

## Southeast Asia Capacity Building Workshop on Indicators as part of NBSAP updating

### Workshop Report

25 - 28 March 2012

Green World Hotel, Tam Dao, Viet Nam



A workshop of the Biodiversity Indicators Partnership (BIP) co-convened by UNEP, UNEP-WCMC, the ASEAN Centre for Biodiversity (ACB) and NatureServe, in conjunction with the Biodiversity Conservation Agency of Viet Nam

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## 1. Summary

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The Southeast Asia Capacity Building Workshop on Indicators as part of NBSAP Updating was held on 25-28 March 2012 at Green World Hotel, in Tam Dao National Park, Viet Nam. The overall objective of the workshop was to strengthen capacity in the production of indicators as part of the National Biodiversity Strategy and Action Plan (NBSAP) updating process.

The workshop brought together a total of 31 delegates from nine Southeast Asian countries: Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam. Participants included representatives from government ministries, national environmental agencies, research centres and conservation NGOs. Representatives from the ASEAN Centre for Biodiversity (ACB), the Secretariat of the Convention on Biological Diversity (CBD), UNEP Regional Office for Asia and the Pacific, NatureServe, IUCN Asia Regional Office, Conservation International and the Wildlife Conservation Society also participated in the workshop and contributed their expertise in information sources and monitoring systems. A full participant list is provided in Annex 1.

The workshop was funded by UNEP and was co-convened by the UNEP World Conservation Monitoring Centre (UNEP-WCMC<sup>1</sup>) and NatureServe in conjunction with the Biodiversity Conservation Agency of Viet Nam and the ASEAN Centre for Biodiversity (ACB) as an activity of the Biodiversity Indicators Partnership (BIP<sup>2</sup>). The logistics were organised by the Biodiversity Conservation Agency of Viet Nam, the ASEAN Centre for Biodiversity and the UNEP Regional Office for Asia and the Pacific. The workshop was facilitated by Philip Bubb, Damon Stanwell-Smith and Murielle Misrachi from UNEP-WCMC and the BIP Secretariat and by Haruko Okusu from the UNEP Regional Office for Asia and the Pacific.

The programme consisted of a mix of presentations, interactive group work and training exercises designed to promote the development of national targets and indicators as part of the NBSAP updating process.

On the first day an introduction was given to the Strategic Plan for Biodiversity 2011-2020, followed by presentations and group discussions on updating NBSAPs, national target setting, and definition of indicators. The afternoon session was dedicated to a role play training exercise aimed at taking participants in mixed groups through the purpose and production steps of the Biodiversity Indicator Development Framework<sup>3</sup>. During this exercise, which continued on Day 2, participants were provided with a series of six workbooks and worked in small groups to develop national targets and indicators for a fictional country. Each workbook exercise concluded with the groups reporting on their results and lessons learnt and consolidation of key learning points.

On Day 2, the role-play exercise focused on identifying indicators, gathering and reviewing data, and calculating and communicating indicators. In the afternoon, participants worked in small groups to examine the information needs and possible indicators for each of the 20 Aichi Targets. Participants explained and discussed their results in a marketplace-like session.

On Day 3, a field trip was arranged to Tam Dao National Park with the aim to explore the application of a framework of pressures, state, responses and benefits to categorise issues and the use of indicators in management of the Park.

Day 4 included presentations from NatureServe, IUCN Asia Regional Office, Singapore City Biodiversity Index, the Wildlife Conservation Society and Conservation International, followed by a group exercise where each country team drafted and shared their next steps, including stakeholder involvement, capacity and information needs. Towards the end of the day, participants exchanged

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<sup>1</sup> [www.unep-wcmc.org](http://www.unep-wcmc.org)

<sup>2</sup> [www.bipindicators.net](http://www.bipindicators.net)

<sup>3</sup>

information on their needs and the expertise they could offer to support each other in the region. The day concluded with an evaluation of the workshop by the participants, thanks from Philip Bubb and the official closing of the workshop.

Copies of the presentations and workbooks used during the workshop were made available to the participants on a CD.

25 participants completed the workshop evaluation form and the average rating for the question 'How useful was this workshop in developing your capacity to update your NBSAP with indicators, on a scale of 0 to 10?' was 9.0.

## 2. Background

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With the adoption of the Strategic Plan for Biodiversity 2011-2020<sup>4</sup> at the tenth Conference of the Parties of the Convention on Biological Diversity (CBD COP-10), Parties to the CBD have been requested to update their National Biodiversity Strategy and Action Plans (NBSAPs) with the new Aichi Targets<sup>5</sup>, including reporting on their adopted national targets at COP-11 in October 2012 and their adopted strategies at COP-12. To support this process, a workshop for Southeast Asian countries on indicator capacity-building as part of NBSAP updating, was organised.

The workshop was funded by UNEP and was co-convened by the UNEP World Conservation Monitoring Centre (UNEP-WCMC<sup>6</sup>) and NatureServe in conjunction with the Biodiversity Conservation Agency of Viet Nam, the ASEAN Centre for Biodiversity (ACB) as an activity of the Biodiversity Indicators Partnership (BIP<sup>7</sup>). The logistics were organised by the Biodiversity Conservation Agency of Viet Nam, the ASEAN Centre for Biodiversity and the UNEP Regional Office for Asia and the Pacific. The workshop was facilitated by Philip Bubb, Damon Stanwell-Smith and Murielle Misrachi from UNEP-WCMC and the BIP Secretariat, and by Haruko Okusu from UNEP Regional Office for Asia and the Pacific. It was designed in co-ordination with the Secretariat of the CBD<sup>8</sup>.

The workshop format focused on interactive group work and training exercises, focusing on the information needs and use of indicators in setting and monitoring national targets. It was designed to complement the regional capacity-building workshops on updating NBSAPs organised by the Secretariat of the CBD in Xi'an, China, in May 2011 and Dehradun, India, in December 2011. The workshop was also designed to build on the capacity building work on national biodiversity indicators conducted in the region by the ASEAN Centre for Biodiversity and the Biodiversity Indicators Partnership and UNEP-WCMC in 2008 (See [www.bipnational.net](http://www.bipnational.net)).

## 3. Workshop Objectives

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The overall objective of the workshop was to strengthen capacity in the production of indicators as part of the National Biodiversity Strategy and Action Plan (NBSAP) updating process.

The expected results of the workshop were:

- Government agencies, NGOs and research institutes that are involved in updating NBSAPs have a better understanding of the analytical needs and availability of information to support the definition of national targets and indicators considering the Strategic Plan for Biodiversity 2011-2020 as a flexible framework;
- Participants are confident to use the 'Biodiversity Indicator Development Framework' and develop indicators for NBSAPs including Aichi Targets;
- Participants gained new ideas, inspiration and opportunities for NBSAP updating from the experience of other countries in the region;
- Increased learning and collaboration between government agencies, NGOs and research institutes involved in updating NBSAPs within and between countries in the region;
- Increased awareness of international organisations that can provide relevant information for NBSAP updating.

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<sup>4</sup> <https://www.cbd.int/sp/>

<sup>5</sup> <http://www.cbd.int/sp/targets/>

<sup>6</sup> [www.unep-wcmc.org](http://www.unep-wcmc.org)

<sup>7</sup> [www.bipindicators.net](http://www.bipindicators.net)

<sup>8</sup> <https://www.cbd.int/nbsap/workshops2/east-south-southeast-asia.shtml>

## 4. Day 1

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### 4.1 Welcome

The workshop was opened on Sunday, 25 March 2012 by Ms Hoang Thanh Nhan, Deputy Director of the Biodiversity Conservation Agency of Viet Nam. Mr. Philip Bubb, UNEP-WCMC, welcomed and thanked all delegates for attending the Southeast Asia Capacity Building Workshop on Indicators in Updating NBSAPs. He thanked the Government of Viet Nam and in particular the Biodiversity Conservation Agency for hosting the workshop in conjunction with the ASEAN Centre for Biodiversity. Ms. Haruko Okusu, from the UNEP Regional Office for Asia welcomed the participants and highlighted the high interest and sense of continuity shown by countries for work on biodiversity indicators. Ms. Clarissa Arida, on behalf of the ASEAN Centre for Biodiversity (ACB), expressed her appreciation for the continued partnership with UNEP-WCMC and the other partners for providing opportunities for learning and sharing experience in the region. Robert Höft from the Secretariat of the CBD noted that some of the participants had assisted to the CBD workshops on Updating NBSAPs held in Xi'an in May 2011 and Dehradun, India in December 2011. He welcomed the BIP initiative and stressed the importance of partnerships and training opportunities to build on the work of the Secretariat and achieve the goals of the Convention. The organisers wished all participants a successful workshop and pleasant stay in Tam Dao, Viet Nam.



*From left to right: Haruko Okusu (UNEP DELC), Hoang Thanh Nhan (Biodiversity Conservation Agency of Viet Nam), Philip Bubb (UNEP-WCMC), Clarissa Arida (ACB) and Robert Höft (Secretariat of the CBD) welcoming participants to the Southeast Asia Capacity Building Workshop on Indicators in Updating NBSAPs*

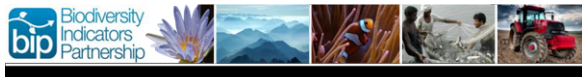
### 4.2 Introduction

Following the opening and welcome statements, the workshop participants were invited to introduce themselves briefly to the group. A complete list of participants is available in Annex 1.



*Workshop opening statements and round table introduction of participants*

Philip Bubb introduced the Biodiversity Indicators Partnership (BIP) and its work on capacity strengthening for national indicator development. He provided information on the National Indicator web-portal [www.bipnational.net](http://www.bipnational.net), a tool and source of information including guidance materials to assist indicator developers.



**The Partnership to 2020 - Expansion in national capacity-strengthening will include...**

- further **regional workshops** to support development of national Indicators
- development of a **guidance “toolkit”** for online and remote learning
- further development of a [www.bipnational.net](http://www.bipnational.net) based on clearly identified needs
- Development of **“Training of Trainers”** programme

[www.bipindicators.net](http://www.bipindicators.net)    [www.bipnational.net](http://www.bipnational.net)



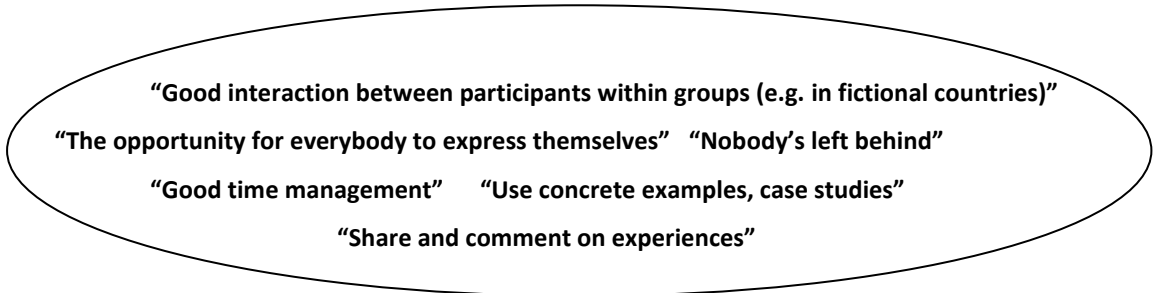
**Biodiversity Indicators Partnership (BIP)**

- CBD-mandated collaboration
- Over 40 organizations working globally
- Secretariat based at UNEP-WCMC
- Funded by GEF, EC, UNEP



[www.bipindicators.net](http://www.bipindicators.net)

He then outlined the objectives of the workshop and described the programme of activities (attached in Annex 2 of this report). To help lay the foundations for the workshop, the participants were invited to share with the rest of the group their expectations and requests regarding the style and content of the workshop. Their responses included:



Lastly, participants were asked four self assessment questions regarding their understanding of the Aichi targets and confidence in updating NBSAPs. Instead of giving a verbal response, participants were asked to express their understanding and confidence by ‘voting with their body’: they were invited to place themselves on a line with either end of the line representing the extremes of the responses. The questions asked and the results are depicted below.

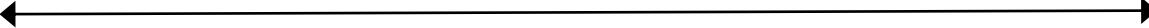
**Q1: I understand the Aichi Targets**



**Q2: How much relevant information is available in my country for NBSAP updating?**

*All the information needed*

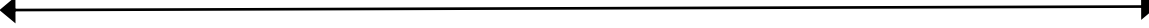
*No information*



**Q3: How ready is my institution for updating our country's NBSAP?**

*Completely ready*

*Not ready at all*



**Q4: How confident am I in developing indicators for NBSAPs?**

*Completely confident*

*Not confident at all*



The outcomes show a variation in answers across countries but also among participants from the same country. The response to question 4 shows that, for most participants, the level of confidence in developing indicators for NBSAPs is not very high at this stage.



## 4.3 Presentations

### 4.2.1 Introduction to the Strategic Plan for Biodiversity 2011-2020

Robert Höft from the Secretariat of the CBD, presented an overview of the Strategic Plan for Biodiversity 2011-2020, its vision and mission, the Strategic Goals and how they relate to each other, the Aichi Targets, the recommendations of SBSTTA-15, the outcomes of AHTEG and the framework of global indicators.

