversee the process	Committed Up to date with the policy issue
User group; Local people (e.g. farmers); NGO	Sharing knowledge / info	Transparency Mutual understanding

Some of the groups set about identifying key groups on post-it notes and positioning them on the flipcharts in a cascade or flow-diagram structure indicating the hierarchical structure of the proposed governance structure (as shown by Bromava in Fig. 2 above). Other groups decided to plan their governance structures in tabular format (as in the case of Ellensia in Table. 8 above), setting out the individuals or groups, their roles and responsibilities, and the desirable skills and characteristics these groups might bring to the assessment process.

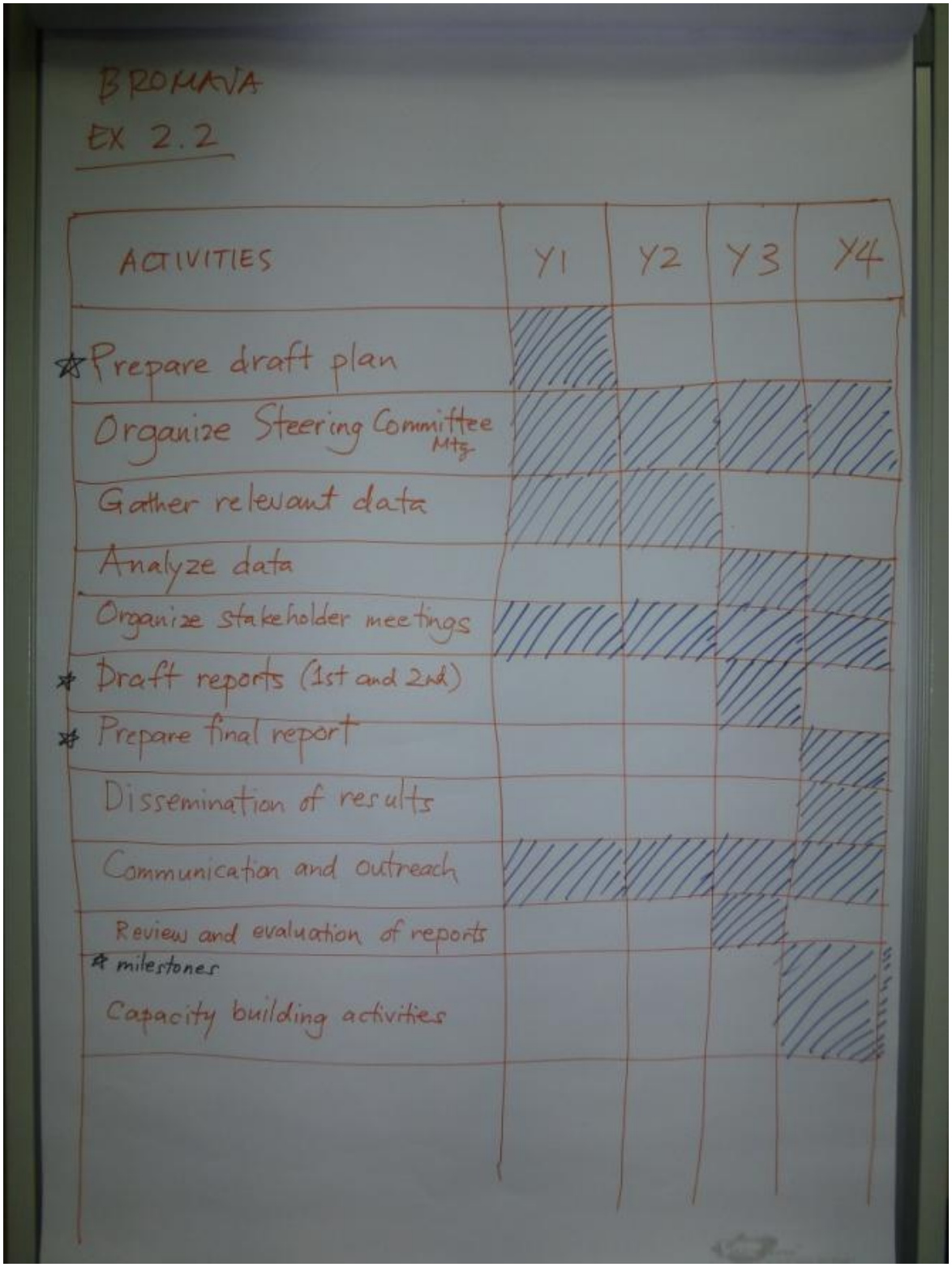
7.1.2 Exercise 2.2 Work plan

Focus then moved onto Exercise 2.2. The workshop participants were tasked with identifying important activities and milestones for each of the four stages of the Ecosystem Assessment Framework, and to then include these on a time-line with the aim of putting together a draft schematic work-plan for the ecosystem assessment (Table 9). Matthew highlighted the importance that a clear work-plan has in the assessment process, stating that a clear work-plan can:

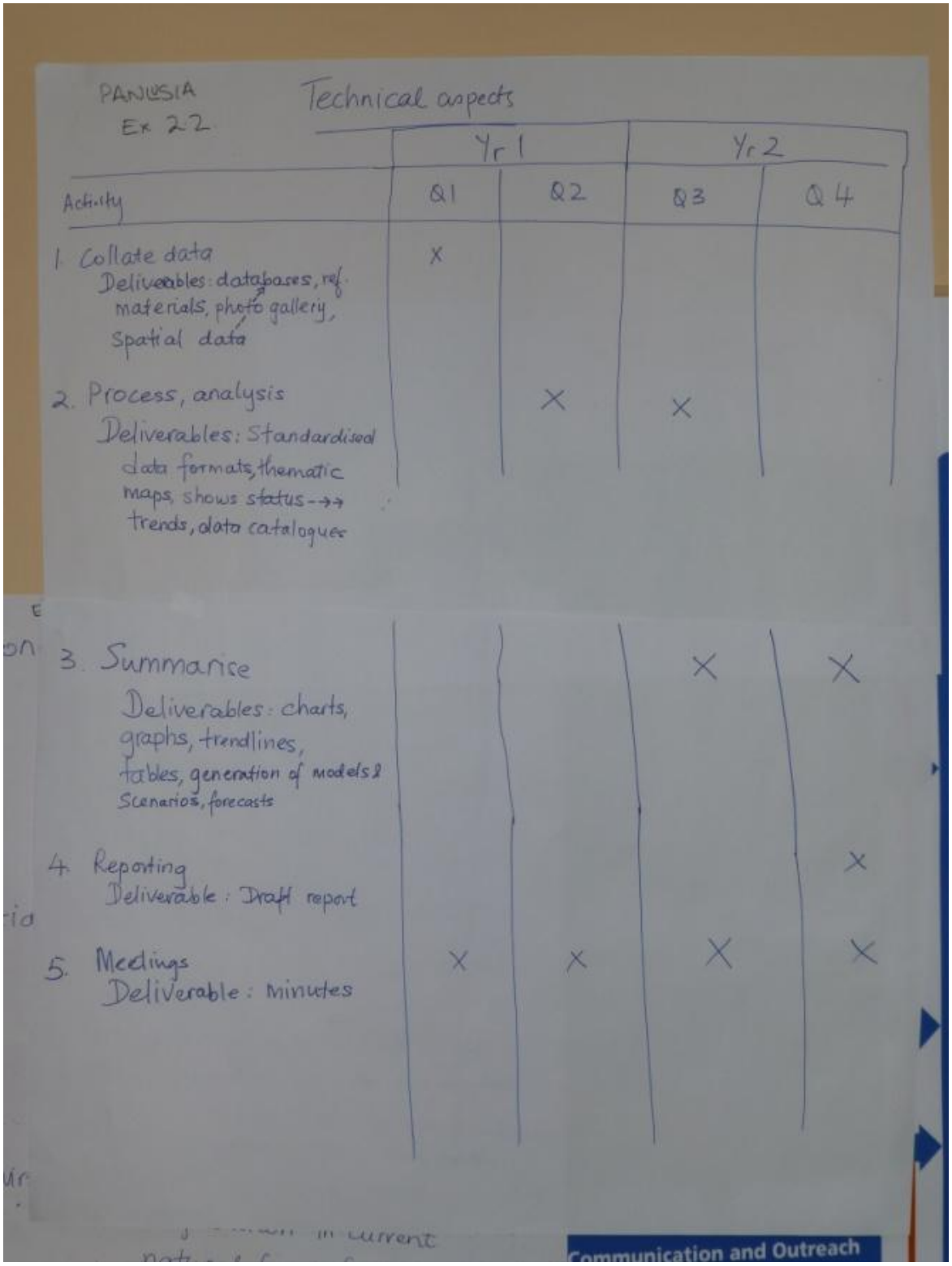
- Help to minimise problems and address issues that may arise;
- Help with conflict management and resolution;
- Identify sources of information and processes for peer review; and
- Can help to integrate different work-streams into a single coherent product

Table 9: Participants' responses to Exercise 2.2 – designing a draft schematic work-plan