## Strategic Plan for Biodiversity 2011-2020

**Framework** for all Conventions and stakeholders.

**Vision:** *Living in harmony with nature.* By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.”

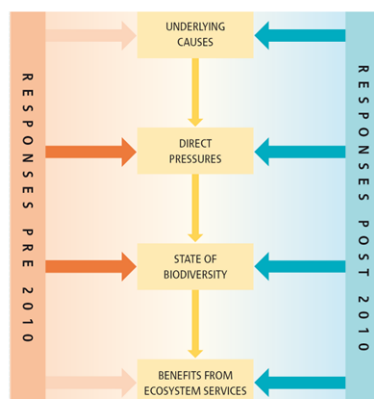
**Mission** Take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet’s variety of life, and contributing to human well-being, and poverty eradication

### 20 Aichi Biodiversity Targets

#### Implementation mechanisms



## Strategic Goals



- Address the **underlying causes** of biodiversity loss (mainstreaming)
- Reduce the **direct pressures** and promote sustainable use
- Directly safeguard** ecosystems, species and genetic diversity
- Enhance the **benefits** to all from biodiversity and ecosystem services
- Enhance implementation** through participatory planning, knowledge management and capacity building



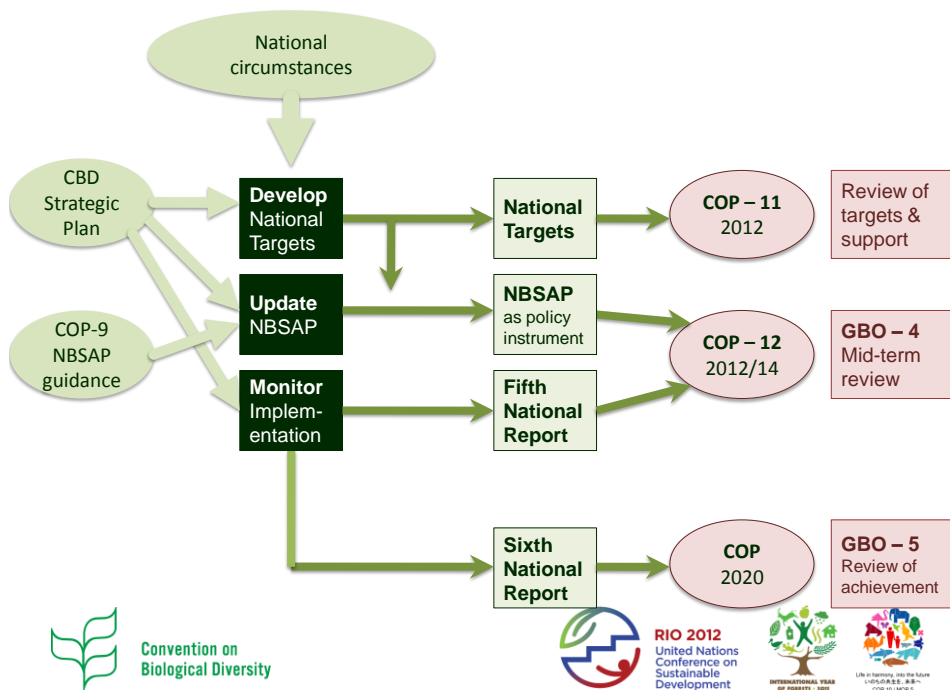
# Outcomes of AHTEG

**Indicator framework consisting of:**

- 12 Headline indicators addressing the issues of the 20 Aichi targets (broad themes)
- 22 Operational indicators that are ready for use globally (Category A)
- Additional indicators that should be developed at global level as a priority (Category B)
- A larger number of indicators for consideration at sub-global (i.e. national, state, province, sub-regional) level (Category C)



A summary of the next steps for countries in revising NBSAPs was provided:



#### 4.2.2 Updating and Implementing NBSAPs

Participants were invited to provide a brief update on their country's NBSAP revision process, including the activities carried out, the persons or institutions involved, the results and the challenges they faced.

##### **Summary of the participants' responses:**

What activity did you carry out?
<ul style="list-style-type: none"> <li>- Consultation workshops</li> <li>- Sectoral and cross-sectoral working groups</li> <li>- Stakeholder consultations</li> <li>- NGO consultations</li> <li>- Round tables</li> <li>- A kick off meeting</li> <li>- A high level meeting</li> <li>- Information gathering, gap analyses</li> <li>- Internal consultations</li> <li>- Inter-ministerial consultations</li> <li>- Technical working groups</li> <li>- Selection and engagement of a consultant</li> <li>- Drafted PIF</li> </ul>
Who was involved?
<ul style="list-style-type: none"> <li>- Representatives of biodiversity-related sectors</li> <li>- Ministries (Environment, Transport, Education...)</li> <li>- IIS</li> <li>- National Development and Planning Agency</li> <li>- National government agencies</li> <li>- Local authorities</li> <li>- Academic and research institutes</li> <li>- Local and international NGOs</li> </ul>
How did it go/what were the challenges?
<p><u>Challenges included:</u></p> <ul style="list-style-type: none"> <li>- Slow process</li> <li>- Getting the team together</li> <li>- Coordination among different stakeholders</li> <li>- Incorporating sectoral targets into strategic plan</li> <li>- Cuts in national budget on research/biodiversity</li> <li>- Information coming slowly</li> <li>- Developing a baseline for quantitative targets</li> <li>- Lack of baseline data and information</li> </ul>

### 4.2.3 Target setting as part of national planning

After an overview of important considerations for target setting, a short discussion was held on what makes a successful national target.



#### **Target Setting and National Planning**

Are there examples of successful or unsuccessful national targets? – from any sector

Why are measurable and time-bound national targets rare?



*General discussion and brainstorming session on national target setting*

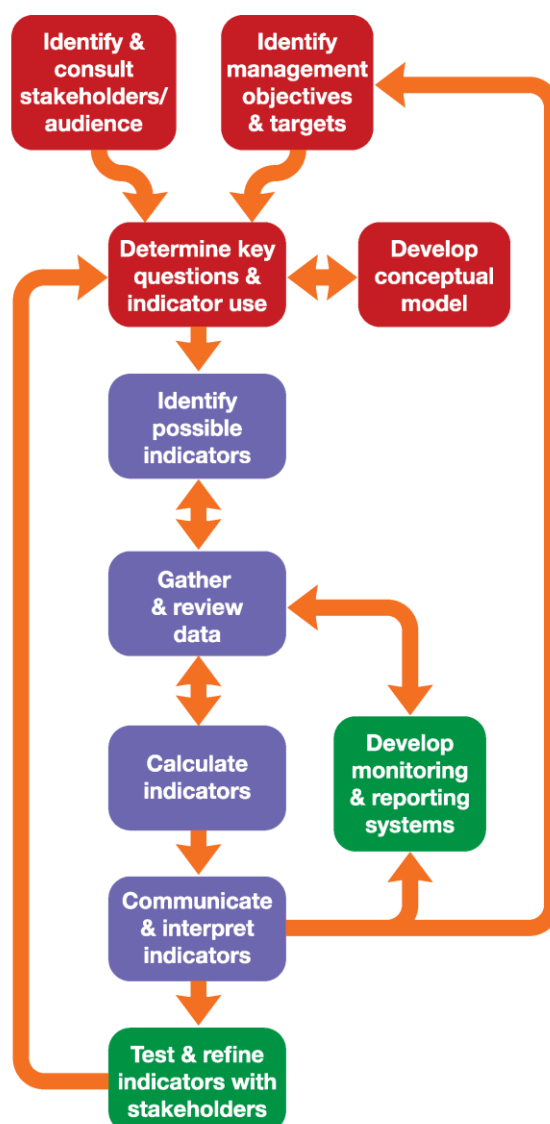
Participants suggested the following criteria:

- **Targets have to be applicable at the national level and on the ground**
- **Targets must be generic enough to be applicable to different sectors**
  - **A target needs to meet its purpose**
  - **There needs to be a follow up**
- **There needs to be enough funding to ensure implementation/follow-up**
  - **The target has to be time-bound**
- **Targets need to be 'owned', they are often more successful if someone or an organization is responsible for their achievement**
- **There needs to be coordination between different levels (e.g. Federal Government and State)**
  - **There needs to be cross-sectoral planning**
  - **There needs to be good baseline data**

### 4.2.4 Indicator definition and the uses of indicators

Damon Stanwell-Smith (UNEP-WCMC) gave a presentation on indicators and their uses. The Biodiversity Indicator Development Framework (below) which contains key steps for developing successful indicators was shared with the participants.

## Biodiversity Indicator Development Framework



This framework has been developed from the capacity-building experience of UNEP-WCMC and its partners including the BIP. The framework can be divided into three areas:

- **Purpose** – actions needed for selecting successful indicators
- **Production** – essential stages for indicator development
- **Permanence** – mechanisms for ensuring indicator continuity and sustainability

Indicator developers often start at the **production** stage by looking at the available data first. However, this approach has been found to be less effective and can be unsustainable. The BIP encourages indicator developers to start at the **purpose** stage. From experience, this has been found to be successful in helping developers select and produce indicators that respond to national priorities.

Further information on the framework and each of its steps is available in the document 'Guidance for national indicator development and use' which can be downloaded on <http://www.bipnational.net>. An interactive online version of the framework is available on: <http://www.bipnational.net/biodiversityindicatordevelopmentframework>.

The participants were invited to share their thoughts on what makes a successful indicator. Their responses included:

- A good indicator must:**
- Be measurable, quantifiable
  - Go beyond proxy, qualitative sensitivity
    - Be comprehensive
  - Be simple enough to provide an understanding of national trends
    - Incur minimum cost/effort (e.g. follow up & monitoring)

Damon Stanwell-Smith provided a summary of the multiple purposes of indicators and outlined some of the most common obstacles to successful indicators. A key element to remember is that **“Indicators are purpose dependent”**: the interpretation or meaning given to the data depends on the purpose or issue of concern.

**What is an indicator?**



**What is an indicator?**

*“A measure based on verifiable data that conveys information about more than itself”*

Indicators are purpose dependent...  
*the interpretation or meaning given to the data depends on the purpose or issue of concern.*

**What makes a successful indicator?**



**What makes a successful indicator?**



- Scientifically valid
- Based on available data
- Responsive to change in issue of interest
- Easily understandable
- Relevant to user’s needs
- Used!**

**Purposes of indicators:**



**Multiple purposes of indicators**

- Track **progress** in achieving targets
- Guide policy design & **implementation**  
*Highlight where action is needed*  
*Adaptive management*
- Build support  
*Communicate simple messages*

**Obstacles to successful indicators:**



**Obstacles to successful indicators**

- Lack of resources (funding, expertise, data)
- Insufficient stakeholder/audience consultation
- Project-based data collection and/or management
- Data utilised not sensitive to change
- An after-thought to a wider process of strategy development and target setting

#### 4.2.5 The distinctions between targets and indicators

Participants discussed distinctions between Targets and Indicators using the example shown below:



##### Distinctions between Targets and Indicators

###### National Target:

Increase terrestrial Protected Area coverage from 5% of the country to 15% by 2020

###### Indicators?

1. 15% terrestrial Protected Area coverage
2. Increase in Protected Area coverage
3. Protected Area coverage
4. Percentage Protected Area coverage

Indicator 1 is not an indicator because it includes a value (15%), and so the name of this indicator has been confused with the Target.

Indicator 2 is not a good name of an indicator because it defines that the value of the indicator should increase, and so has been confused with the Target. Indicator 3 is an acceptable indicator name.

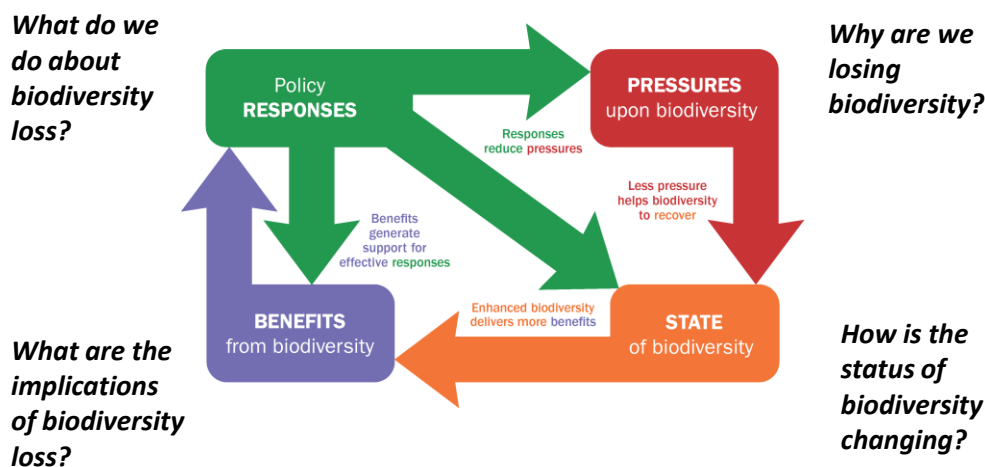
Indicator 4 could be considered a better indicator name because it includes the units of measurement.

#### 4.2.6 Steps in updating NBSAPs with the Aichi targets and the roles of information on biodiversity and ecosystem services

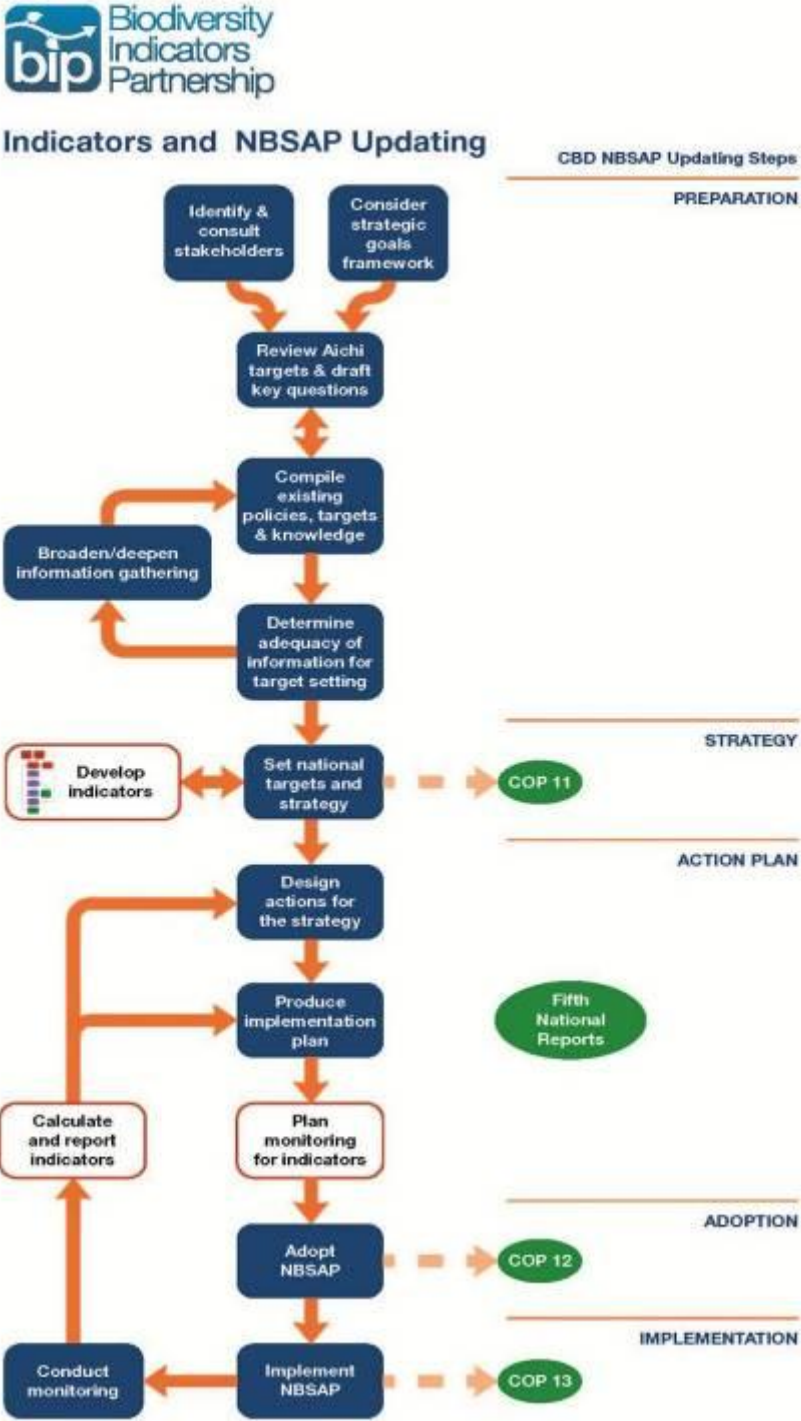
The 2011 CBD Ad Hoc Technical Expert Group (AHTEG) on indicators conceptual model (below) was described to the participants. The model, or framework, is used to assist the selection, development and communication of information and indicators for biodiversity conservation and management.



##### AHTEG: conceptual model



The following NBSAP Updating Framework was presented to the participants. The steps up to national target setting and developing indicators were emphasised.





### 4.3 Training Exercise – Setting 2020 targets and choosing indicators

The afternoon session was dedicated to a training exercise entitled “Setting 2020 Targets and choosing indicators - A day in the life of an NBSAP target and indicator developer”. The exercise, which started on Day 1 and continued on Day 2, used role play to take participants through both the NBSAP Updating framework introduced above and the **purpose** and **production** steps of the Biodiversity Indicator Development Framework shown on p.13 of this report. During this exercise, participants worked in small groups to develop national targets and indicators for a fictional country. Participants were divided into four mixed groups that represented four fictional countries, namely Lamar, Kamland, Balasia and Ponei. A total of six workbooks were used to guide participants throughout the exercise:

- **Workbook 1:** Defining the purpose of indicators
- **Workbook 2:** Target setting
- **Workbook 3:** Developing a conceptual model
- **Workbook 4:** Identifying indicators
- **Workbook 5:** Gather and review data
- **Workbook 6:** Calculate indicators

Each workbook contained background information and a specific task or question. The country teams were asked to write or illustrate their results on a flipchart and present them to the other participants.

#### Workbook 1: Defining the purpose of indicators

During this exercise participants in each fictional country were tasked with identifying three priority key questions regarding habitat loss and conservation and setting a national version of Aichi Target 5 that are likely to be important for their fictional country. In order to determine the key questions participants were asked to take into account stakeholder comments presented in the workbook. They were also requested to provide a reason/justification for each key question they selected.







*Kamland’s team of indicator developers identifying priority questions regarding habitat loss and conservation*



*Ponei’s team presenting their results*

## Workbook 1: Exercise Results

Key Questions	Reason/Justification for key question selection
<b>Lamar</b> 	
<ol style="list-style-type: none"> <li>1. What are the key habitats that need to be included in our national targets?</li> <li>2. What is the rate of loss of key habitats?</li> <li>3. What are the main threats to key habitats?</li> <li>4. What is the % area that is under sustainable management practices?</li> </ol>	<ul style="list-style-type: none"> <li>- We need baseline data and information on key habitats including status and pressures</li> </ul>
<b>Kamland</b> 	
<ol style="list-style-type: none"> <li>1. What is the rate/percentage of degradation of key habitats?</li> <li>2. How effective is our habitat management?</li> <li>3. Who are the key players/stakeholders?</li> </ol>	<ul style="list-style-type: none"> <li>- We need baseline data and information</li> <li>- We need to know how we are doing to date</li> <li>- We need to consult stakeholders,</li> <li>- We need to identify duties and responsibilities</li> </ul>
<b>Balasia</b> 	
<ol style="list-style-type: none"> <li>1. What are the natural habitats?</li> <li>2. What are the main causes of habitat loss, degradation and fragmentation?</li> <li>3. What is the current rate of habitat loss, degradation and fragmentation?</li> <li>4. Who are the custodians/stakeholders of these habitats?</li> </ol>	<ul style="list-style-type: none"> <li>- We need baseline data and information on our ecosystems</li> <li>- We need to know the key drivers of biodiversity loss</li> <li>- We need to identify roles and responsibilities</li> </ul>
<b>Ponei</b> 	
<ol style="list-style-type: none"> <li>1. What are the major causes of habitat degradation/loss (including forest, wetlands, marine and terrestrial habitats)?</li> <li>2. What are the status, trends and pressures of natural resources (past, present and future)?</li> <li>3. Who are the main stakeholders contributing to decision-making on habitat improvement?</li> </ol>	<ul style="list-style-type: none"> <li>- We need to understand the causes to address the problems, set priorities and baseline targets</li> <li>- We need to understand stakeholders' roles to engage them in the decision-making process</li> </ul>

### Lessons learned from workbook 1

Participants were asked to comment on the lessons they learned from this first exercise.

#### Participants' observations:

**"We need to respond to different stakeholders/interests/expertise/mandates"**

**"We need to make questions as specific as possible"**

**"In some cases we may need to include all ecosystems while in others focus on specific ecosystems"**





**"We need to make sure that there is a system in place so we don't miss important ecosystems"**

**"We need baseline data and information on ecosystems, habitats and key stakeholders"**

## Workbook 2: Target Setting

Participants were asked to select one of their key questions and work to propose three potential targets that respond to this question. In order to propose targets participants needed to consult existing policies, targets and knowledge provided in workbook 2.

### **Workbook 2: Exercise Results**

Targets	
<b>Lamar</b> 	
<b>Selected key question:</b> What is the rate of loss of key habitats?	
<b>Targets:</b> 1. At least 13,000 km <sup>2</sup> of primary tropical forest are protected by 2015 2. 293 km <sup>2</sup> of coral reef are protected by 2015 3. 100% of aquaculture operations are certified sustainable by 2015	
<b>Kamland</b> 	
<b>Selected key question:</b> What is the rate of degradation of priority habitat (e.g. primary tropical forests)?	
<b>Targets:</b> 1. Rehabilitate/restore at least 10% of degraded areas by 2020 2. Increase forest PA coverage by 15% from current baseline by 2020	
<b>Balasia</b> 	
<b>Selected key question:</b> What is the current rate of loss, degradation and fragmentation of key habitats?	
<b>Targets:</b> 1. Increase protected area coverage of mangrove ecosystems by 10% by 2020 2. Stop the rate of coral reef loss by 2012 onwards 3. Increase protected area coverage of forests by 2020	
<b>Ponei</b> 	
<b>Selected key question:</b> What is the status of primary tropical forests?	
<b>Target:</b> 1. Reduce the annual rate of forest loss and degradation from 3.2% to 1.5% by 2020 2. By 2020, at least 30% of tropical forests are protected 3. By 2020, at least 50% of tropical forest areas are sustainably managed while providing benefits to local stakeholders	

### **Lessons learned from workbook 2**

#### Participants' observations:

"Sometimes we need to look at the 'flip side' of the facts (e.g. primary forest vs. degraded forest)"

**Workbook 3: Developing the indicator – conceptual model**

For this exercise, each team was asked to develop a simple conceptual model, which will aid the selection and communication of their indicator. The starting point for this exercise was the selected key question and target. Each team was requested to pick one of the targets identified in the previous workbook exercise and then draw a conceptual model on the flip chart provided.