Work plans
Bromava



Panlusia



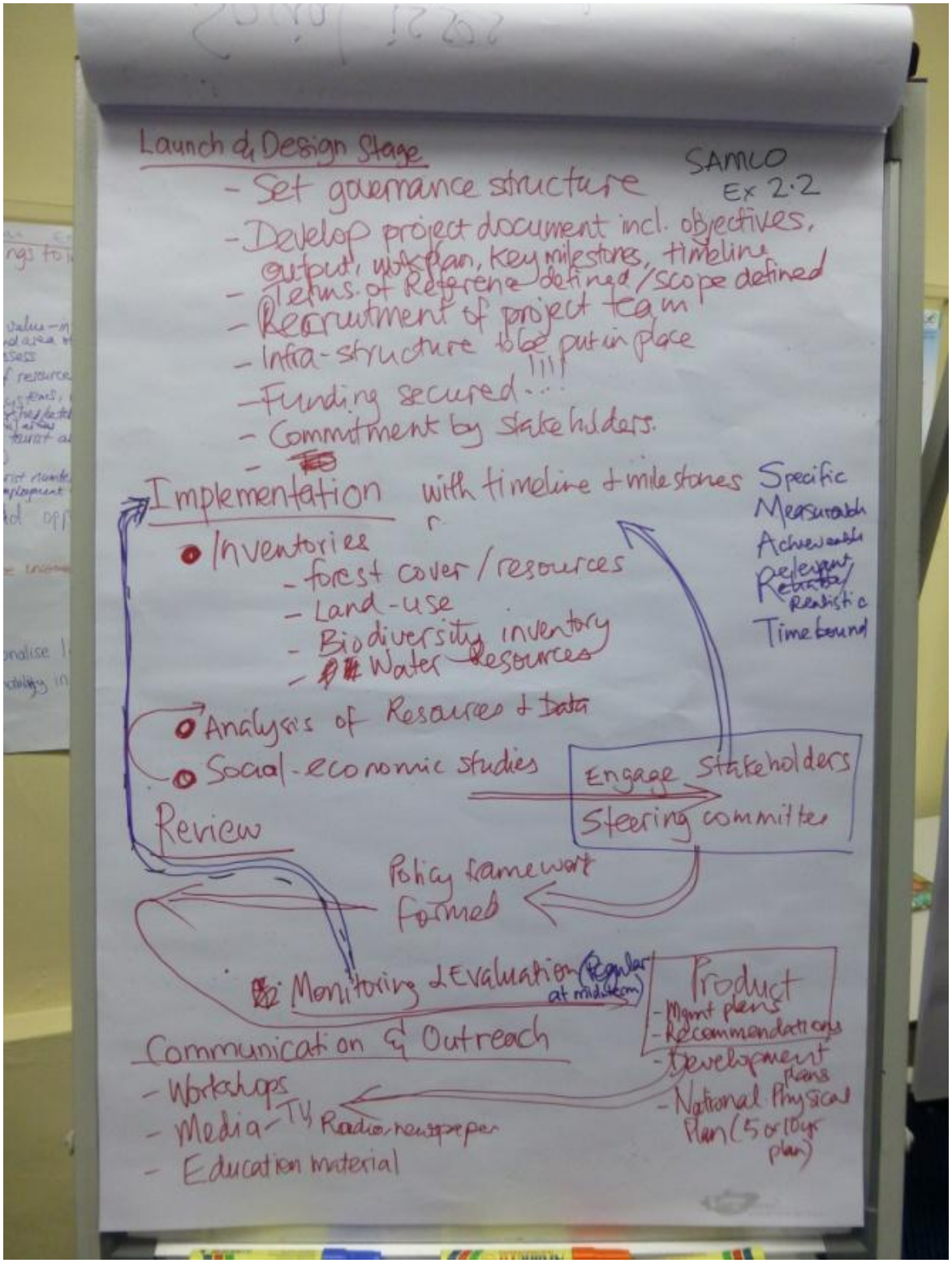
PANLUSIA
Ex 22

Technical aspects

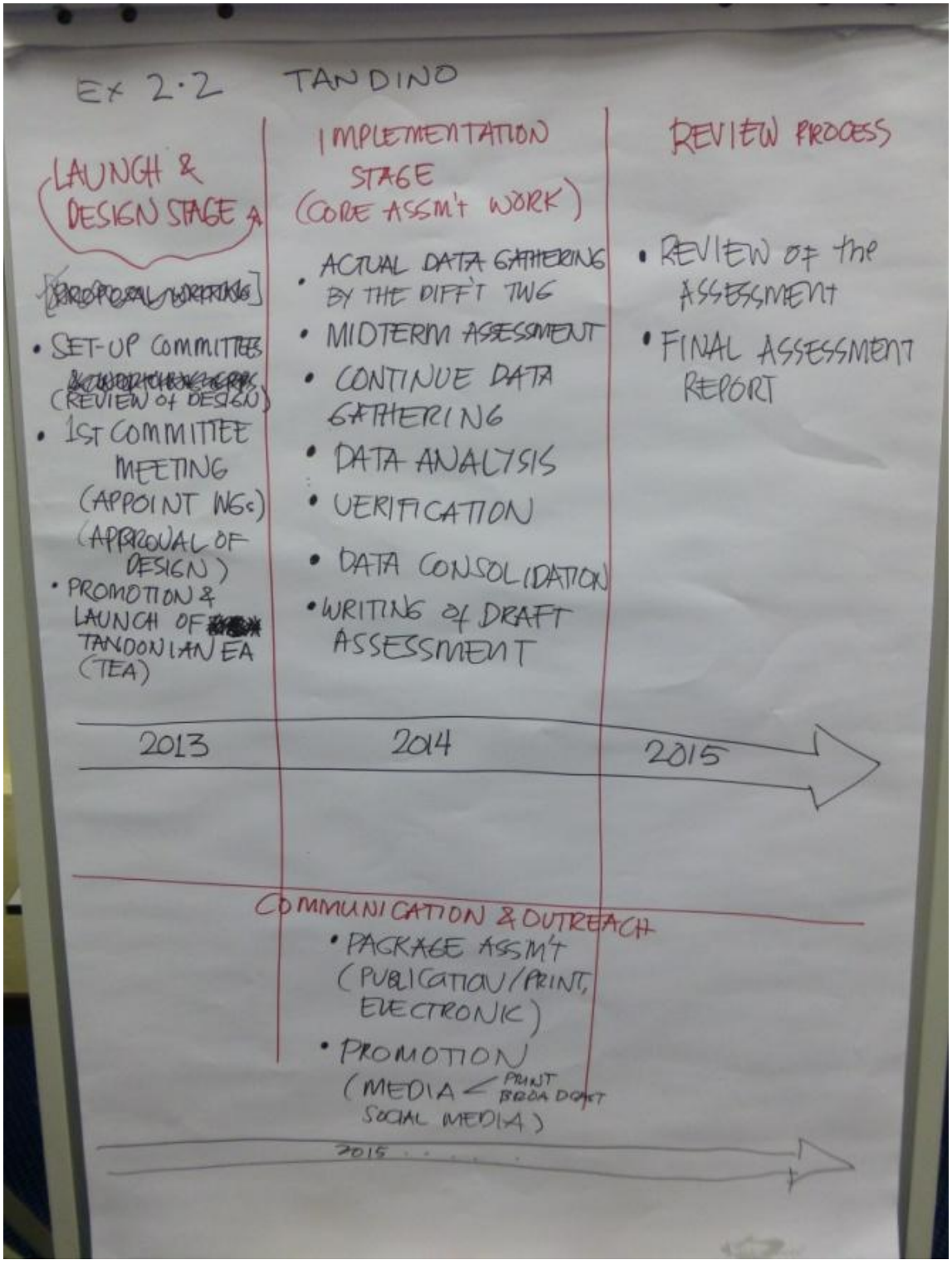
Activity	Yr 1 Q1	Yr 1 Q2	Yr 2 Q3	Yr 2 Q4
1. Collate data Deliverables: databases, ref. materials, photo gallery, spatial data	X			
2. Process, analysis Deliverables: Standardised data formats, thematic maps shows status→→ trends, data catalogues		X	X	
3. Summarise Deliverables: charts, graphs, trendlines, tables, generation of models/ scenarios, forecasts			X	X
4. Reporting Deliverable: Draft report				X
5. Meetings Deliverable: Minutes	X	X	X	X

Communication and Outreach

Samlo


Launch & Design Stage
SAMLO
Ex 2.2
- Set governance structure
- Develop project document incl. objectives, output, work plan, key milestones, timeline
- Terms of Reference defined / scope defined
- Recruitment of project team
- Infra-structure to be put in place
- Funding secured...
- Commitment by stakeholders.
-
Implementation with timeline & milestones
Specific
Measurable
Achievable
Relevant
Realistic
Time bound
Inventories
- forest cover / resources
- Land-use
- Biodiversity inventory
- Water resources
Analysis of Resources & Data
Social-economic studies
Engage Stakeholders
Steering committee
Review
Policy framework formed
Monitoring & Evaluation (Regular at mid-term)
Product
- Mgmt plans
- Recommendations
- Development plans
- National Physical Plan (5 or 10yr plan)
Communication & Outreach
- Workshops
- Media - TV Radio newspaper
- Education material

Tandino


EX 2·2 TANDINO
LAUNCH & DESIGN STAGE
• SET-UP COMMITTEES (REVIEW of DESIGN)
• 1ST COMMITTEE MEETING (APPOINTING) (APPROVAL OF DESIGN)
• PROMOTION & LAUNCH OF TANDONIAN EA (TEA)
IMPLEMENTATION STAGE (CORE ASSM't WORK)
• ACTUAL DATA GATHERING BY THE DIFF'T TWG
• MIDTERM ASSESSMENT
• CONTINUE DATA GATHERING
• DATA ANALYSIS
• VERIFICATION
• DATA CONSOLIDATION
• WRITING of DRAFT ASSESSMENT
REVIEW PROCESS
• REVIEW of the ASSESSMENT
• FINAL ASSESSMENT REPORT
2013
2014
2015
COMMUNICATION & OUTREACH
• PACKAGE ASSM't (PUBLICATION/PRINT, ELECTRONIC)
• PROMOTION (MEDIA ← PRINT BROADCAST SOCIAL MEDIA)
2015

Day 3

7.2 The Design Stage Continued

Following a brief recap of Day 2, Megan Tierney proceeded with outlining the objectives for Day 3, and commenced with the design stage of the ecosystem assessment framework.

7.2.1 Exercise 2.3 Conceptual framework

Megan delivered a section on conceptual frameworks in ecosystem assessments; specifically focussing on what they are, why they are needed and why they are important.

Conceptual frameworks are used to:

- Organising the thinking;
- Understand complexities, interconnections and trade-offs;
- Overcome paralysis by detail;
- Achieve consensus and communication;
- Cross boundaries of different forms of knowledge;
- Set and refine questions for the assessment; and
- Define the linkages between ecosystem services and human well-being.

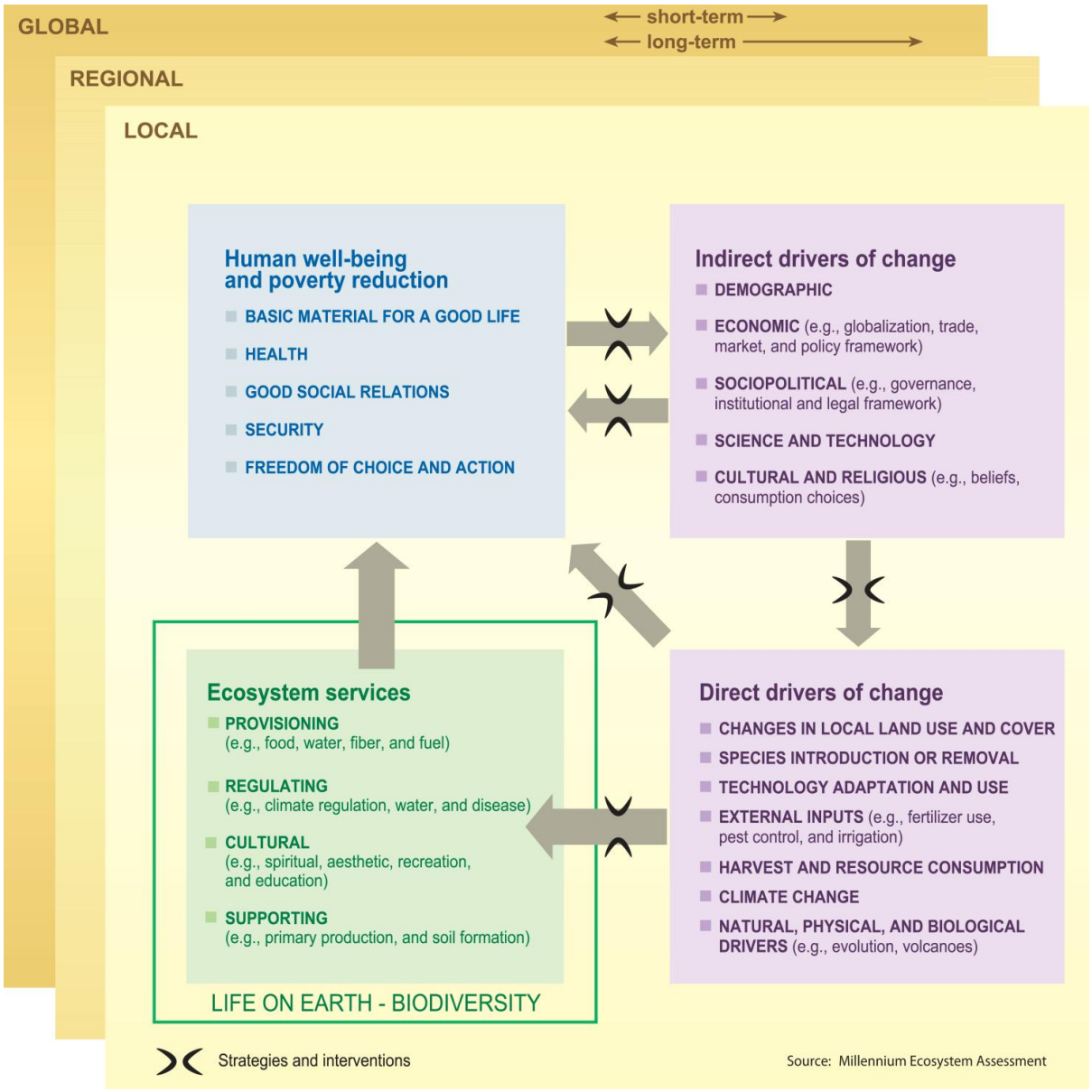
After the introduction outlining the details of conceptual frameworks, focus was switched to the process of how one would go about producing a conceptual framework for an ecosystem assessment. This was facilitated by detailing the parties that might be involved in the process of drawing up a conceptual framework; highlighting how it is valuable to develop a sense of ownership from the assessment's user groups; the need for sensitivity and compromise between different stakeholder groups with different ideas and opinions; and then by demonstrating some examples of conceptual frameworks (see Fig. 3 – the MA conceptual framework). Following on from these steering remarks, it was emphasised that there are many examples and types of conceptual frameworks, but there is no right or wrong approach or structure – they should be tailored specifically to the needs of the assessment in hand.

In Exercise 2.3 the workshop participants were tasked with studying some examples of conceptual frameworks (from the MA, the Peruvian Vilcanota sub-global assessment, and the UK NEA) to gain an understanding of their main features, and then to assess the pros and cons of each in relation to the fictional country assessments, for example, for Ellensia.