**Workbook 3: Exercise Results**

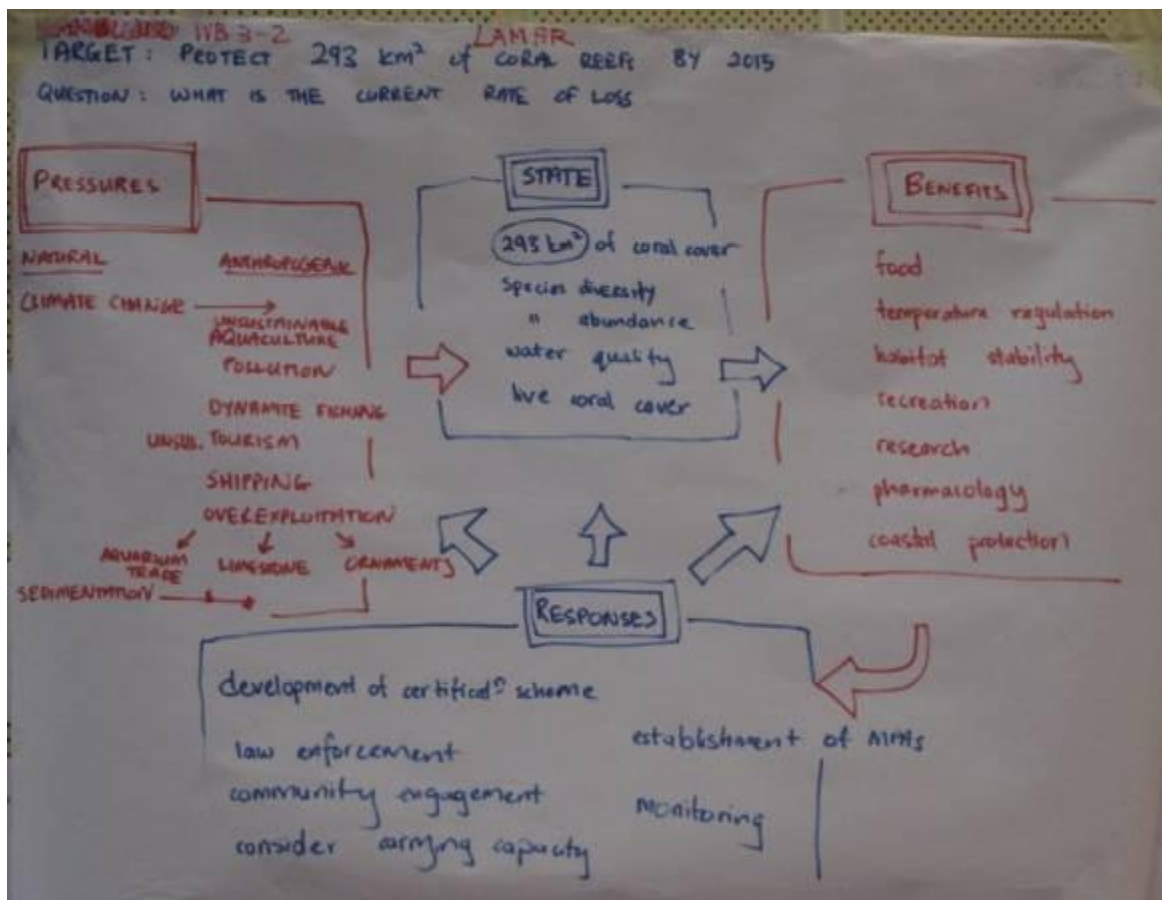
**Conceptual Model**

Lamar 

**Selected Target:**

293 km<sup>2</sup> of coral reef are under protected area coverage by 2015

**Conceptual Model:**

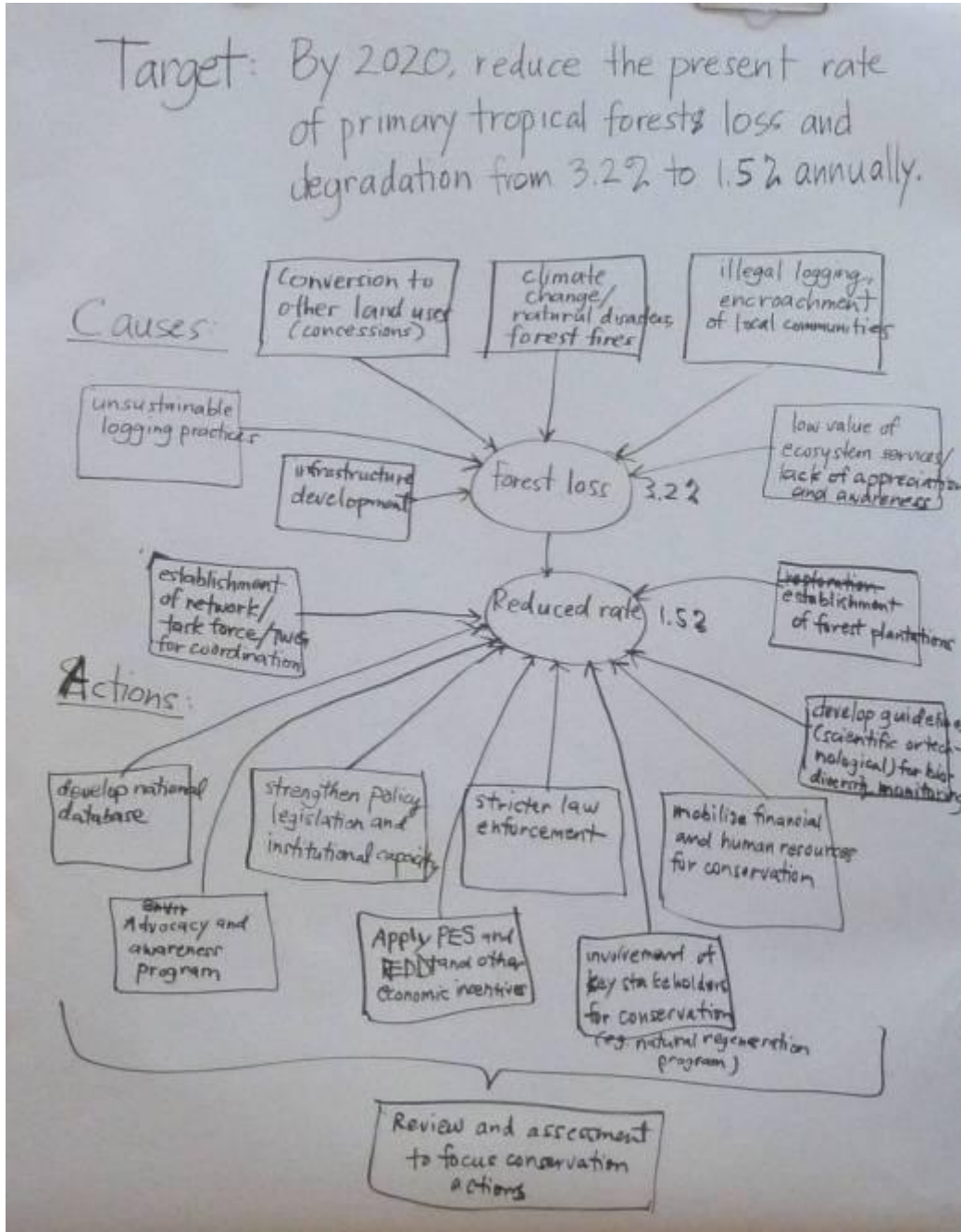




**Selected Target:**

Reduce the annual rate of forest loss and degradation from 3.2% to 1.5% by 2020

**Conceptual Model:**

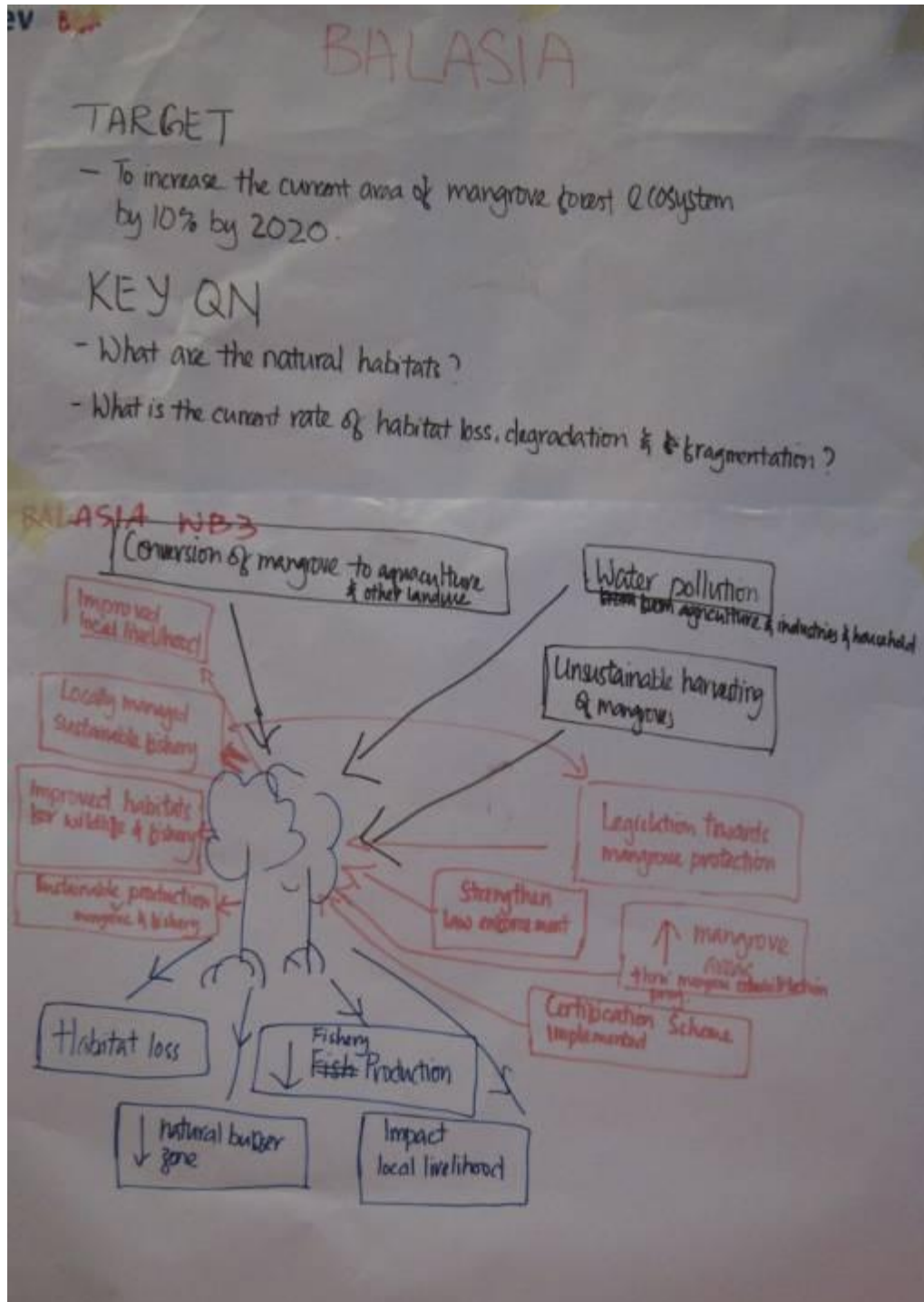




### Selected Target:

Rehabilitate or restore at least 10% of mangrove ecosystems by 2020

### Conceptual Model:

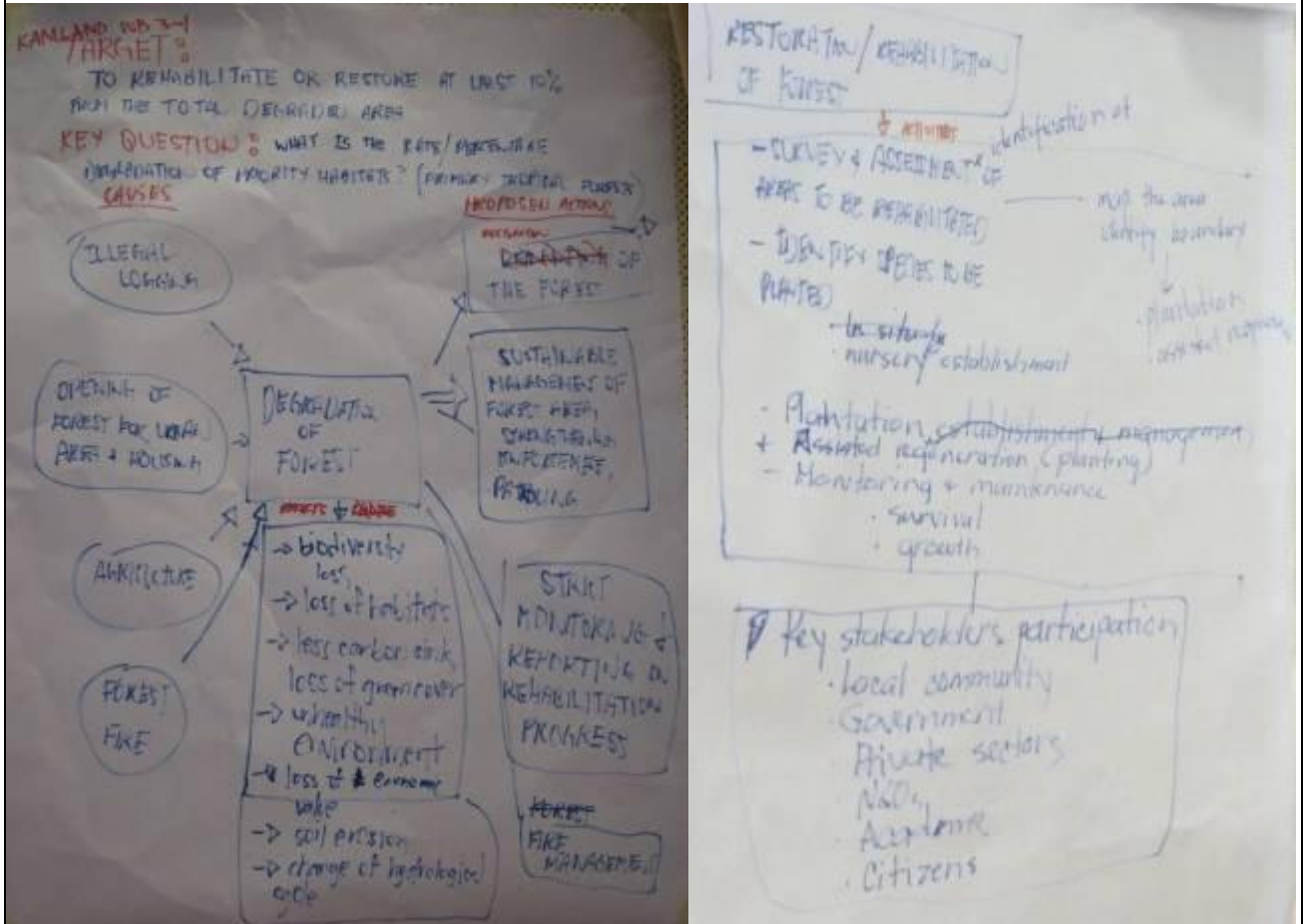




**Selected Target:**

Rehabilitate/restore at least 10% of total degraded area by 2020

**Conceptual Model:**



**Lessons learned from workbook 3**





Participants' observations:

- “There is no right or wrong model; what matters is how useful the model is”
- “This exercise supports logical thinking and helps defining accurate targets”
- “This is good for brainstorming in many areas, involving different sectors”
- “One model per target seems more convenient than one model for all targets”
- “It helps clarify how indicators respond to a particular target”

## Workbook 4: Identifying Indicators

During this exercise, each country team was asked to consider their conceptual model and propose three potential indicators that could be used to monitor progress towards their chosen target. They were also asked to justify why they had selected the indicators by relating them to the target and key question.

### **Workbook 4: Exercise Results**

Proposed Indicators	
Lamar 	<p><b>Selected Target:</b> 293 km<sup>2</sup> of coral reefs are protected by 2015</p> <p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>• Coral reef area in km<sup>2</sup> under PA coverage/ outside PA coverage</li> <li>• % of aquaculture companies certified “green”</li> <li>• Water quality</li> <li>• Species diversity</li> <li>• Number of violation cases</li> </ul> <p><b>Reasons/justification for indicators:</b></p>
Kamland 	<p><b>Selected Target:</b> Rehabilitate/restore at least 15,000 km<sup>2</sup> of primary tropical forest by 2020</p> <p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>• Area of primary tropical forest rehabilitated per year in km<sup>2</sup></li> <li>• Rate of survival of planted seedlings</li> <li>• Number of participating stakeholders</li> </ul> <p><b>Reasons/justification for indicators:</b> Monitor restoration progress; determine follow-up activities; the higher number of stakeholders participating, the higher the chance of success</p>
Balasia 	<p><b>Selected Target:</b> Increase protected area coverage of mangrove ecosystems by 10 % by 2020</p> <p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>• Percentage PA coverage of mangrove ecosystems</li> <li>• Changes in HH incomes dependent on mangrove ecosystems</li> <li>• Changes in CPUE</li> </ul> <p><b>Reasons/justification for indicators:</b></p>
Ponei 	<p><b>Selected Target:</b> Reduce the annual rate of forest loss and degradation from 3.2% to 1.5% by 2020</p> <p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>• Percentage of primary tropical forest cover in Ponei</li> <li>• Extent of protected primary tropical forest</li> <li>• Extent of conversion of protected primary tropical forest to other land use</li> <li>• Number of illegal activities, encroachment in primary tropical forest</li> <li>• Number of Ha being naturally restored, regenerated</li> </ul> <p><b>Reasons/justification for indicators:</b> Trend over time; response (how much is protected/management plan); evolution of pressure/threats; planning; efficiency of law enforcement, capacity building; local involvement</p>



*Lessons learned from workbook 4*

*Participants' observations:*

**“It is important to link the indicator with the target. Indicators are purpose-dependent”**

**“The lack of baseline data and information constitutes an obstacle to making and monitoring quantitative indicators”**



*Participants working in their respective fictional country team*



## 5. Day 2





### 5.1 Exercises

#### 5.1.1 *Setting 2020 targets and choosing indicators - A day in the life of an NBSAP target and indicator developer (continued)*

##### Workbook 5: Gather and review data

For this exercise each country team was presented with invented data sheets containing protected area site, species population, protected area management and ecosystem services data. Participants were tasked with reviewing the data to see if it would be possible to calculate their proposed indicators.