7.2.2 Exercise 2.4 Conceptual framework (continued)

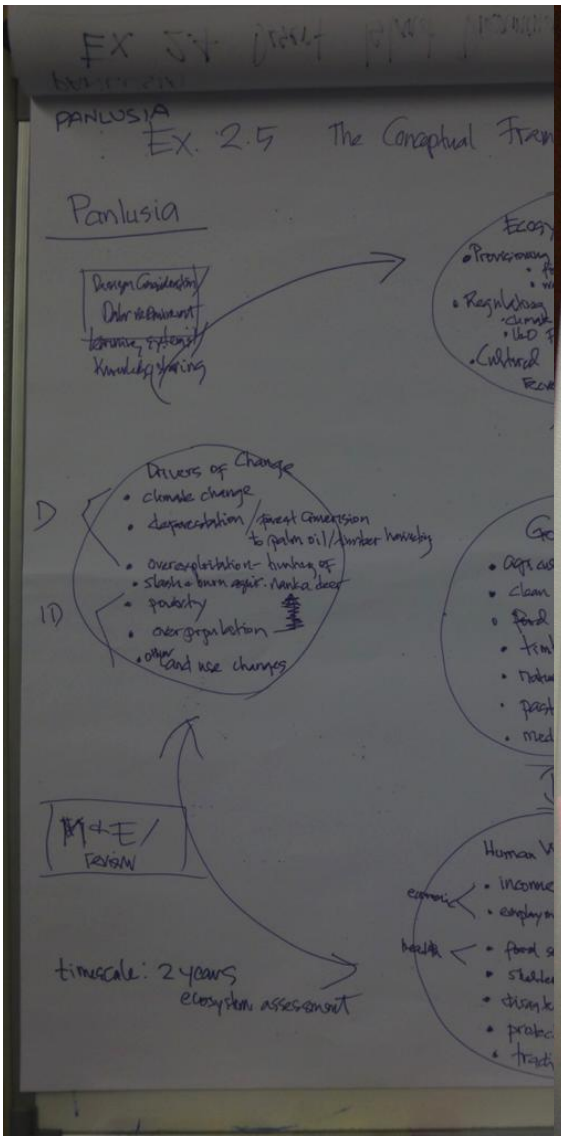
At this point the workshop participants had developed a good understanding of the purpose of conceptual frameworks; as such, they were asked to consider the 'Robinson Crusoe' scenario – an individual, lone person, who is stranded on an isolated tropical island – and identify: the key elements of well-being, and if these are shaped by ecosystem services; any ecosystem goods and/or services that most heavily influence the elements of well-being; the factors which directly affect the supply of these ecosystem goods and/or services (direct drivers); and any indirect influences upon these factors (indirect drivers). The final consideration for the groups was to try and indentify any connections that exist between these elements of well-being, direct and indirect drivers.

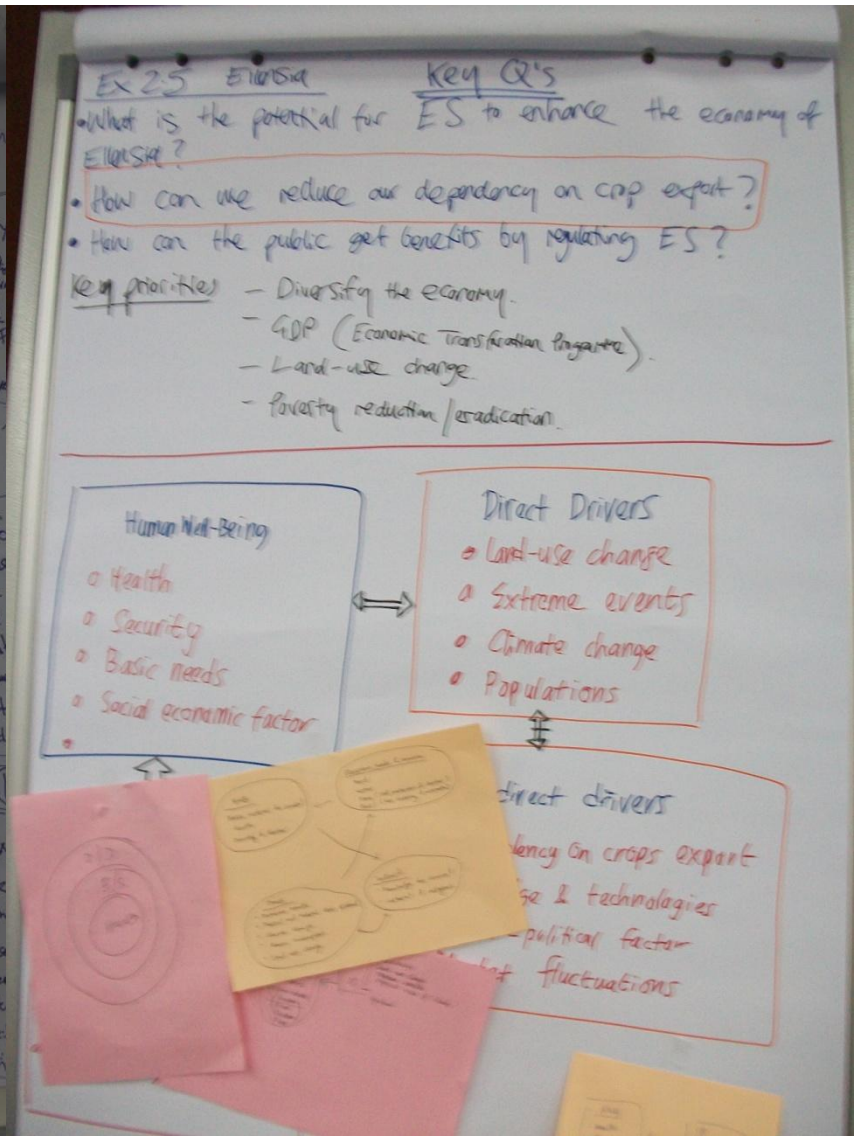
Figure 3: The Millennium Ecosystem Assessment (MA) conceptual framework

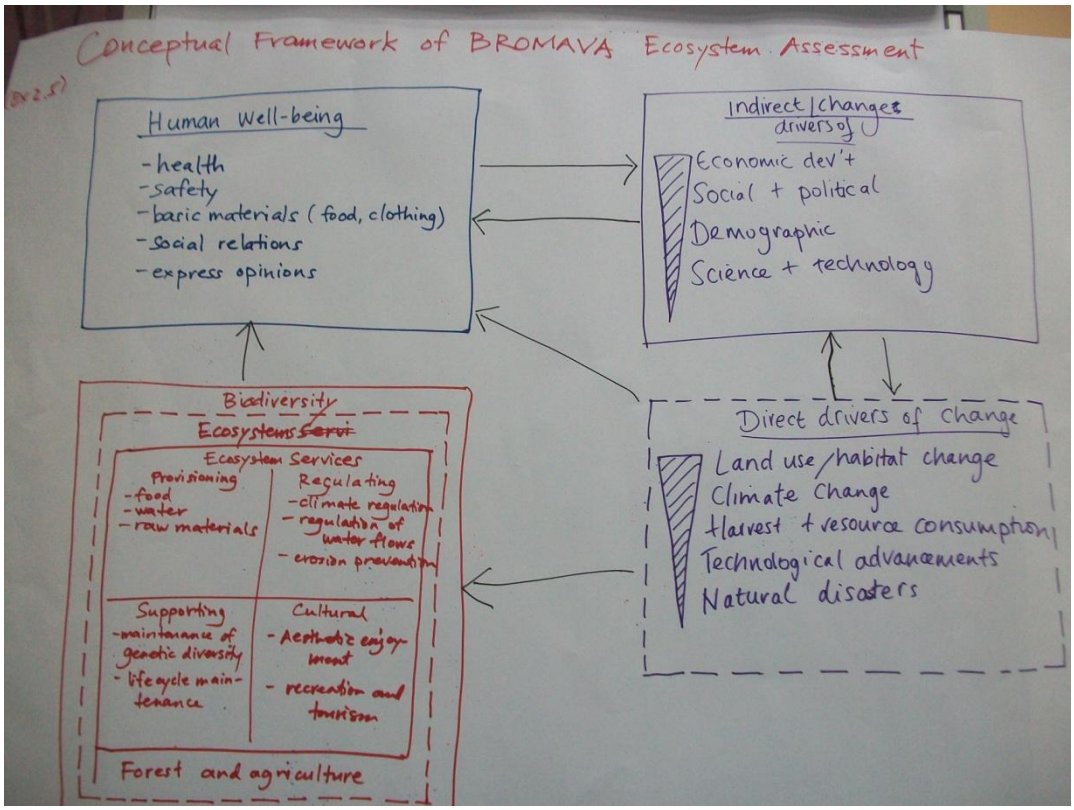


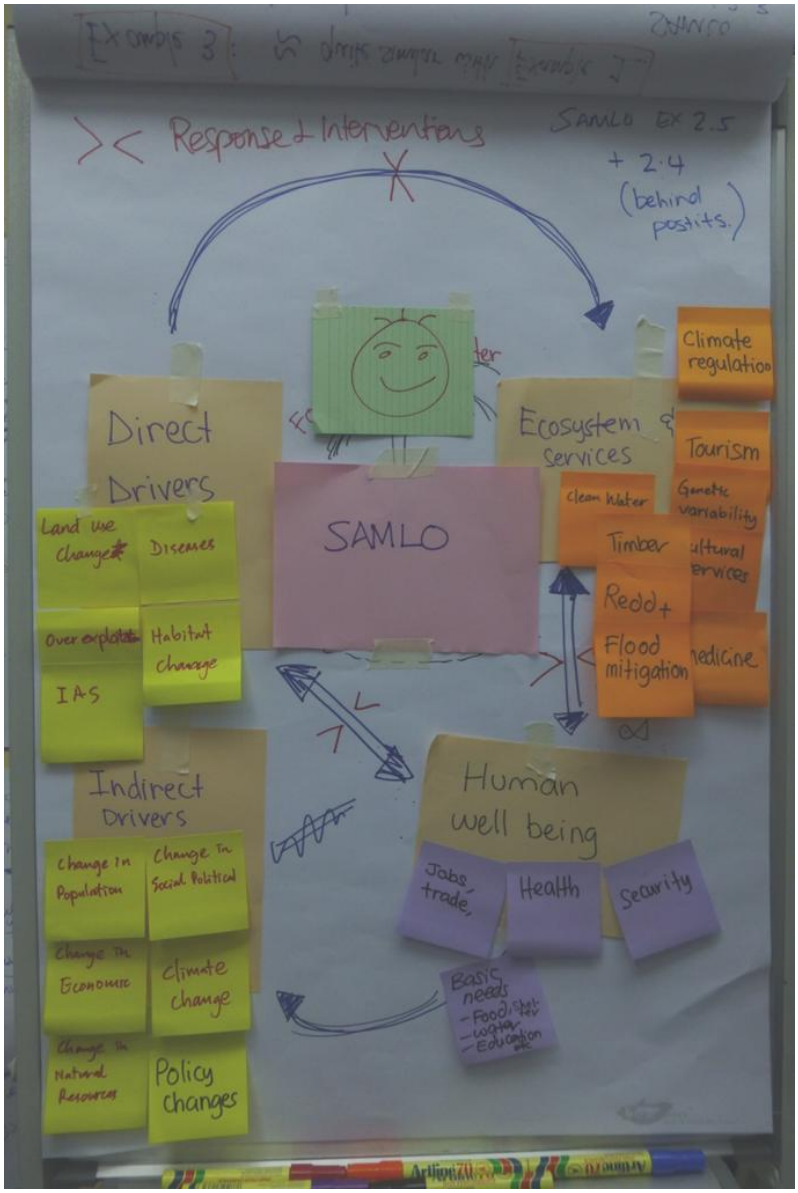
7.2.3 Exercise 2.5 Conceptual framework (continued)

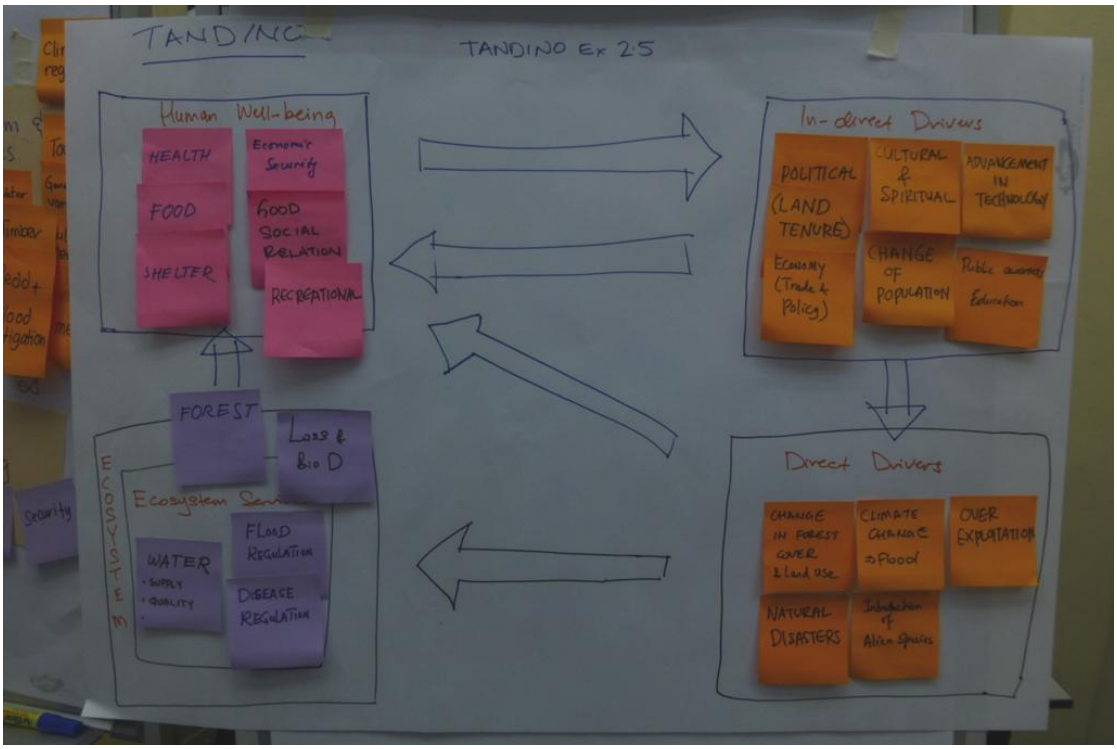
Using the considerations and findings of Exercise 2.4 as a template, the fictional country groups were now set the task of developing conceptual frameworks for the national ecosystem assessments of their countries. Participants were asked specifically to consider the information they gathered from the stakeholder groups in Exercise 1.2; factors occurring or changing at a time-scale likely to influence the assessment; and the spatial-scale at which key influences occur. The conceptual frameworks developed by each fictional country are set out below.


PANLUSIA
Ex. 2.5 The Conaptual Fram
Panlusia
Drivers of Change
• climate change
• deforestation / forest conversion to palm oil / timber harvesting
• overexploitation - hunting of
• slash + burn agric. - ranka deer
• poverty
• overpopulation
• other land use changes
timescale: 2 years
ecosystem assessment


Ex 2.5 Ellensia
Key Q's
• What is the potential for ES to enhance the economy of Ellensia?
• How can we reduce our dependency on crop export?
• How can the public get benefits by regulating ES?
Key priorities
- Diversify the economy
- GDP (Economic Transformation Programme)
- Land-use change
- Poverty reduction / eradication
Human Well-Being
o Health
o Security
o Basic needs
o Social economic factor
Direct Drivers
• Land-use change
• Extreme events
• Climate change
• Populations
direct drivers
fluctuations


Conceptual Framework of BROMAVA Ecosystem Assessment
(Ex 2.5)
Human Well-being
- health
- safety
- basic materials (food, clothing)
- social relations
- express opinions
Indirect / changes drivers of
Economic dev't
Social + political
Demographic
Science + technology
Biodiversity
Ecosystems
Ecosystem Services
Provisioning
- food
- water
- raw materials
Regulating
- climate regulation
- regulation of water flows
- erosion prevention
Supporting
- maintenance of genetic diversity
- lifecycle maintenance
Cultural
- Aesthetic enjoyment
- recreation and tourism
Forest and agriculture
Direct drivers of change
Land use / habitat change
Climate Change
Harvest + resource consumption
Technological advancements
Natural disasters


Response & Interventions
SAMLO Ex 2.5
+ 2.4
(behind postits)
Direct Drivers
Land use Change
Diseases
Over exploit
Habitat change
IAS
SAMLO
Ecosystem services
Climate regulation
Tourism
Genetic variability
Clean water
Timber
Redd+
Flood mitigation
Indirect Drivers
Change in Population
Change in Social Political
Change in Economics
climate change
Change in Natural Resources
Policy changes
Human well being
Jobs, trade,
Health
Security
Basic needs
- Food
- Clothing
- Education


TANDINO Ex 2.5
Human Well-being
HEALTH
Economic Security
FOOD
GOOD SOCIAL RELATION
SHELTER
RECREATIONAL
In-direct Drivers
POLITICAL (LAND TENURE)
CULTURAL & SPIRITUAL
ADVANCEMENT IN TECHNOLOGY
Economy (Trade & Policy)
CHANGE OF POPULATION
Public awareness Education
FOREST
Loss & Bio D
ECOSYSTEM
Ecosystem Services
FLOOD REGULATION
WATER
- SUPPLY
- QUALITY
DISEASE REGULATION
Direct Drivers
CHANGE IN FOREST COVER & Land use
CLIMATE CHANGE → Flood
OVER EXPLOITATION
NATURAL DISASTERS
Introduction of Alien Species

7.3 Field Trip: FRIM Canopy walkway

The afternoon of Day 3 was spent on a field trip around the FRIM site, enjoying the tropical forest surroundings and its wildlife; considering the ecosystem services provided by such an assemblage of plants and animals; and also enjoying a walk in the tree tops, courtesy of the FRIM canopy walkway.

7.4 Workshop dinner: Atmosphere 360 – KL Tower

On the evening of Day 3 the workshop de-camped to down-town Kuala Lumpur for the official Workshop Dinner; this was held at the spectacular Atmosphere 360 at KL Tower – 282 metres above the evening skyline. This gave everyone an opportunity for some downtime and relaxation, and an opportunity to consider the subject matter of the previous three days.

Day 4

8. Workbook 3: The Implementation Stage

Matthew Ling began Day 4 by introducing and outlining the next step in the Ecosystem Assessment Framework, "The Implementation Stage" (see Fig. 1). Given the complex nature of this stage of the ecosystem assessment, a small caveat was presented before delving into descriptions of the stage components and exercises. It was made explicit to the audience that, given the timeframe available, we would just scratch the surface of introducing conditions and trends assessment, scenarios development and analysis and the assessment of potential response options. The workshop participants were directed towards the "MA Methods Manual" (Ash *et al.*, 2010) for more information on each of these components of the implementation stage.

See the "MA Methods Manual" – Ecosystems and Human Well-Being: A manual for assessment practitioners (Ash et al.*, 2010)*

***Chapter 4** (page 115): Assessing state and trends in Ecosystem services and human well-being*

***Chapter 5** (page 151): Scenario development and analysis for forward-looking ecosystem assessments*

***Chapter 6** (page 221): Assessing intervention strategies*

8.1 Status and Trends

An outline of what the "Status and trends" assessment component is, what it hopes to achieve and some of the key definitions associated to this component was presented to the audience by Matthew.

Status and trends key questions:

What are the current condition and historical trends of ecosystems and their services?

What have been the consequences of changes in ecosystems for human well-being?

8.1.1 Exercise 3.1 Drivers of change and trade-offs

The workshop participants were then presented with the context for Exercise 3.1, whereby they were tasked with considering what the drivers of ecosystem service change might be, how these drivers could affect ecosystem services, and what trade-offs exist between the supply of these ecosystem services and human well-being (Table 10). The audience were asked to consider each of these points specifically in relation to the priority ecosystem services as previously identified in the conceptual frameworks developed for each of the fictional countries (see Exercise 2.4).

Drivers of ecosystem change:

Direct drivers: have an explicit effect on ecosystem processes, usually causing physical change that can be identified or monitored

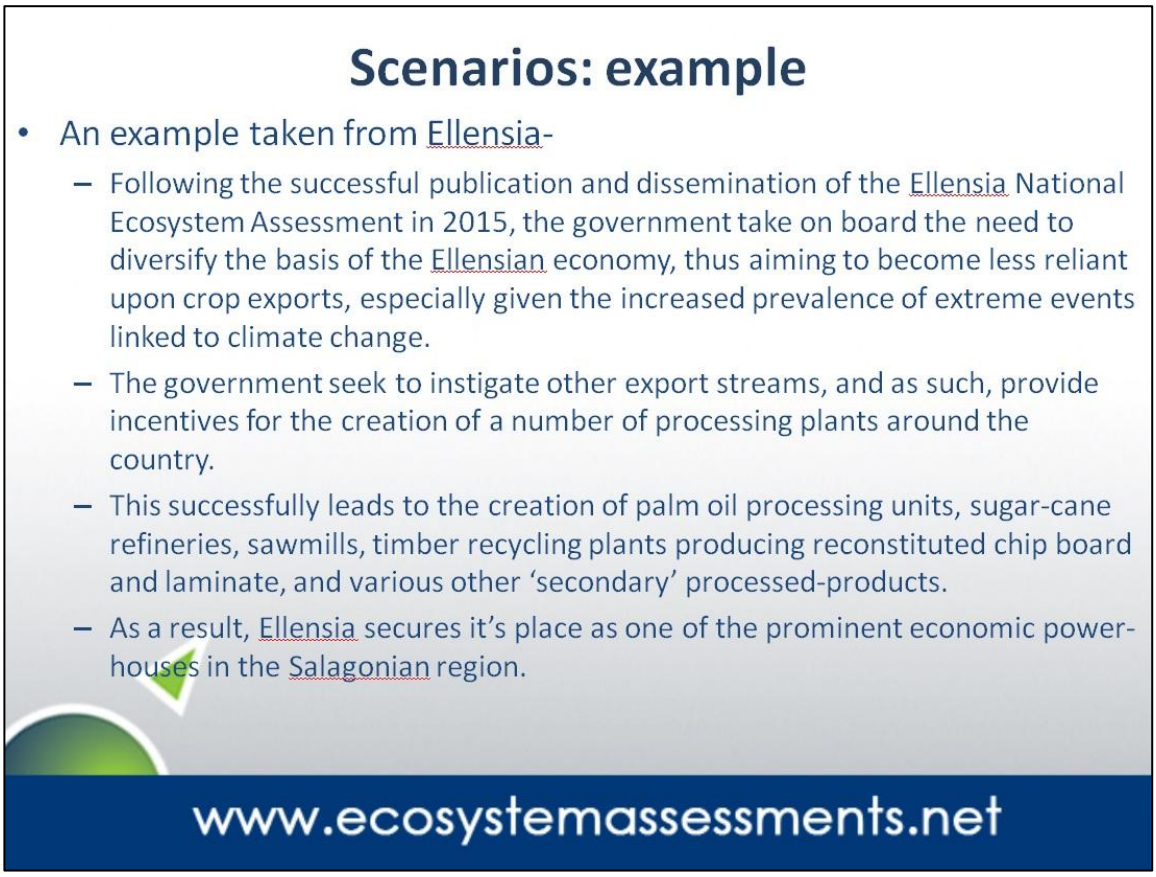
Indirect drivers: operate more diffusely by altering the level or rate of change of one or more direct drivers

Table 10: Participant responses to Exercise 3.1

Priority ecosystem service	Driver of change	Mechanism for change	Trade-off	Fictional country
Water quality (clean water provided by forests)	Change in forest cover and land use	Forest degradation	Reduction in timber production and land conversion	**Tandino**
Food	Land-use change/habitat change	Policy change that resulted in more land for agriculture	Increased productivity versus decreased land for other uses, e.g. natural resources	**Bromava**
(Commercial) fishing	Technological change	Increased demand (population growth)	Increased economic benefits versus biodiversity loss and cultural values/knowledge	**Ellensia**
Provisional (water, food)	Extraction of forest products	Policies that favour export industries	Increased water run-off, susceptibility to storm damage; reduced income for farmers in the affected areas	**Panlusia**
Food and medicine (plant and animal)	Hunting and collection; land conversion	Over exploitation; destruction of forest	Economic income versus loss of monkey (biodiversity) and flagship species for Samlo	**Samlo**

8.2 Scenarios

The "Scenarios" component of the implementation stage was introduced to the audience next. Matthew pointed out that the focus of this introduction, and the exercise related to this component, would only focus on scenarios development rather than also including scenarios analysis; the participants were directed to Chapter 5 of the "MA Methods Manual" (Ash *et al*., 2010) for further information regarding scenarios analysis. Matthew presented the definition and aim of scenarios development and analysis, followed by an example scenario created for the fictional country of Ellensia.