##### **Workbook 5: Exercise Results**

Proposed Indicators	
Lamar 	<p><b>Can any of the identified indicators be calculated with available data:</b> Yes</p> <p><b>Selected Indicator:</b> Percentage of aquaculture area certified “green”</p> <p><b>Data fields used:</b></p> <ul style="list-style-type: none"> <li>• Area used for aquaculture</li> <li>• Percentage of companies compliant with aquaculture policy</li> <li>• Number of certified companies</li> </ul>
Kamland 	<p><b>Can any of the identified indicators be calculated with available data:</b> Yes</p> <p><b>Selected Indicator:</b> Area of tropical primary forest rehabilitated per year</p> <p><b>Data fields used:</b></p> <ul style="list-style-type: none"> <li>• Yearly habitat data for tropical primary forest</li> </ul>
Balasia 	<p><b>Can any of the identified indicators be calculated with available data:</b> Yes</p> <p><b>Selected Indicator:</b> Area of mangrove coverage</p> <p><b>Data fields used:</b></p> <ul style="list-style-type: none"> <li>• Total area of mangrove cover from 1992 to 2011</li> </ul>
Ponei 	<p><b>Can any of the identified indicators be calculated with available data:</b> Yes</p> <p><b>Selected Indicator:</b> Percentage of primary tropical forest cover in Ponei Extent of primary tropical forest under PA in Ponei</p> <p><b>Data fields used:</b></p> <ul style="list-style-type: none"> <li>• Total land area in km<sup>2</sup></li> <li>• Total area of habitat type in km<sup>2</sup></li> <li>• Terrestrial PA in km<sup>2</sup></li> </ul>

## Lessons learned from workbook 5

*Participants' observations:*

“We may want to look for data outside targets”

“Datasets might change so it is important to adjust the target's wording”

## Workbook 6: Calculate Indicators

Due to time constraints country teams were not asked to calculate the indicator. Instead each fictional country indicator development team was asked to identify potential options for presentation that could help to guide the calculation process.

## **Workbook 6: Exercise Results**

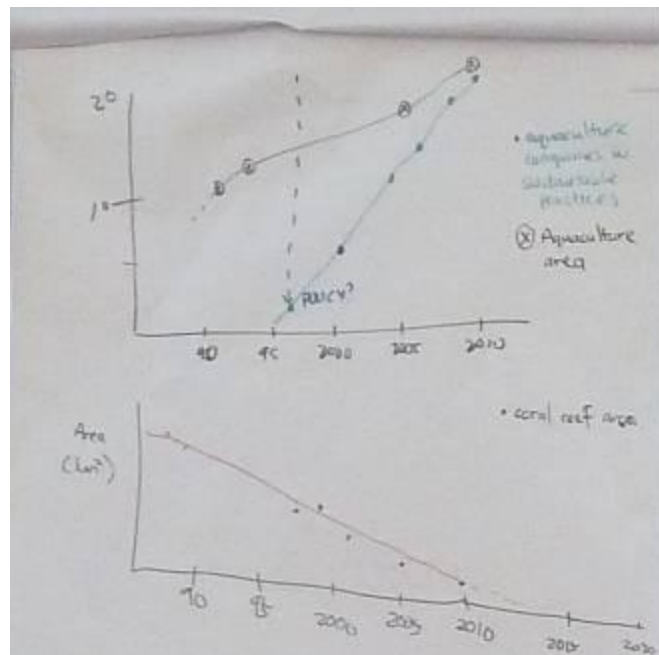
### Indicator Presentation

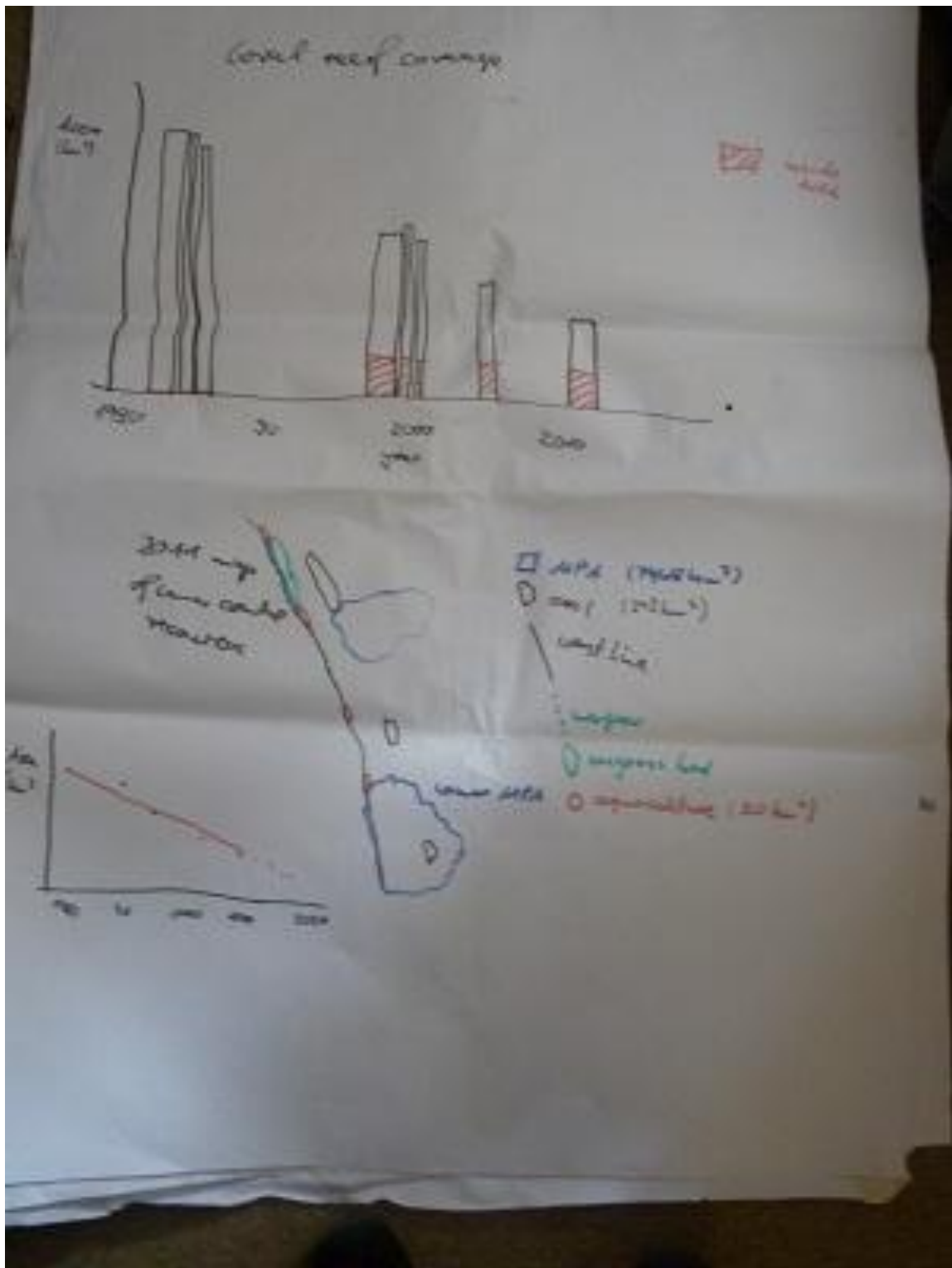
Lamar 

#### **Selected Indicator:**

Percentage of aquaculture area certified “green”

#### **Presentation Options:**

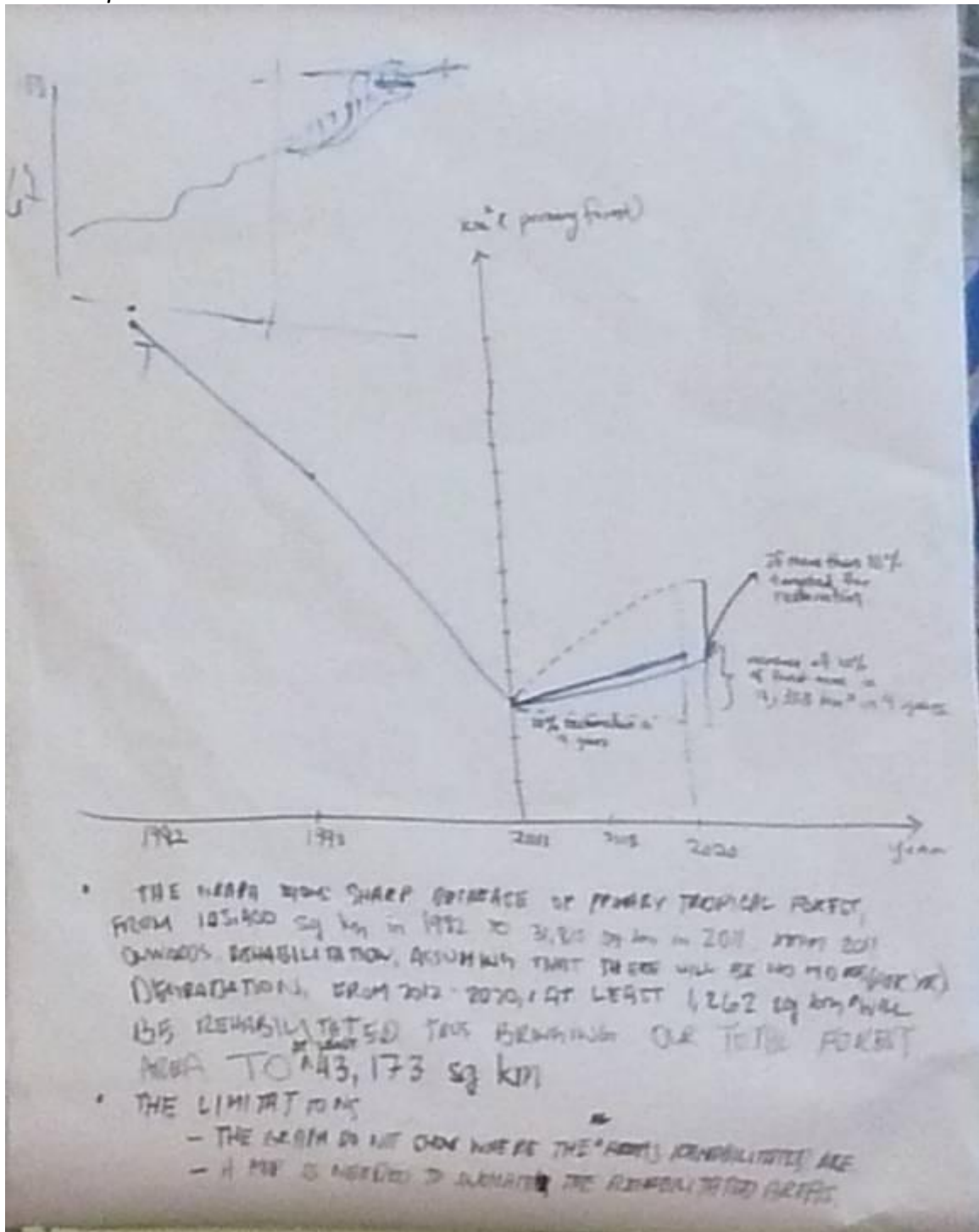




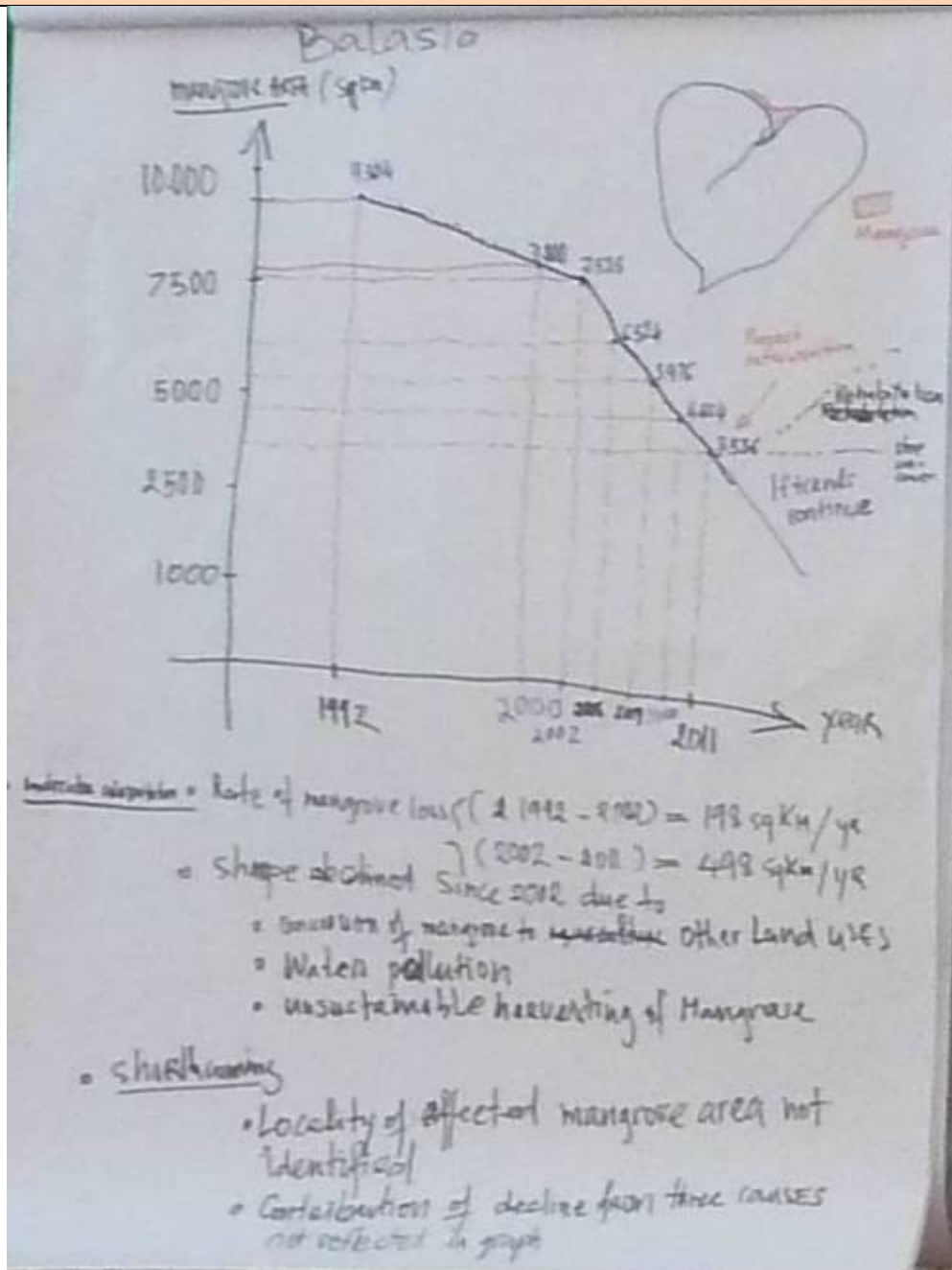
**Selected Indicator:**

Area of tropical primary forest rehabilitated per year

**Presentation Options:**



- THE HEAVY AND SHARP DECREASE OF PRIMARY TROPICAL FOREST, FROM 105,400  $\text{sq km}$  IN 1992 TO 3,800  $\text{sq km}$  IN 2011. WITH 2011 ONWARDS, REHABILITATION, ASSUMING THAT THERE WILL BE NO FURTHER DEGRADATION, FROM 2012-2020, AT LEAST 1,262  $\text{sq km}$  WILL BE REHABILITATED TAKING FORWARD OUR TOTAL FOREST AREA TO 43,173  $\text{sq km}$
- THE LIMITATIONS
  - THE AREA DO NOT ONLY WHERE THE AREAS REHABILITATED ARE
  - A PLAN IS NEEDED TO MANAGE THE REHABILITATED AREAS.