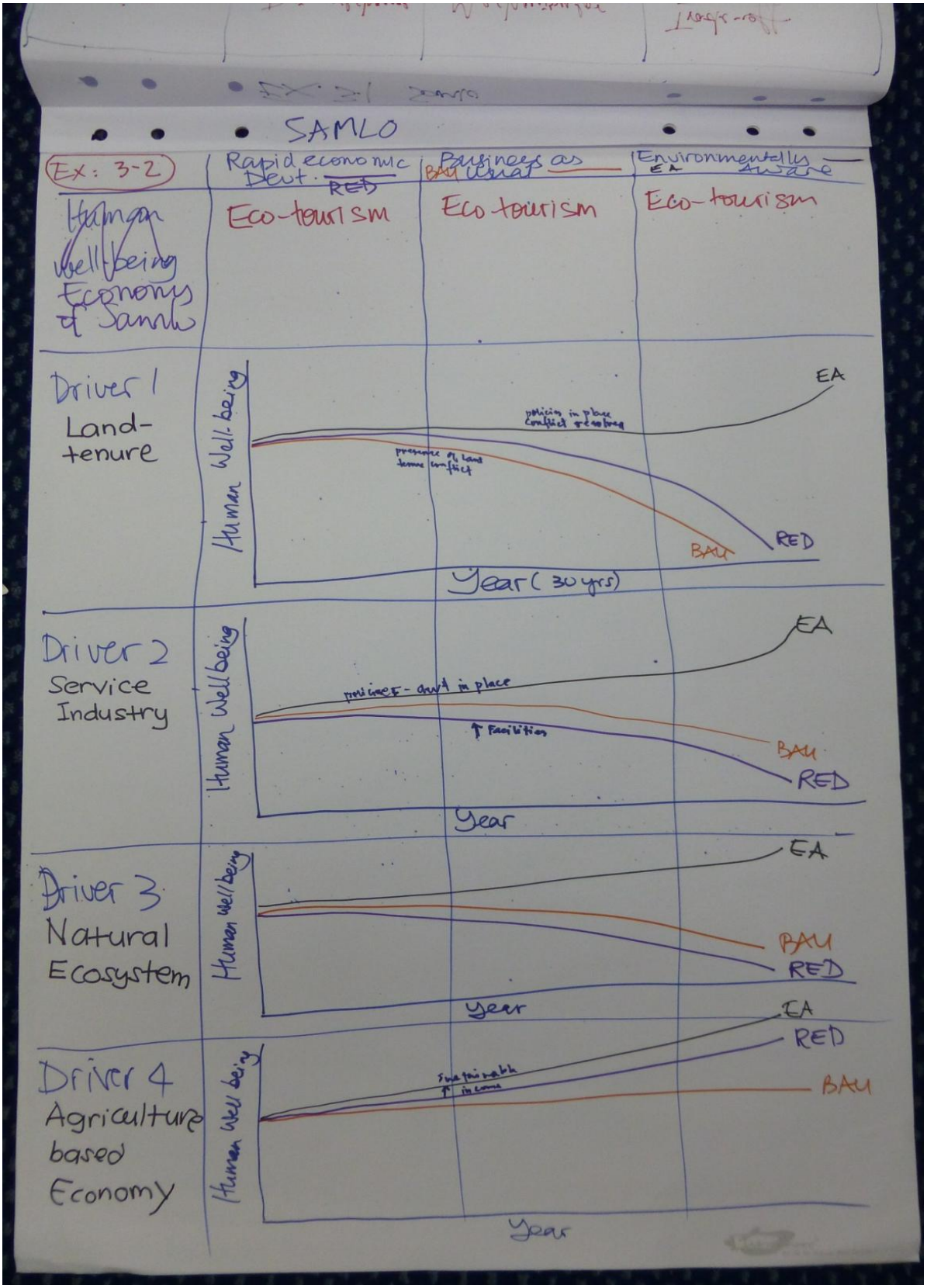


8.2.1 Exercise 3.2 Scenario development

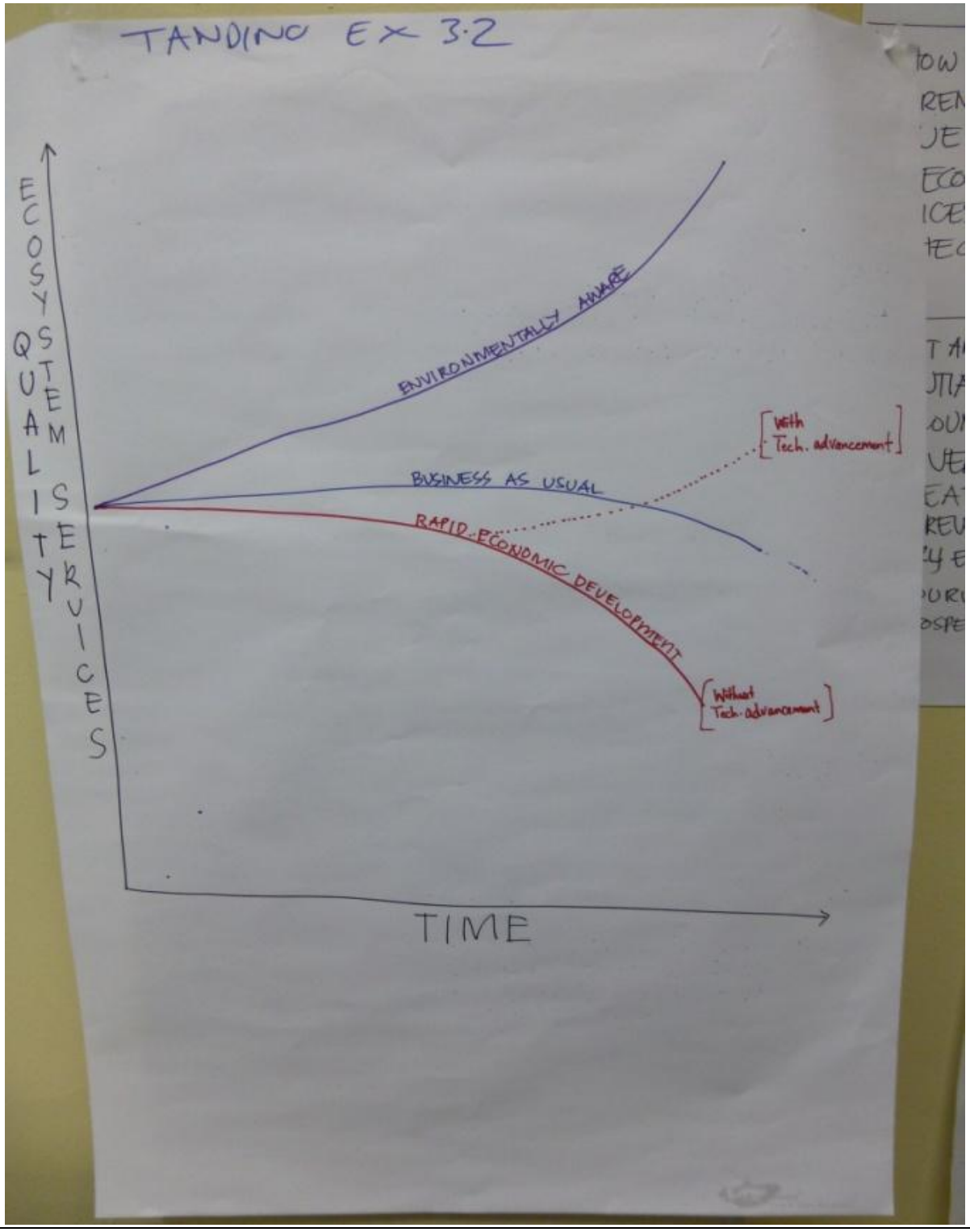
Following the brief introduction to scenarios, Exercise 3.2 was outlined. The participants were asked to consider three plausible scenarios developed in response to the drivers of change and the conditions and trends analysis; these scenarios were (1) the 'rapid economic development' scenario; (2) the 'business as usual' scenario; and (3) the 'environmentally aware scenario'. The participants were then asked to develop storylines for each of these three scenarios in respect to their individual fictional countries, and then to describe how well-being and the drivers affecting change might look over the next 30 years (see Table 11).

Following the completion of these tasks a member of each working group was asked to report back on the scenario storylines developed for their country, in a 'market-place' type format, whereby they would make their 'sales pitch' to other 'passers-by'.

Table 11: Responses to Exercise 3.2, Part 2

Scenario Development
Samlo


Tandino


TANDINO EX 3.2
ECOSYSTEM SERVICES QUALITY
ENVIRONMENTALLY AWARE
BUSINESS AS USUAL
RAPID ECONOMIC DEVELOPMENT
With Tech. advancement
Without Tech. advancement
TIME

Participants listening to the scenarios 'sales pitches' in the 'market-place' format report back session (Exercise 3.2, part 3); Samlo (left), Tandino (right)

8.3 Response Options

To conclude the implementation stage, Matthew presented a brief introduction to the "Response Options" component, where future intervention strategies are assessed. This introduction outlined that the aim of the response options component is to identify different possible responses in order to prevent deterioration in ecosystem services and to restore those services that have been lost; and some of the steps needed to achieve this were made explicit, for example, strategy and intervention, who should intervene and at what scale, how to identify the appropriate strategies, how to identify binding constraints and how to manage trade-offs.

8.3.1 Exercise 3.3 Response options

The final exercise of this stage was then introduced, Exercise 3.3, in which the participants were asked: to consider the most important changes that needed addressing with regards to preventing ecosystem services deterioration and associated negative effects on human well-being in their fictional countries; to think about why the identified changes are important; to develop some response options for these changes; and to identify the actors best placed to implement the identified response options (see Table 12). It was emphasised that this should focus on, and tie-in, the "key questions" as drawn up in the design stage (Exercise 1.5).

Table 12: Exercise 3.3 Response options by fictional country

Country	Change to be addressed	Reason for addressing	Response options	Actor(s) responding
Ellensia	Forest degradation	• Biodiversity loss • Increased risk of landslides • Loss of land and livelihood for the traditional • Habitat loss • Endemic and native species threatened • Lower environmental quality	• Community for plantation • Promote income generation from alternative options • Introducing the incentive for sustainable forestry practitioners • Legal protection over biodiversity hotspot areas	• Forest department and local people • Government officials and economists, business entrepreneurs • Researchers, forestry department • Ministry of Environment
	Eco-tourism	Improving... • Number of tourists • Income • Sustainable use	• Management plan • Established service • Local participation	• Government • Private sector • Communities
	Fishing	• To meet demand	• Technology • Sustainable use • Government policy – find investors	• Government • Private sector • Communities
Panlusia	Maintaining forest cover, sustainable forest management	• Provisioning • Regulatory • Social/cultural well-being	• Appropriate zoning of land use; development of land use master plans • Increased awareness of the benefits of zonation • Subscribe to licensing/ certification schemes • Zonation inside forest areas • Extend totally protected areas • Review current legal and regulatory mechanisms (for enforcement)	• Scientists • Ministries • Law-makers, executive councils • Public authorities • Experts, NGOs, academia, media • Timber companies, relevant departments, ministries

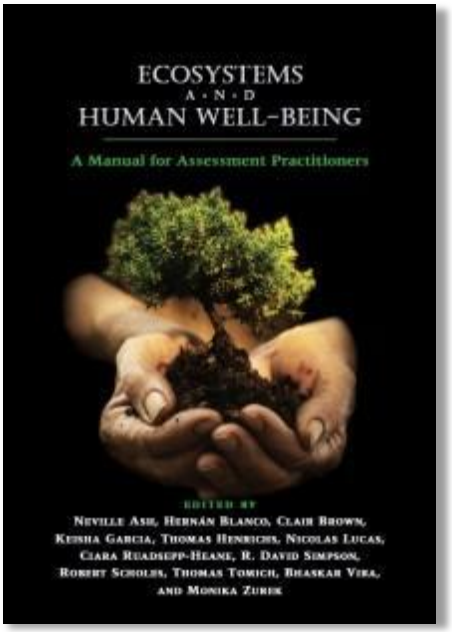
Country	Change to be addressed	Reason for addressing	Response options	Actor(s) responding
Samlo	Land conversion – forest – palm oil and other land uses	• improper and unplanned land conversion • conflict of interest in land ownership (land tenure issue)	• Conduct of ecosystem assessment before conversion • Develop options for land use (land classification and zonation) • Develop land use policy and strategies (CEPA)	• Federal Govt. • Local authority • Stakeholders (local community) • Technical experts • Private sector • NGOs
Bromava	Land use and habitat change	• Maintain a healthy ecosystem (people re-visit)	• Regeneration of forest (National Forestry dept., NGOs, public) • Review protected area and establish more (local Govt. Land use dept, PA managers) • Review of land use planning guidelines (planning dept, NGOs, IPs)	
	Harvest and resources consumption	• Manage level of natural resource exploitation	• Regulating exploitation (Govt.) • Selective harvesting (Govt., PA managers) • Zonation of land (Govt., PA managers, NGOs) • Education programme (NGO, schools, teachers, media, local communities)	
Tandino	Forest degradation and land conversion	• Because it affects water quality and supply	• Determine location and size of water catchment areas • Sustainable forest management – policies, regulations • Scientific research – data • Alternative economic activities – bio-prospecting, ecotourism, REDD+ (carbon stock trade)	• Policy decision makers (Ministry of Environment) • Logging companies • Local governments • Researchers • Universities • Indigenous and local communities • NGOs

8.4 Ecosystem Assessment Tools

During the afternoon session of Day 4, Matthew gave a presentation on "*Toolsets available to assessment practitioners, and the knowledge gaps which exist within these*". In this presentation Matthew provided a brief introduction to, and overview of what ecosystem assessment tools are, why and where they are needed, their uses, and some of the tools that are available to assessment practitioners.

This presentation grouped some of the tools that are available into several broad categories:

- Publications as tools. Some examples include (see http://www.ecosystemassessments.net/resources/tools-and-publications.html for pdf. versions of the following reports):
  - Ecosystems and human well-being: a manual for assessment practitioners (Ash *et al*., 2010);
  - The World Resources Institute's "Ecosystem services: a guide for decision makers"; and
  - Measuring and monitoring ecosystem services at the site scale: introducing a practical toolkit (CCI and Birdlife International, 2011).
- Mapping/spatial analysis tools
  - ARIES (ARtificial Intelligence for Ecosystem Services) (http://www.ariesonline.org/)
  - CEV (Corporate Ecosystem Valuation) (http://www.wbcsd.org/pages/edocument/edocumentdetails.aspx?id=104&nosearchcontextkey=true)
  - InVEST (Integrated Valuation of Environmental Services and Tradeoffs) (http://www.naturalcapitalproject.org/InVEST.html)
  - MIMES (Multiscale Integrated Models of Ecosystem Services) (http://www.ebmtools.org/mimes.html)
  - PRESS-PEER (PEER Research on Ecosystem Services) (http://www.peer.eu/projects/press-project/)
- Methodological tools
  - Scenarios development and analysis
  - Valuation
  - Conceptual frameworks
  - Indicators and metrics



Economic valuation

Techniques available:

Effect on productivity; cost of illness, human capital; replacement cost; travel cost; hedonic prices; avoided damages; contingent valuation; choice modelling; benefits transfer…

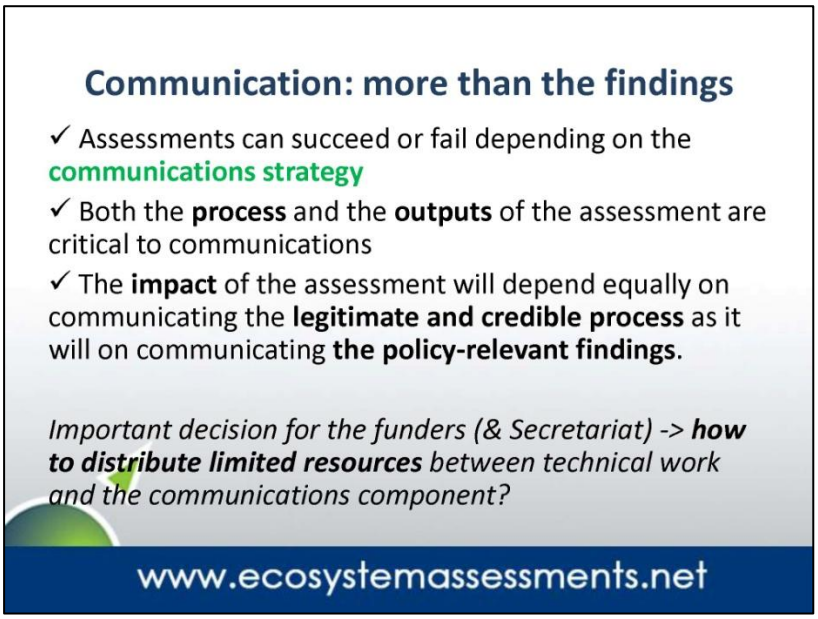
Some examples of "ecosystem assessment tools" as presented to the workshop participants

An invitation to the audience to ask questions and share their "tool" experiences was then extended and followed by some discussion in plenary.

Day 5

9. Workbook 4: Communication and outreach

The importance of effective internal communication throughout the assessment process was emphasised in the introduction to Workbook 4: Communication and Outreach. In terms of external communication and dissemination of results, success in this element of the assessment process depends on a well thought out Communication Strategy which conveys both the process and the outputs:

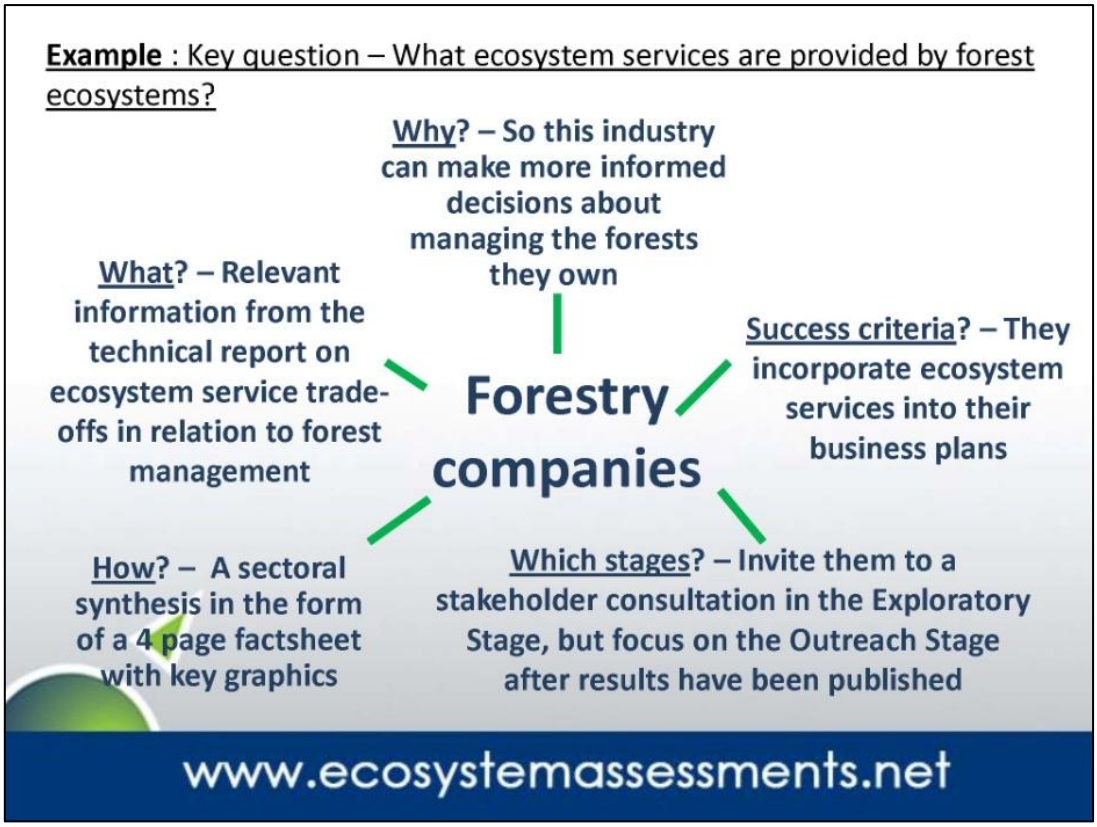


Participants learned that a Communications Strategy requires clear communication goals in order to focus in on the appropriate target audiences given resources available and therefore the most appropriate means to connect with these audiences.

9.1 Communication Strategies

9.1.1 Exercise 4.1 Communications Strategy

This exercise asked each group to identify two relevant audiences given their key questions and to consider the form that communication would take. An example was provided for guidance (see slide below):



A broad range of audiences and ways to communicate were identified, reflecting that communication needs to be targeted to a specific audience and 'one size' (e.g. one product) does not fit all.

Figure 4 below summarises an example of a key audience for the national assessment of Ellensia - in response to the key question***: How can we reduce our dependency on crop exports?***

Figure 4: An example of a 'key audience' type in Ellensia's assessment

Figure 5 below summarises an example of a key audience for the national assessment of Panlusia - in response to the key question***: How to secure land ownership?***

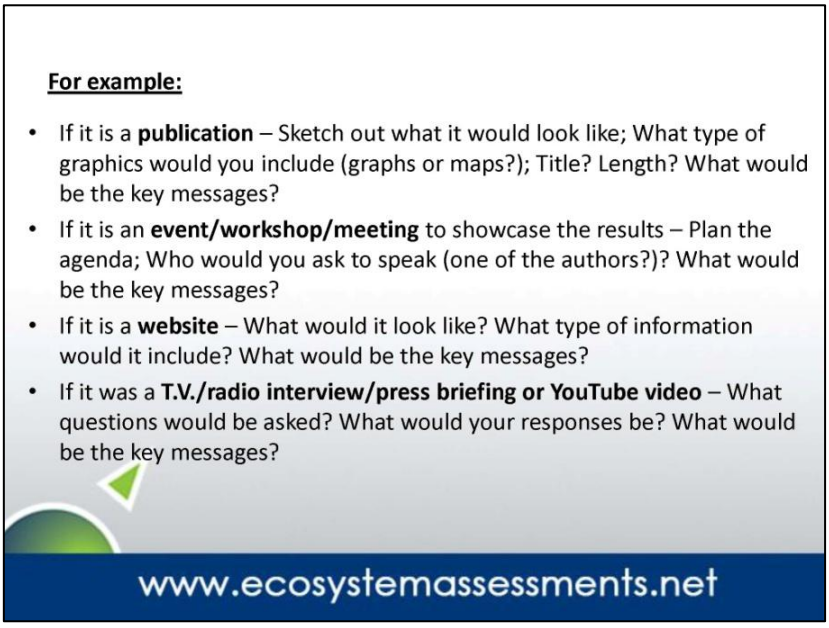
Figure 1: An example of a 'key audience' type in Panlusia's assessment

Members of the Tandino group discuss key audiences

Groups draw out their spider diagrams

9.1.2 Exercise 4.2 Designing a tailored communication product

The second communications-focused exercise gave an opportunity for participants to be really creative. Their task was to build on their discussions in Exercise 4.1 and design a tailored communication product. The type of product chosen would determine some of the information they would have to think about:



Participants were also asked to consider:

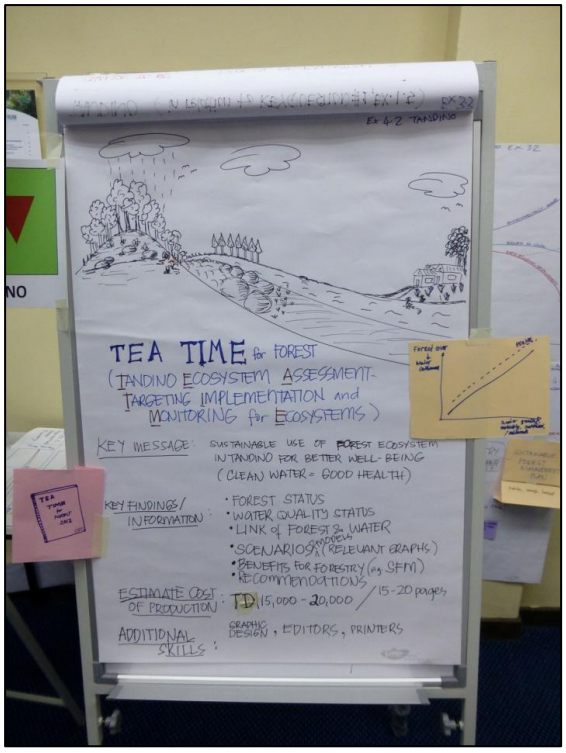
- How they would brand their assessment;
- What additional skills they would need in order to create the product; and
- What would be the estimated cost of creating the product

The fictional country groups came up with exciting and innovative communications products ranging from publications and marketing material to scripts for a radio interview (as outlined in Table 13 below). All the products were well thought out and had kept the key question of their respective assessment in mind at all times. Participants had picked up on the need to source specialists in some cases (e.g. graphic designers or science writers) to ensure products look professional. Some examples are shown in the photos below.