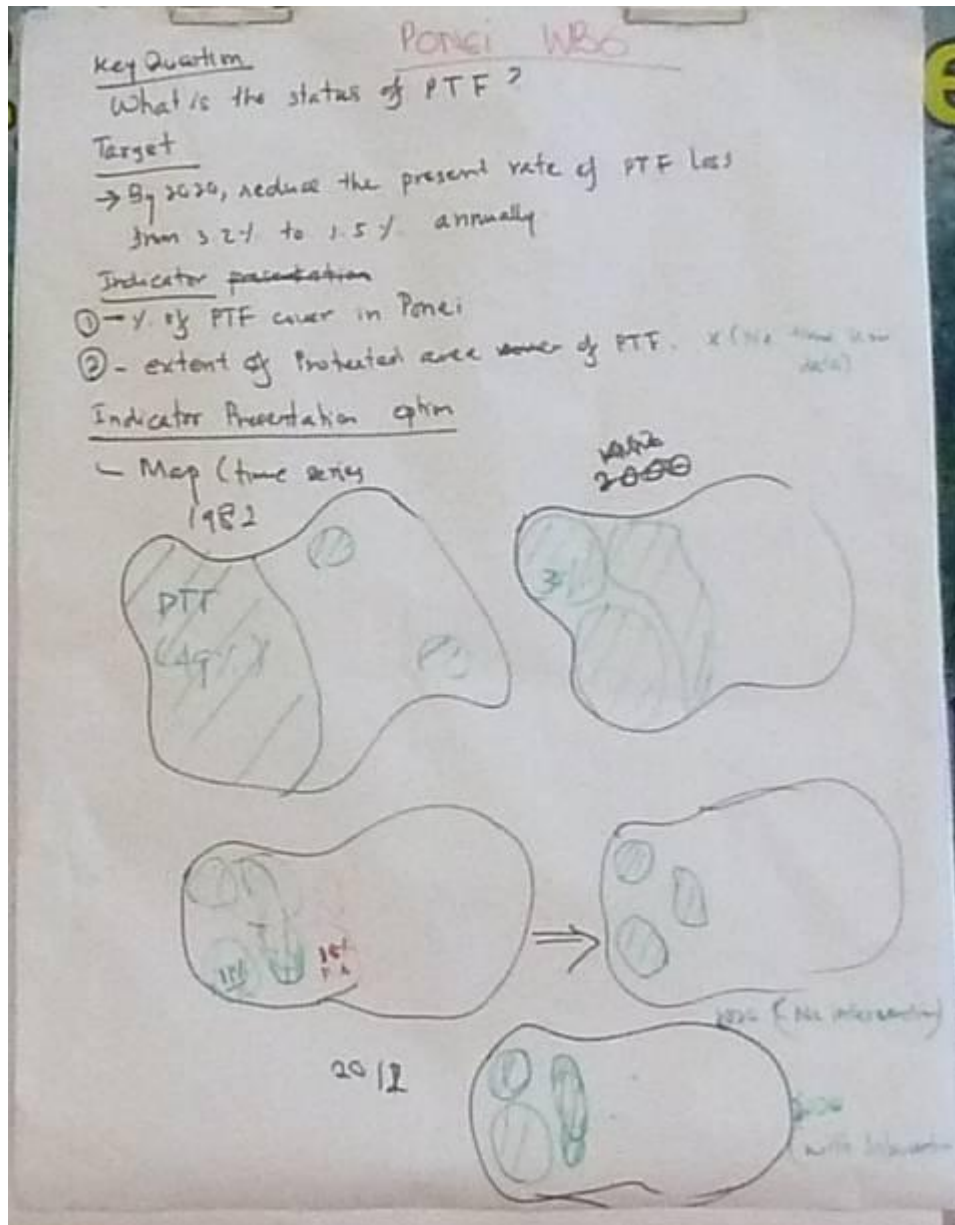
**Selected Indicator:**

Area of mangrove coverage

**Presentation Options:**

**Selected Indicator:**

- % of primary tropical forest cover
- Extent of primary tropical forest under PA

**Presentation Options:**

To conclude the role-play exercise, Philip Bubb summarised the exercises and lessons learned. He referred to the Biodiversity Indicators Development Framework, reminded that indicators are purpose-dependent, that they need to be used to be successful, and that it is important to clarify the purpose of the indicator and its user(s).

### 5.1.2 *Analysing the Aichi Targets: Information needs, possible indicators and national level constraints*

For the afternoon exercise participants were divided into five groups. Each group was given a different set of Aichi targets, asked to review the target and write information on a flipchart under the following sub-headings:

- Essential information needed to set a national target or targets under this Aichi Target
- Possible indicators for the Target
- Information feasibility issues for national target setting and reporting

Participants were provided with the following resources to assist in the evaluation of the targets:

- CBD Aichi Target Rationale: NEP/CBD/COP/10/INF/12/
- Conceptual and knowledge issues for Aichi Targets 1 to 19. Taken from the Annex of the report, *National Indicators, Monitoring and Reporting for the Strategy for Biodiversity 2011-2020*

Each group presented their results back to the other participants. This activity took the form of a 'marketplace' - i.e. next to each flipchart a designated spokesperson explained the results found by their group to another group. After a given time, spokespersons would be replaced by another team member and each group moved on to the next flipchart.



*A group of participants discussing the information needed to set a national target under an Aichi Target, possible indicators for the Target and information feasibility issues for national setting and reporting*



*A designated spokesperson explaining her group's findings to another group.*



**Exercise Results - The Aichi Targets: Information needs, possible indicators and national level feasibility**

Target 1
Target Text
By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Information on existing public awareness programmes on biodiversity (curriculum related to biodiversity)</li> <li>• Audiences/target groups for communication on public awareness</li> <li>• Existing communication plans/strategies</li> <li>• Information on biodiversity values (e.g. ecosystem services, pharmacology, economic, social)</li> <li>• Surveys to measure attitudes, look at behaviour</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Number of awareness programmes on biodiversity (information materials...)</li> <li>• Number of audiences who participated in relevant programmes</li> <li>• Number if curriculum integrating biodiversity courses</li> <li>• Number of policy briefs for decision-makers</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Baseline data not available</li> <li>• Difficult to measure impacts or monitor</li> <li>• Need a mechanism on CEPA</li> <li>• Ways to make biodiversity hot topics</li> </ul>

Target 2
Target Text
By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting as appropriate and reporting systems.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Current budget allocation to biodiversity management</li> <li>• Assessment and screening of policies/strategies/plans of national, local and sectoral levels</li> <li>• Existing info on biodiversity values</li> <li>• Institutional analysis on mainstreaming biodiversity</li> <li>• Priority of ecosystems</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Resource allocated for biodiversity management at all levels</li> <li>• Number of plans/strategies incorporating biodiversity and its values</li> <li>• Payment for ecosystem services (policy or mechanism)</li> <li>• Mechanism for incorporating biodiversity into national accounting (green GDP)</li> <li>• National reporting</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Lack of information on economic value of biodiversity</li> </ul>

<b>Target 3</b>
Target Text
By 2020, at the latest, incentives including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimise or avoid negative impacts and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Existing subsidies (positive and negative)</li> <li>• Policy (fiscal and other) impact on biodiversity</li> <li>• Stakeholders affected</li> <li>• Biodiversity friendly incentives</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Number/amount of biodiversity friendly incentives</li> <li>• Number and amount of harmful subsidies removed</li> <li>• Number of applied initiative incentives (PES, tax etc.)</li> <li>•</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Difficulties to obtain documentation on subsidies and incentives</li> <li>• Impact assessment of decoupling subsidies from the use of NR</li> </ul>

<b>Target 4</b>
Target Text
By 2020, at the latest, Governments, businesses and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Level of safe ecological limit</li> <li>• Sustainable production and consumption (CSPC)</li> <li>• Existing policies, regulations and standards</li> <li>• Identification of products and consumer information that are in critical level</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Number of market base incentives for sustainable production and consumption</li> <li>• Standard for sustainable production and consumption in various sectors</li> <li>• Number of sustainable production and consumption certifications</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Insufficient information on current sustainable production and consumption practices and patterns</li> </ul>

Target 5
Target Text
By 2020, at the latest, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Types of habitat</li> <li>• Current status</li> <li>• Rate of loss</li> <li>• Drivers of degradation/loss/fragmentation</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Area coverage</li> <li>• Rate of loss per year</li> <li>• Area protected</li> <li>• Area under sustainable development management</li> <li>• Area restoration</li> <li>• Quantification of fragmentation</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Types of habitat (can be very diverse so difficult)</li> <li>• Rate of loss depends on ecosystem</li> <li>• Drivers of degradation/loss/fragmentation easy to identify but difficult to quantify</li> </ul>

Target 6
Target Text
By 2020, at the latest, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem-based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species-fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are in safe ecological limits.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Which kind of fisheries?</li> <li>• Status and stock of fishery resources (inc. identification of depleted species)</li> <li>• Exploitation level</li> <li>• Sustainable harvest level of fishery stock</li> <li>• Number/methods of sustainable practices</li> <li>• Safe ecological limits</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Population trends of selected species</li> <li>• Catch per unit effort</li> <li>• Percentage of total catch from certified sustainable practices</li> <li>• Number of recovery plans for depleted species</li> <li>• Legislation on fishery practices including zoning</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Status and stock of fishery resources depends on species</li> <li>• Sustainable harvest level of fishery stock difficult to measure unless there is certification in place</li> <li>• Difficult to measure sustainable practices</li> </ul>

<b>Target 7</b>
Target Text
By 2020, areas under agriculture, aquaculture and forestry are managed sustainably ensuring conservation of biodiversity
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Current status (policy e.g. land use, economic incentives)</li> <li>• Management practices and impacts on biodiversity conservation</li> <li>• Definition of sustainable</li> <li>• Certification scheme linked to biodiversity conservation</li> </ul>
Possible indicators
<ul style="list-style-type: none"> <li>• Proportion of harvest from sustainable practices/negative indicators area, practices</li> <li>• Area of land under sustainable management</li> <li>• (monitoring) population trend of selected species</li> <li>• Number of certified products</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Difficult to define “sustainable”</li> <li>• Difficult to measure impacts on biodiversity conservation</li> </ul>

<b>Target 8</b>
Target Text
By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Data on source of pollution (ecosystems, species and population)</li> <li>• Data on types of pollution</li> <li>• Data on amount and level of pollution</li> <li>• Data on impacts of pollution (ecosystems and services affected (what types of pollution affect what type of ecosystems, extent and incidence of damage due to pollution)</li> <li>• Data regarding mitigation (treatment plants, discharge)</li> <li>• Existing threshold levels</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• TSP emissions over time</li> <li>• Water quality standards (total suspended solids (physical), Oxygen levels (chemical))</li> <li>• Carbon levels</li> <li>• NPK levels</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• No or limited data on threshold levels</li> </ul>

<b>Target 9</b>
Target Text
By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated and measures are in place to manage pathways to prevent their introduction and establishment.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• List of IAS</li> <li>• Risk assessment of IAS</li> <li>• Information on pathways/affected areas</li> <li>• Experience of legal frameworks/management plans</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Number/population of IAS</li> <li>• Area affected by IAS</li> <li>• Trends in habitat conversion</li> <li>• Number of IAS in eradicated programme under management programme</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Not easy to have a full inventory programme</li> </ul>

<b>Target 10</b>
Target Text
By 2015, the multiple anthropogenic pressures on coral reefs and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized so as to maintain their integrity and functioning.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Anthropogenic pressures (pollution, exploitation, sedimentation...)</li> <li>• Status of coral reefs/vulnerable ecosystems</li> <li>• (List of vulnerable ecosystems impacted by climate change and ocean acidification</li> <li>• List of anthropogenic pressures on those ecosystems e.g. unsustainable fishing, pollution, unsustainable tourism)</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Water quality</li> <li>• Extinction risk of coral reef and fish</li> <li>• Coverage of MPAs</li> <li>• Trend in coral reef condition</li> <li>• Area of coral reef affected by dynamite fishing</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Difficulties to get data on anthropogenic pressures/can be very different depending on countries</li> </ul>

<b>Target 11</b>
Target Text
By 2020, at least 17 per cent of terrestrial and inland-water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures and integrated into the wider landscape and seascape.
Essential information needed to set a national target or targets under this Aichi Target
Baseline data e.g.: <ul style="list-style-type: none"> <li>• Coverage of protected areas</li> <li>• Coverage of water areas (terrestrial and inland, marine etc.)</li> <li>• Inventory of key biodiversity areas</li> <li>• Information on connectivity</li> <li>• Criteria and processes for establishing corridors</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Percentage of areas under protection</li> <li>• Connectivity of Pas/KBAs</li> <li>• Presence of management effectiveness</li> <li>• Ecosystem quality measures (species diversity, species abundance, population)</li> <li>• Number of PAs included in spatial planning</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Lack of standardised tools to measure management effectiveness</li> <li>• Management Effectiveness Tracking Tool (METT)</li> <li>• Management Effectiveness Assessment</li> </ul>