Table 13: Communication products

Country	Key question	Target audience	Product	Details	Key messages	Additional skills	Cost
Bromava	What are the benefits of conducting sustainable ecotourism?	Tourist companies / Tourists	Posters; drinks coasters; website		Through tag lines e.g. - Leave nothing but footprints - Healthy ecosystem, health people ☺ - Partnership with nature	Graphic designer, web developer, marketing & PR, technical experts, science writer	B$ 50,000
Panlusia	How to reduce forest degradation through licensing / certification?	Timber companies	Field trips supplemented by meetings/ consultations	CEOs are taken to poorly and well-managed forest sites and to view wildlife e.g. Nanka deer	To impress the benefits of licensing to the company	Personnel from certification board, pilots	<US$ 500,000
Samlo	Why ecosystem services are important for eco-tourism?	Local communities	Demonstration / pilot site	Before and after examples; knowledgeable local community speakers and hands-on training	Clean environment and healthy ecosystems bring good tourist dollars!		PRK 100,000 3 year programme
Tandino	What is the status and trend of water quality and supply in Tandino?	Forestry Department	Report – TEA TIME for Forest (Tandino Ecosystem Assessment-Targeting Implementation and Monitoring for Ecosystems)	Facts and figures about forest in relation to forest management & the need to have better environmental policy regulation	Sustainable use of forest ecosystem in Tandino for better well-being (clean water & good health)	Graphic designer, editors, printers	TD$ 15,000-20,000
Ellensia	How can we reduce our dependency on crop exports?	Farmers	Radio interview & debate on Weekly Farmer programme	Introduce how the ecosystem assessment underway will affect farmers	Promote sustainable harvest production for future generations linked to alternative incomes		

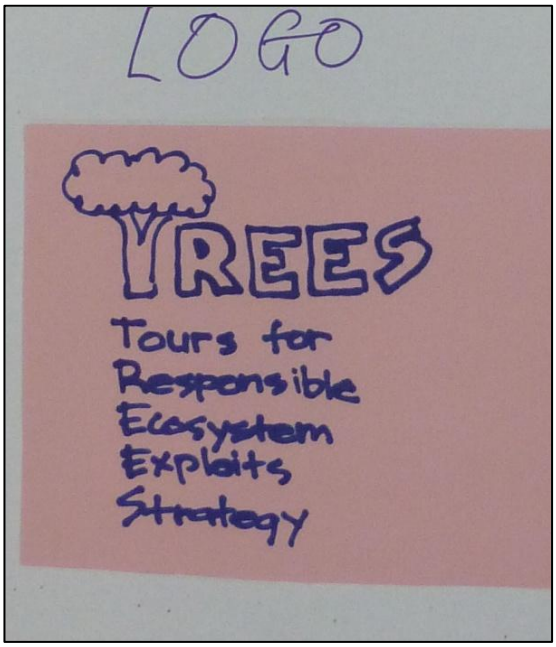
Example of coaster designs from Bromava



A clear communication strategy from Tandino aimed at the Forestry Department

Members of Ellensia play out their radio interview

A member from the Samlo group explaining their idea for a demonstration site

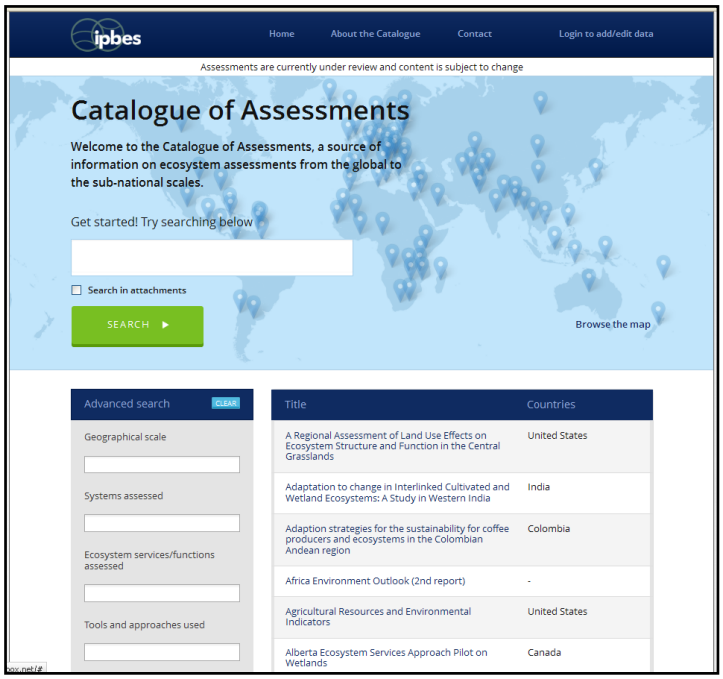


Panlusia think up a catchy logo for their campaign to the timber companies

9.2 Catalogue of assessments

A brief introduction to the new Catalogue of Assessments website which formed part of the IPBES intercessional work was presented by Lucy. The catalogue could be a useful resource for the participants as it compiles assessments from the global to sub-national scales. A demonstration of the catalogue's ability to search the content in a number of ways including geographically via an interactive map was demonstrated. In addition, the type of information the catalogue holds such as the conceptual framework and the tools/approaches used was shown.

The catalogue's content is currently under peer review and so the URL could not be shared with the participants. They will be alerted once the website is live.

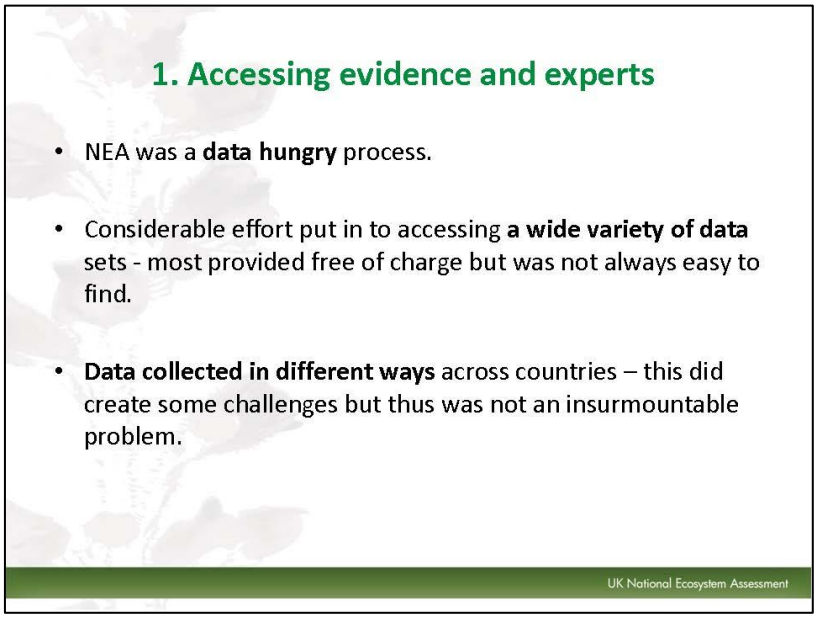


The home page of the IPBES Catalogue of assessments

9.3 The UK NEA

During the course of the workshop several participants had requested information on a 'success story', a real life example of an ecosystem assessment that has followed the framework participants had been learning about. The UK National Ecosystem Assessment seems the obvious choice as the workshop coordinators had the most knowledge and experience of this sub-global assessment. Lucy and Megan led the participants through the story of the UK NEA from its initiation to its completion and subsequent policy impact in the UK. The focus was highlighting challenges faced, points of interest and big decisions during the process and subsequent lessons learned.

How ecosystems were categorised in the UKNEA



Lessons learned on assessing evidence and experts identified from the UKNEA

10.0 Conclusion

10.1 Workshop conclusion

To wrap-up the workshop Megan began by reiterating the primary objectives of the workshop and by outlining some of the expectations put forward from participants at the workshop outset – some of which are detailed below:

Workshop expectations included-

- Improved understanding of ecosystem assessments and the ecosystem assessment process.
- How do you adapt/design an assessment to meet specific needs?
- What are the tools required for conducting an assessment?
- How do you translate results into policy?
- [To] share experiences.

A brief recap of the workshop as a whole was then offered to the participants; this touched on:

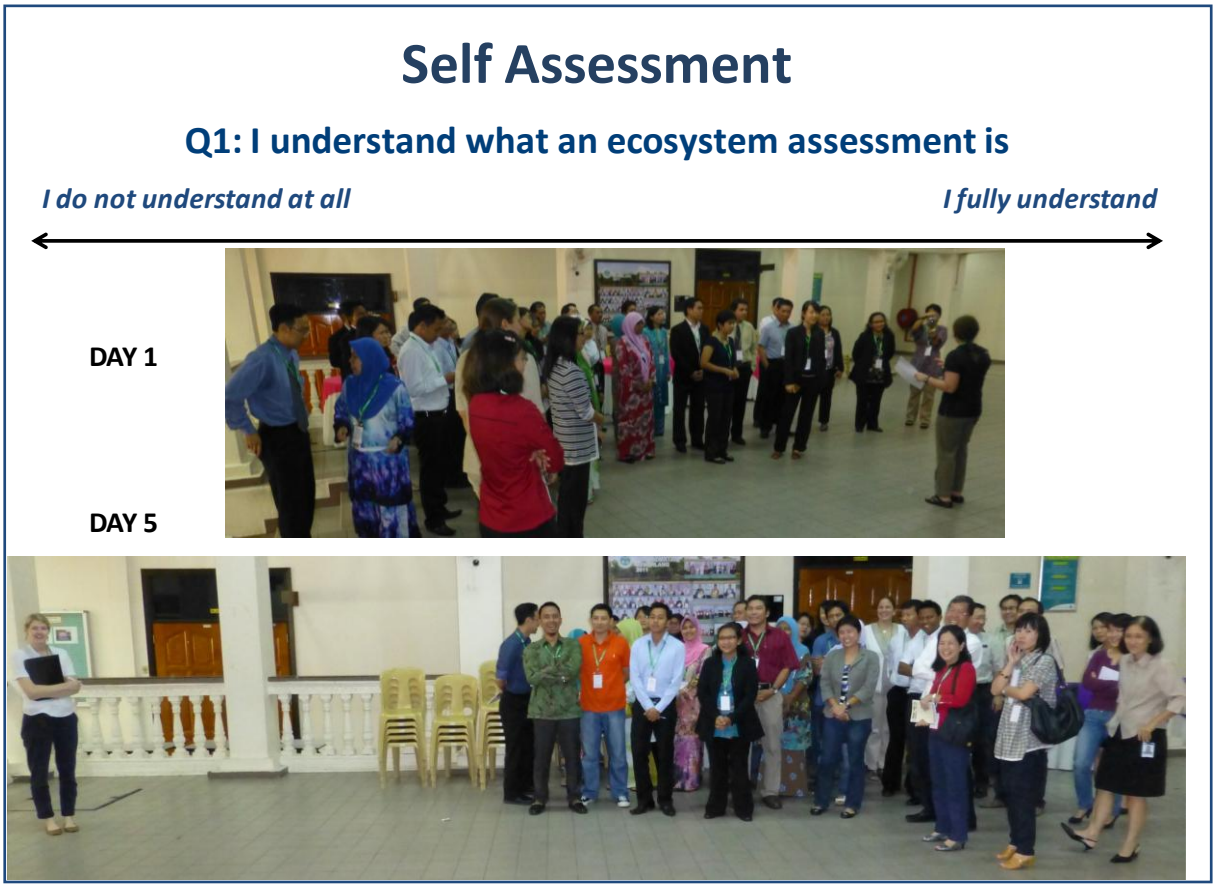
- Introducing the assessment landscape (and how it fits into global and regional processes);
- The basic concepts of ecosystem assessments and the four broad stages of the process;
- Why an assessment might be carried out;
- How to identify and engage with key stakeholders;
- The identification of key policy-relevant questions;
- The identification of key ecosystem services and habitats to assess (which would help to answer the key policy-relevant questions);
- Setting up governance structures;
- Developing work-plans;
- Developing conceptual frameworks (allowing the conceptualisation of the relationships between human well-being and ecosystem services);
- Assessing/identifying the drivers of changes to ecosystems and the supply of ecosystem services;
- Developing plausible future scenarios storylines;
- Formulating response options;
- Tools available to aid the assessment process; and
- The importance of effective communication during the assessment process, and of the assessment outcomes.

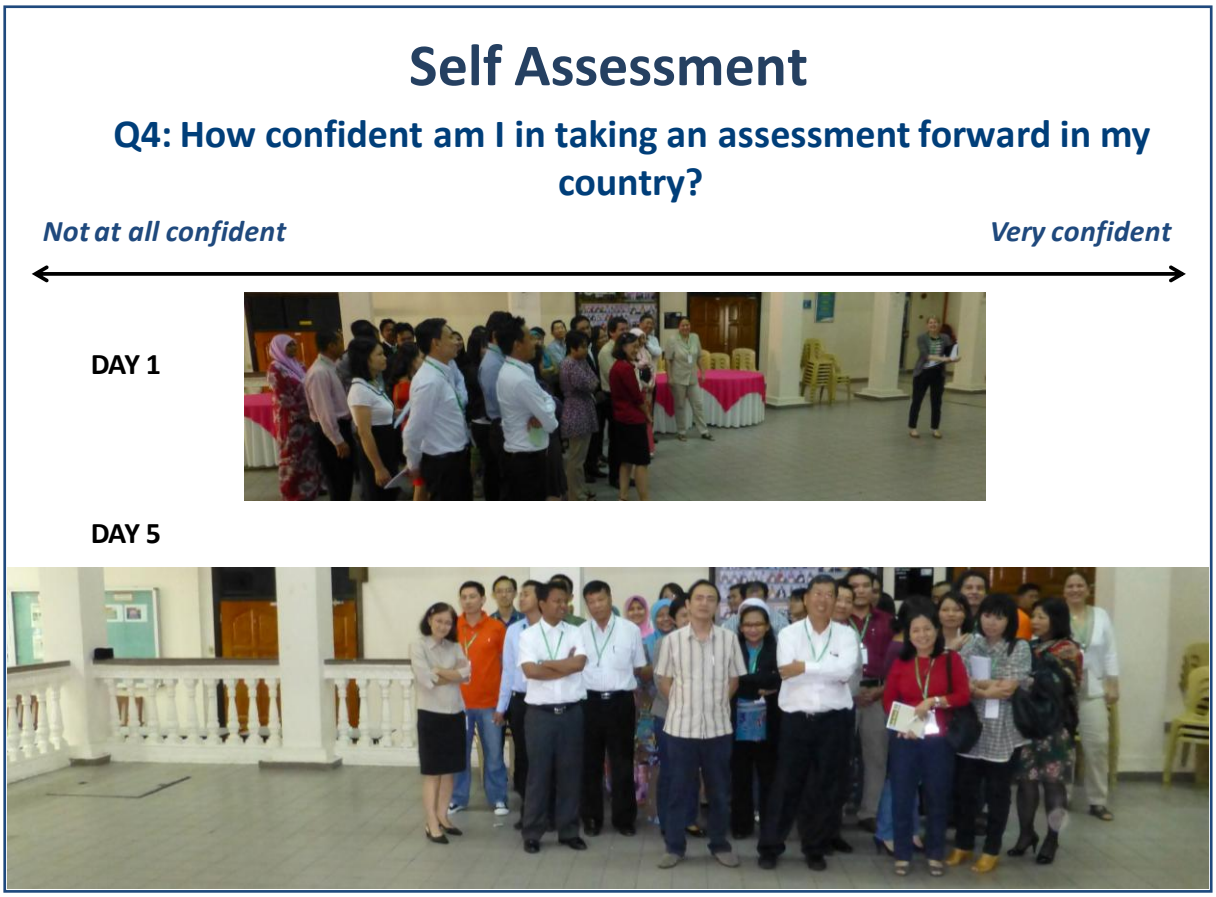
Some general 'take home' messages where formulated by Megan and offered to the group; these were:

- There is no 'one size fits all' assessment design or way of undertaking one;
- Assessments should be policy-relevant;
- An assessments scope should be achievable within the constraints of the available resources;
- The whole assessment process should be transparent, thus helping to achieve legitimacy;
- Assessments should be flexible and adaptable to account for changes that will inevitably happen throughout the course of the process;

- It is important to engage the assessment stakeholders early on in the process and to maintain regular contact throughout the assessment; and
- Communication, communication, communication!

To glean an understanding of how the workshop participants' understanding of the ecosystem assessment concept had changed over the course of the week, a repeat of the interactive 'self-assessment' exercise (as carried out in section 4.2) was conducted. The participants of the workshop were again asked several questions relating to their understanding of ecosystem assessments and how ready they consider themselves to be to carry out and assessment in their home countries. The results are shown in the slides below.





As can be seen in both of the above slides, there was a definite shift from a majority lack of understanding and confidence in the initial exercise (4.2), to a much better level of understanding and confidence in the re-assessment. It can be concluded therefore, that one of the main expectations of the workshop was successfully achieved: to improve understanding of ecosystem assessments and the ecosystem assessment process.

Thanks were delivered from Megan on behalf of Lucy Wilson and Matthew Ling, to the workshop hosts, FRIM, in particular Dr Saw Leng Guan, Dr Lillian Chua Swee Lian, and Mr Lau Kah Hoo and his team for workshop logistics and set-up; to the members of the ASEAN Centre for Biodiversity who assisted in preparations for the workshop, in particular Dr Clarissa Arida, Mr Jerome Alano, Ms Corazon de Jesus Jr, and Norman Emmanuel Ramirez; to the Norwegian Directorate for Nature Management for funding the event and for technical input, particularly Dr Nina Vik; and finally to the participants of the workshop.

10.2 Evaluation

Before leaving, participants were asked to complete an evaluation form to identify where the workshop succeeded, and where improvements may be made. Thirty-four forms were completed and the average score for the question "*How useful was this workshop in developing your capacity to design and implement a national or regional EA, ON A SCALE OF 0-10?"* was 8. The scores and comments from each participant have been carefully evaluated so as to inform the preparations for future 'Capacity Building for Ecosystem Assessment' workshops.

Some comments from the workshop participants can be seen in the box below and in Table 14.

"I have enjoyed very much the presentations and workshop material. Most of all meeting new friends in the workshop"

"I came to this workshop with limited knowledge. I have a better understanding of the EA process now."

"Although generally I can theorize the [Ecosystem Assessment] process from my institutions operations, the workshop gave the critical guidelines in doing it properly".

"Very useful, because I personally can see possibilities for regional level co-operations in Ecosystem Assessment, especially after understanding most of the Ecosystem Assessment framework."

"[The workshop] gave me the chance to share ideas between the other ASEAN countries."

"This workshop has helped me to understand and identify the knowledge gaps that are currently present in my country, and thus understand what sort of capacity needs are lacking"

"This is really great for us, as we are starting to conduct an assessment. The knowledge from this pilot workshop will be used to develop practical guidance on how to mainstream ecosystem based approaches."

"The whole Ecosystem Assessment framework itself was very valuable, but I liked most the scenario setting and the communication and outreach parts. The conceptual framework is tricky but also valuable as it will guide the implementation and set the direction of the Ecosystem Assessment."

Table 14: Some evaluation form questions and participant responses

How useful was this workshop in improving your understanding of links between national, regional and global ecosystem assessment process?
• We are working on this issue so we can use this knowledge for our work at home • It was explained that ecosystems are not confined by countries or region. However not too clear about the links. Need more examples. • Very helpful, it will help us a lot as a regional organisation, to identify at which point or stage can we assist at the national level, and how we can in turn also share the information at the global level
How useful was this workshop in developing your capacity to design and implement a national or regional Ecosystem Assessment?
• Yes the workshop is very helpful and useful to gain the new knowledge and approach. It might be applicable in my country, provided sufficient funding • This workshop relevant to my department on the protection and conservation of forest, wildlife management for biodiversity, so this is based on the national EA • I learned a lot in this workshop but I need some time to digest everything to have a broader view about Ecosystem Assessments
Do you feel the knowledge you have gained from the workshop will influence your work going forward?
• Yes in doing the assessment or conservation status of the species I work on • Yes we are now in the midst of implementing a project to update [our country's] NBSAP. This workshop will help in the process • Yes perhaps we are already doing some form of EA in our area of work but understanding the framework allows us to document it down in an organised way

11. Annexes

11.1 Annex 1: Workshop participants

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11.2 Annex 2: Workshop programme

Day 1: Introduction to Ecosystem Assessments

Time	Session	Facilitation	Format
08:30	Participants registration	-	-
	Opening Session		
9:00	1. Opening address	WCMC	Plenary
9:50	***Tea/Coffee break***		
10:00	2. Welcome & introductions	WCMC	Plenary
10:20	3. Self assessment	WCMC	Plenary
10:40	4. Expectations of participants	WCMC	Plenary
10:50	5. Overview & objectives	WCMC	Plenary
11:00	6. Introduction to 'running of the workshop'	WCMC	Plenary
11.10	***Tea/Coffee break***		
	Setting the Scene		
11:30	7. Introduction	WCMC	Plenary
11:40	8. Setting the assessment landscape	ROAP	Plenary
12:00	9. Introduction to IPBES	ROAP	Plenary
12:45	10. Introduction to other MEAs and the SGA Network	DN/WCMC	Plenary
13:15	***Lunch***		
	Introduction to Ecosystem Assessments		
14:00	11. Exercise: What is an ecosystem assessment	WCMC	Break-out
14:45	12. Report back (market place)	WCMC	Discussion
15:15	13. The ecosystem assessment framework	WCMC	Plenary
15:45	***Tea/Coffee break***		
	The Exploratory Stage		
16:00	14. Exercise 1.1: Country fact file; Scope and context	WCMC	Plenary
16:10	15. Break-out in working groups	WCMC	Break-out
16:40	16. Report back	WCMC	Discussion
17:00	17. Exercise 1.2: Exploring stakeholder needs	WCMC	Plenary
17:10	18. Break-out in working groups	WCMC	Break-out
17:40	19. Report back	WCMC	Discussion
18:00	***Close***		

Day 2: Ecosystem Assessment Framework – Exploratory and Design Stages

Time	Activity	Facilitation	Format
09.00	1. Review of Day 1 and agree Agenda for Day 2	WCMC	Plenary
	The Exploratory Stage - continued		
09.10	2. Exercise 1.3: Selling the assessment concept	WCMC	Plenary
09:15	3. Break-out in working groups	WCMC	Break-out
09:45	4. Report back	WCMC	Discussion
10:10	5. Exercise 1.4: Stakeholder engagement	WCMC	Plenary
10:15	6. Break-out in working groups	WCMC	Break-out
10.45	7. Report back	WCMC	Discussion
11.15	***Tea/Coffee break***		
11:30	8. Exercise 1.5: Key questions	WCMC	Plenary
11:40	9. Break-out in working groups	WCMC	Break-out
12:30	10. Report back	WCMC	Discussion
13:00	***Lunch***		

Time	Activity	Facilitation	Format
14:00	11. Exercise 1.6: Draft assessment plan	WCMC	Plenary
14:10	12. Break-out in working groups	WCMC	Break-out
15:00	13. Report back	WCMC	Discussion
15.30	***Tea/Coffee break***		
	The Design Stage		
15:45	14. Exercise 2.1: Governance structure	WCMC	Plenary
15:50	15. Break-out in working groups	WCMC	Break-out
16:15	16. Report back	WCMC	Discussion
16:35	17. Exercise 2.2: Work plan	WCMC	Plenary
16:40	18. Break-out in working groups	WCMC	Break-out
17:10	19. Report back	WCMC	Discussion
17:30	***Close***		

Day 3: Ecosystem Assessment Framework – Design Stage

Time	Activity	Facilitation	Format
09.00	1. Review of Day 2 and agree Agenda for Day 3	WCMC	Plenary
	The Design Stage - continued		
09.10	2. Exercise 2.3: Exploring conceptual frameworks	WCMC	Plenary
09:20	3. Break-out in working groups	WCMC	Break-out
09:45	4. Report back	WCMC	Discussion
10:10	5. Exercise 2.4: Exploring linkages between ecosystem services and human well-being	WCMC	Plenary
10:20	6. Break-out in working groups	WCMC	Break-out
10.50	7. Report back	WCMC	Discussion
11.15	***Tea/Coffee break***		
11:30	8. Exercise 2.5: Designing the conceptual framework	WCMC	Plenary
11:40	9. Break-out in working groups	WCMC	Break-out
12:30	10. Report back (market place)	WCMC	Discussion
13:00	***Lunch***		
14:00	***Field Trip: FRIM Canopy Walkway***	-	-
19:45	***Workshop Dinner: Atmosphere 360 @ KL Towers***	-	-

Day 4: Ecosystem Assessment Framework –Implementation Stage

Time	Activity	Facilitation	Format
09.00	1. Review of Day 3 and agree Agenda for Day 4	WCMC	Plenary
	The Implementation Stage		
09.10	2. Exercise 3.1: Drivers of change and trade-offs	WCMC	Plenary
09:15	3. Break-out in working groups	WCMC	Break-out
09:45	4. Report back	WCMC	Discussion
10:10	5. Exercise 3.2: Scenario development	WCMC	Plenary
10:15	6. Break-out in working groups	WCMC	Break-out
10.45	7. Report back	WCMC	Discussion
11.15	***Tea/Coffee break***		
11:30	8. Exercise 3.3: Response Options	WCMC	Plenary
11:40	9. Break-out in working groups	WCMC	Break-out
12:30	10. Report back	WCMC	Discussion

Time	Activity	Facilitation	Format
13:00	***Lunch***		
	Ecosystem Assessment Tools		
14:00	11. Ecosystem Assessment Tools	WCMC	Plenary
15:00	12. Exercise: Indicators	WCMC	Plenary
15:10	13. Break-out in working groups	WCMC	Break-out
15:15	***Tea/Coffee break*** (in breakout group)		
15:30	14. Report back	WCMC	Discussion
16:00	**Closure**		

Day 5: Ecosystem Assessment Framework – Communication

Time	Activity	Facilitation	Format
09.00	1. Review of Day 4 and agree Agenda for Day 5	WCMC	Plenary
	Communication and Outreach		
09.10	2. Exercise 4.1: Communicating to target audiences	WCMC	Plenary
09:20	3. Break-out in working groups	WCMC	Break-out
10:30	4. Report back	WCMC	Discussion
11.00	***Tea/Coffee break***		
11:15	5. Exercise 4.2: Packaging products	WCMC	Plenary
11:25	6. Break-out in working groups	WCMC	Break-out
12:20	7. Report back	WCMC	Discussion
13:00	***Lunch***		
	Capacity needs		
14:00	8. Self Assessment	WCMC	Plenary
14:30	9. IPBES recap: how an assessment can feed into IPBES process	ROAP	Plenary
15:00	10. Identifying priority needs	WCMC	Discussion
15.30	***Tea/Coffee break***		
	Next Steps		
15:45	11. Exercise: Where to from here?	WCMC	Plenary
15:50	12. Breakout in country groups	WCMC	Break-out
16:30	13. Report back	WCMC	Discussion
17:00	14. Evaluation	WCMC	Individual
17:20	15. Thanks and conclusion of workshop	WCMC / ACB	Plenary