<b>Target 12</b>
Target Text
By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those in decline, has been improved and sustained.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• A list of threatened species (IUCN Red list, Cities, national Red lists)</li> <li>• Number of threatened species</li> <li>• Distribution of threatened species</li> <li>• Status and threats</li> <li>• Enforcement, policies and programmes</li> <li>• Habitats essential for species survival</li> </ul>
Possible indicators
<ul style="list-style-type: none"> <li>• Population distribution of threatened species</li> <li>• Size and distribution of habitats</li> <li>• Number of essential habitats that are protected</li> <li>• Critical habitats</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Difficulties in measuring population and distribution of marine species</li> </ul>

<b>Target 13</b>
Target Text
By 2020 ,the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives including other socio-economically as well as culturally valuable species is maintained and strategies have been developed and implemented for minimizing genetic erosion and safe guarding their genetic diversity.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• A list of species of cultivated plants, farm and domesticated animals</li> <li>• A list of socio-economically and culturally valuable species</li> <li>• Existing policies and strategies in genetic diversity of...</li> <li>• Genetic information of all...</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Number of plant species cultivated</li> <li>• Number of domesticated animals that are maintained</li> <li>• Number of strategies in place to maintain genetic diversity</li> <li>• Number of species of cultivated plants and domesticated animals that are protected. Gene banks</li> <li>• (Number of wild / endemic species genetic material preserved in gene banks)</li> <li>• (Number of relevant International Treaties ratified and integrated into national strategies)</li> <li>• (Area of land cultivated with exotic species)</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Data on genetic diversity is limited</li> </ul>

<b>Target 14</b>
Target Text
By 2020, ecosystems that provide essential services, including services relating to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities and the poor and vulnerable.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Identification of essential ecosystem services</li> <li>• Socio-economic data (e.g. health), resource use of target groups</li> <li>• Value of biodiversity</li> <li>• Legal framework/legislation</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Income/benefits of target group derived from ecosystem services</li> <li>• Life expectancy of target group</li> <li>• Existence of a legal framework</li> <li>• Access to clean water</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Difficulties to measure benefits (intangible)</li> <li>• Easy to determine life expectancy</li> <li>• Easy to conduct policy review</li> </ul>

<b>Target 15</b>
Target Text
By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced, through conservation and restoration, including restoration of at least 15% of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Extent of degraded ecosystems</li> <li>• Impact of environment pollution</li> <li>• Baseline data of carbon stocks</li> <li>• Main drivers of ecosystem degradation</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Area of restoration</li> <li>• Area of degraded ecosystems</li> <li>• Measurement of biomass in different types of natural forests</li> <li>• Levels of environmental pollution</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Fragmentation of data</li> <li>• Classification of ecosystems and biomass using satellite images (relatively easy) or difficult to ground truth</li> <li>• Difficulty to obtain due to lack of CHM</li> <li>• (REDD strategy under development –Political will / interest)</li> </ul>

<b>Target 16</b>
Target Text
By 2015, the Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization is in force and operational, consistent with national legislation.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Identification of genetic resources</li> <li>• Identification of operational instruments for ABS (legislation framework, agreements, technical assistance programmes)</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Existing legislation framework, agreement and technical assistance programme</li> <li>• Adoption of ABS law/policy</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Difficulties in collection and monitoring of data on genetic resources</li> </ul>



<b>Target 17</b>
Target Text
By 2015, each party has developed, adopted as a policy instrument, and has commenced implementing, an effective participatory and updated NBSAP
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Existing policies for biodiversity conservation</li> <li>• Who are the key stakeholders and what are their responsibilities</li> <li>• Resources to implement the strategy and action plan</li> <li>• Is there a monitoring mechanism in place</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Number of national, sub-national and sectoral plans that incorporate biodiversity conservation</li> <li>• Number of policy instruments and NBSAPs that are adopted</li> <li>• Number of stakeholders (NGAs, NGOs, GOs, ILC etc.)</li> <li>• Stage of implementation</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• There seems to be enough information for national target setting and reporting</li> </ul>

<b>Target 18</b>
Target Text
By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with full and effective participation of indigenous and local communities, at all levels.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• National policy and/or legislation to protect traditional knowledge</li> <li>• Directory of traditional knowledge (TK) and customary practices</li> <li>• Participation of indigenous and local communities in the planning process</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Number of policy instruments and action plans developed and implemented to protect traditional knowledge</li> <li>• Status and trends of traditional knowledge being used</li> <li>• Number of indigenous and local communities who participated in the planning process</li> <li>• Number of Traditional knowledge patents for products developed</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Lack of information on status of TK</li> </ul>

<b>Target 19</b>
Target Text
By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred and applied.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Current situation regarding science base and technologies on biodiversity</li> <li>• Information on clearing house mechanism (CHM)</li> </ul>
Possible indicators for the target
<ul style="list-style-type: none"> <li>• Number of scientific publications and transferred technology to society/target users</li> <li>• Number of visitors of CHM</li> <li>• Number of technologies that can be applied to conserve biodiversity</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Availability of information</li> <li>• Availability of feedback from CHM users</li> <li>• CHM might impact some local communities</li> </ul>

<b>Target 20</b>
Target Text
By 2020, at the latest, the mobilization of financial resources for effective implementation of the Strategic Plan for Biodiversity 2011-2020 from all sources and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially from current levels. This target will be subject to changes contingent to resources needs assessments to be developed and reported by parties.
Essential information needed to set a national target or targets under this Aichi Target
<ul style="list-style-type: none"> <li>• Data on funders and other financial opportunities for biodiversity conservation</li> <li>• Information of financing mechanisms (including traditional and innovative)</li> <li>• Evaluation of financial needs for implementing the NBSAP, cost of implementing NBSAPs, cost for conservation of biodiversity</li> <li>• (Investment plan and mechanisms for financial resources mobilization)</li> <li>• Data on all funders and other financial opportunities for biodiversity conservation</li> <li>• Governmental fund for biodiversity conservation</li> </ul>
Possible indicators for the Target
<ul style="list-style-type: none"> <li>• Total amount of funding spent on biodiversity conservation</li> <li>• Number of funding sources for implementation of NBSAPs</li> <li>• Percentage of budget spent on biodiversity conservation/for implementation of NBSAP</li> </ul>
Information feasibility issues for national target setting and reporting
<ul style="list-style-type: none"> <li>• Difficulties to get information (percentage for biodiversity conservation) from governments and other sources</li> </ul>

## 5.2 Presentations

### 5.2.1 Indicators for NBSAPs – examples and analysis from the region

Clarissa Arida, Director of the Development & Implementation Programme at the ASEAN Centre for Biodiversity (ACB) made a presentation on provisional ASEAN biodiversity indicators in preparation for the Fourth National Report to the CBD. These were indicators were developed in two workshops led by ACB with UNEP-WCMC in 2008.

#### Provisional List of ASEAN Biodiversity Indicators

- From 11 goals and targets, the indicators were trimmed down to Goals and Targets 1-5
- The rest were deemed “parked” due to difficulty in obtaining data
- Analyses showed that most of the targets with selected indicators were more bio-physical in nature
- The socio-economic targets and goals comprised most of the “parked” indicators, including Access and Benefit Sharing (ABS) indicators.

#### Target 1.1 At least 10% of the world’s ecological regions effectively conserved

- Total area protected (ha or sq. km.)
- Percentage of country area protected
- Total forest area protected (ha. or sq. km.)
- Percentage of forest area protected
- Number or proportion of your PAs in different categories of effectiveness
- Total number of rangers in whole PA system
- Average number of rangers per PA

#### Target 1.2 Areas of particular importance to biodiversity protected

- Area of PAs that is, e.g. Key Biodiversity Area (sq. Km)
- Percentage or proportion of area in PAs that is, e.g. Key Biodiversity Area for other processes and/or measures Area of PAs that is recognised as important by any of the processes (sq. km.)
- Percentage or proportion of area in PAs that is recognised as important by any of the processes
- Area within country that is recognised as important, e.g. as Key Biodiversity Area, that is included in the PA network (sq. km.)
- Percentage or proportion of area that is recognised as important, e.g. that is Key Biodiversity Area, that is included in the PA network
- Area or percentage or proportion of area that is recognised as important by any of the processes that is included in the PA network

#### Target 2.1 Restore, maintain or reduce the decline of populations of species of selected taxonomic groups

- Numbers of important native species (well-known, economically important, endemic, threatened) that are successfully captive-bred or artificially propagated in your country, divided into taxonomic groups (e.g. birds/ mammals/ reptiles/ amphibians/ fishes/ invertebrates/ plants)
- Proportion or percentage of important native species in the different groups above that are successfully captive-bred or artificially propagated
- Numbers of important native species (well-known, economically important, endemic, threatened) that are the subject of in-situ conservation programmes in your country, divided

into taxonomic groups (e.g. birds/ mammals/ reptiles/ amphibians/ fishes/ invertebrates/ plants)

- Numbers of important native species whose population status has stabilised or improved as a result of in-situ conservation programmes in your country

**Target 4.1 Biodiversity-based products derived from sources that are sustainable managed and Production areas managed consistent with the conservation of biodiversity**

- Proportion of CITES-listed species in cultivation
- Total area or proportion of area used for production forest

**Target 4.3 No species of wild flora or fauna endangered by international trade**

- List of wildlife species legally traded
- Number of certificates for wildlife export issued by national CITES office
- Number of joint memorandum or regional agreement for protection
- Number of activities and agreements on trans-boundary cooperation (related to wildlife and fauna international trade)
- Number of species and quantity of endangered wildlife species in captured breeding for international trade
- Number of endangered wildlife species in captured breeding farms certificated by national CITES office

**Target 5.1 Rate of loss and degradation of natural habitats decreased**

- Percentage of forest area lost in one/five years (forest area lost/total original forest area)
- Percentage of mangrove area lost in one/five years (mangrove area lost/total original mangrove area)
- Percentage of coral cover lost in one/five years (coral cover lost/total original coral cover)

**Why only a few indicators were agreed:**

- Availability of data in 2008 (prior to 4NR) Participants /Stakeholders involved are mostly from environment agencies or CBD focal points -
- Involving those who were in the previous workshops in the national NBSAP updating process and target/indicator setting
- Lack of socio-economic data and difficulty to decide on socio-economic indicators
- Ecosystems assessment /ecosystems functions
- Fourth National Report – Assessing progress towards 2010 target, ASEAN Biodiversity Outlook (ABO)
- Now: 2020 Targets, ecosystems assessment, valuation studies/TEEB, etc.
- More relevant and complete set of indicators (socio-economic and ABS indicators)

## 6. Day 3

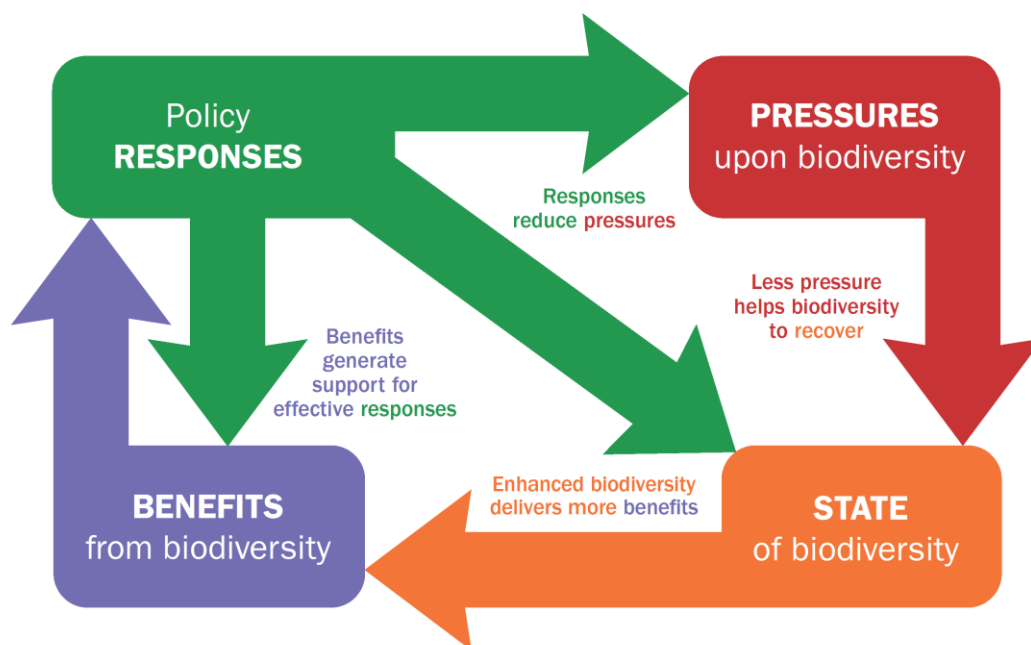
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### 6.1 Field Trip

On the morning of day three a field trip to Tam Dao National Park was arranged. The field trip provided an opportunity to apply some of the concepts covered in the workshop in an external environment.

Participants were referred to an earlier conceptual model (below) that was presented on Day 1 of the workshop, which illustrates how analyses and indicators of Pressures/State/Benefits/Responses can be linked. This conceptual model can be used as a basis for selecting indicators and also communicating indicators at a later stage.

### Pressure-State-Benefits-Response Framework



Participants were separated into four groups. Each group was assigned with one of the conceptual model boxes (Pressures/State/Benefits/Responses) and tasked with identifying applicable information regarding the management of Tam Dao National Park that could be used to aid indicator development for the Park management. As part of this process, the participants were given the opportunity to meet with the Director of the Park and with members of staff from the Animals Asia Foundation's Bear Rescue Centre, located in the Park. Upon returning to the workshop venue, each group shared their findings and comments with the other participants.

## Field Trip Results

### State

- Area: 36,856 ha
- +/- 2000 plant species (> 1000 tree species, 300 medicinal plants, 300 NTFP)
- 287 bird species, 124 reptile + amphibian, 651 insects, 77 mammals
- > 8 types of ecosystem (tropical evergreen rainforest, subtropical evergreen, other...)
- Extinct plant species: *Fokienia Nodginsii*, *Erythrophoegm forbic*, *Madhuca pasquieri*
- Extinct fauna: tiger, bear
- 200 000 inhabitants around the Park
- Financial support from government + entrance fee USD 20-25 K / year
- 100 staff of which 70 work on wildlife protection

### Responses

- A management plan has been adopted
- Regular patrolling
- 100 staff of which 70 work for protection
- Fines for illegal activities
- Entrance fee
- Awareness raising
- Regular monitoring and inspection
- Protect the natural springs from pollution

### Pressures

- Forest fires
- Poverty
- Illegal hunting (driven by poverty)
- Domestic settlements
- Agriculture 3000 ha, cattle 8000 heads
- Timber extraction
- Forest areas converted to other land uses (Industrial park, housing, infrastructure, agriculture...)
- Tourism

### Benefits

- Water quality (important for population, agriculture, tourism)
- Air quality
- Timber and non-timber products (honey, medicinal plants, food)
- Environmental services (tourism, employment, water supply)
- Income from tourism, projects, investment
- Research area
- Education support
- Beneficiaries: local populations, local government, Bear Rescue Centre, Tam Dao National Park, Provincial/National stakeholders, academic organisations, visitors



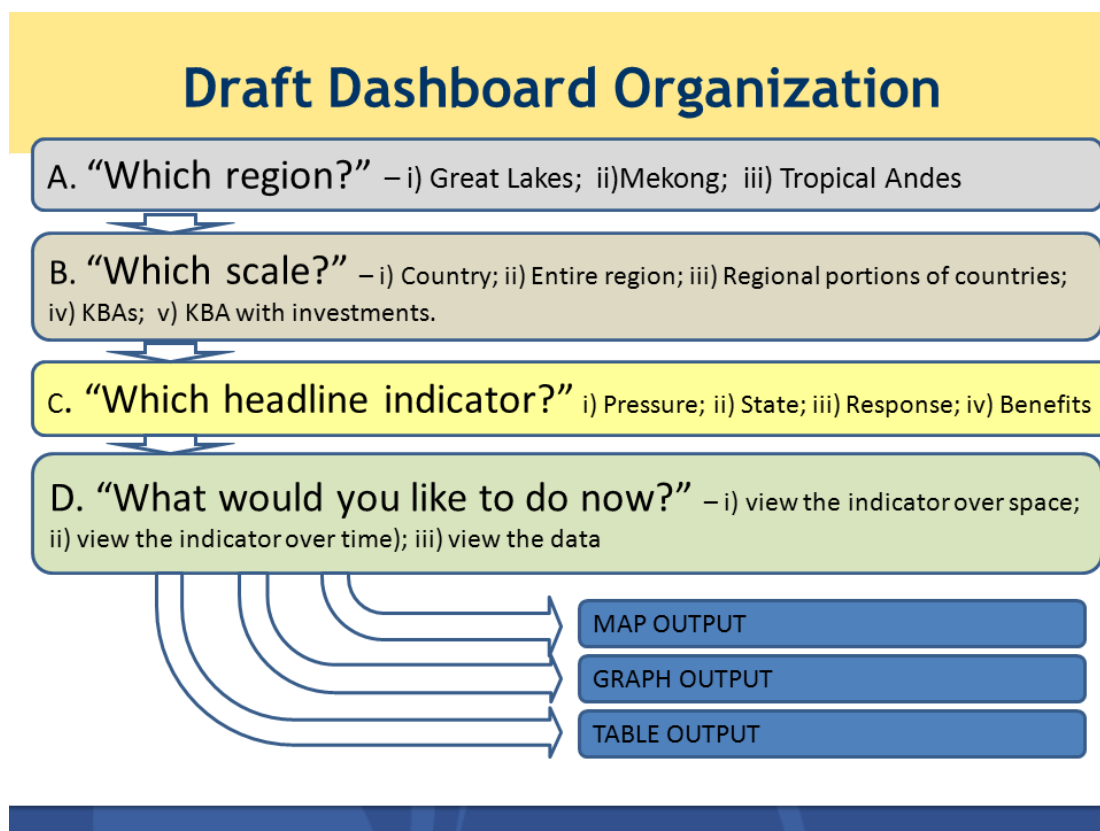
Participants in Tam Dao National Park on Day 3

## 7. Day 4

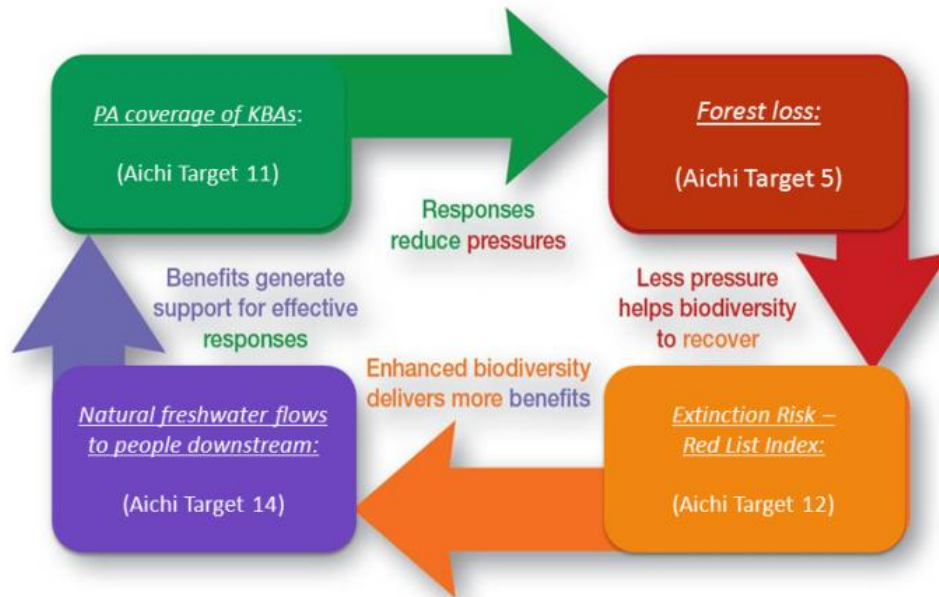
### 7.1 Presentations

#### 7.1.1 *Supporting national and regional biodiversity monitoring through dashboard presentation of downscaled global indicators*

Alexandra Sanchez de Lozada and Xuemei Han (NatureServe) provided an introduction to NatureServe and its information value chain, and an introduction and background to their dashboard project of downscaled global indicators. This program seeks to develop “dashboards” for presenting biodiversity indicator data to strengthen biodiversity conservation action by better placing responses within the regional context of status, threats, benefits and responses; thus, informing adaptive management and investment. The specific objective for the year 2012 is to establish four baseline indicators as examples for three specific regions: the Greater Mekong Region, the Tropical Andes, and the Great Lakes Region of East and Central Africa. The four baseline indicators that will be downscaled from existing global data set are: forest loss (pressure), extinction risk (state); freshwater flows from natural ecosystems (benefits), and protected areas coverage for key biodiversity areas (response). Furthermore, the downscaled data for the four indicators for the Southeast Asia countries was demonstrated to the participants. Issues related to the data source, data quality, data sharing mechanisms, potential applications, and contributions of the dashboard assessment program in the region was discussed among participants and NatureServe. The draft organization of the dashboard and the four example indicators are presented in the following images.

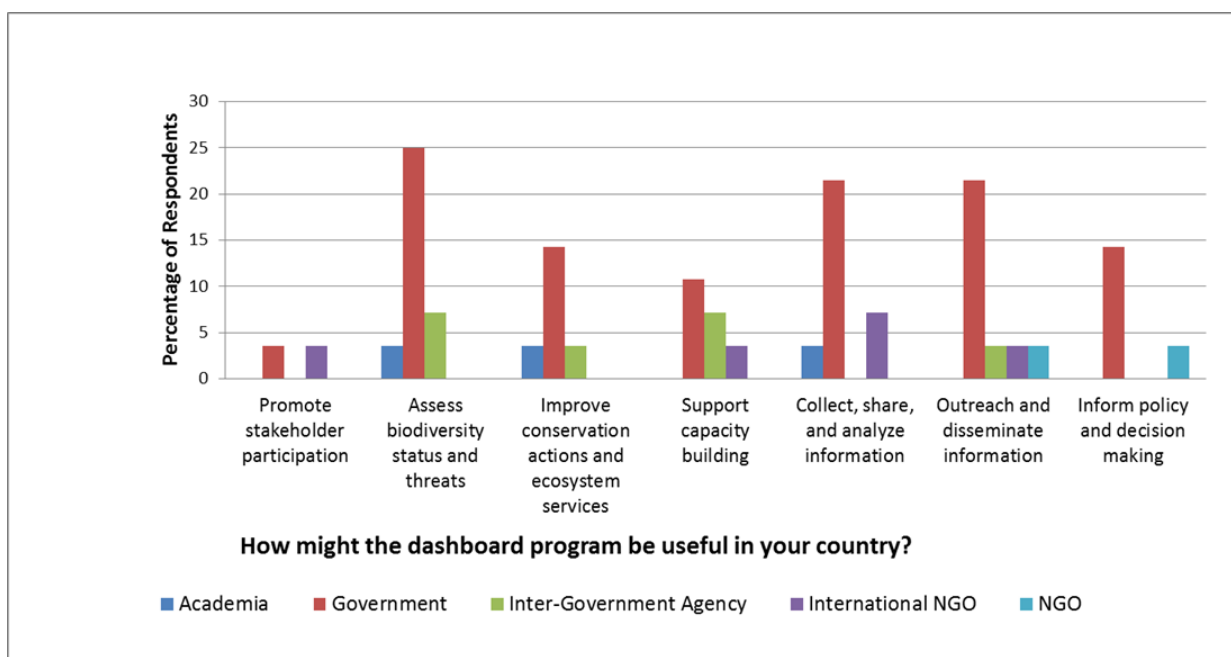


## 2011- 2012: Downscale Global Datasets for Four Example Biodiversity Indicators



Framework: BIP, UNEP WCMC

Participants were requested to answer an individual questionnaire to provide their opinion of the dashboard program and information about biodiversity monitoring in their countries. Specifically, about monitoring of the four example indicators and the scales in which these indicators are being or not monitored in their countries. As well as information about the local institutions and capacity that exists in each country, and the challenges for sustainable production of the data that will maintain the dashboard assessments framework into the long term. The responses of the questionnaire show different opinions from different sectors about the usefulness of the dashboard program (see figure below).





According to the opinion of the participants, among the four indicators being monitored in the different countries, forest Loss, species extinction risk, and protected areas coverage are being monitored to some extent on country level and in Key Biodiversity Areas. However, there is very limited data known regarding ecosystem services provided by fresh water flow to people downstream.

In addition, respondents identified challenges for sustainable production of these four indicators in their countries, and laid out the needs as the following: long-term financial and human resource especially technical support to sustain data collection and monitoring of the indicators; standardized guidelines, methodology and reporting systems to facilitate communication; adequate baseline data to continue the production of data for monitoring; promote Institutional coordination and data sharing among the institutions that are working in monitoring; promoting the analysis, synthesis and dissemination of the data; and involving national and regional monitoring initiatives in to the dashboard program.

### 7.1.2 Examples of successful national indicators

As part of the session led by NatureServe, each country team was then tasked with identifying a successful indicator from their country in order to discuss the process of producing Indicators and the variables that make a successful indicator. Each country team was asked to interview another country team, write down the following information on a flipchart and report to the plenary:

- Name and description of the indicator
- Why it is a successful indicator
- Key lesson about why this indicator is successful

#### Results of the exercise:

Examples of successful indicators
<b>Lao</b>
<p><b>Indicator:</b> number of carnivores in Protected Areas (NEPL)</p> <p><b>Why it is successful:</b></p> <ul style="list-style-type: none"> <li>• Habitat conditions</li> <li>• Status of prey</li> <li>• Community collaboration</li> <li>• Enforcement + joint partnership</li> </ul> <p><b>Lesson(s):</b></p> <ul style="list-style-type: none"> <li>• More enforcement = decreased pressure</li> <li>• Need incentives (PES) for long term funding</li> <li>• Need policy support including from other sectors</li> </ul>
<b>Cambodia</b>
<p><b>Indicator:</b> number of Protected Area management plans</p> <p><b>Why it is successful:</b></p> <ul style="list-style-type: none"> <li>• Reduced illegal activities</li> <li>• Increased law enforcement</li> <li>• Increased number of species in the PA</li> <li>• Enhanced collaboration with other partners (NGOs, Gov., local communities, private sector...)</li> </ul> <p><b>Lesson(s):</b></p> <ul style="list-style-type: none"> <li>• Ability to update the PA</li> </ul>

<ul style="list-style-type: none"> <li>• Awareness of species status</li> <li>• Enhance law enforcement</li> <li>• Set MIST programme for PA management</li> </ul>
<b>Myanmar</b>
<p><b>Indicator:</b> Forest cover</p> <p><b>Why it is successful:</b></p> <ul style="list-style-type: none"> <li>• National Forest Master Plan (2001-2030) – Monitoring every 5 years</li> <li>• Forest resource assessment (inventory)</li> <li>• Collaboration with FAO</li> </ul> <p><b>Lesson(s):</b></p> <ul style="list-style-type: none"> <li>• Possibility to track change</li> <li>• Rate of decline is slowing down</li> <li>• Track sustainable timber production</li> </ul>
<b>Thailand</b>
<p><b>Indicator:</b> percentage of forest cover</p> <p><b>Why it is successful:</b></p> <ul style="list-style-type: none"> <li>• Regular/annual monitoring (since 1961)</li> <li>• Used as a management tool</li> </ul> <p><b>Lesson(s):</b></p> <ul style="list-style-type: none"> <li>• Easy to understand</li> <li>• Institutional support</li> </ul>
<b>Viet Nam</b>
<p><b>Indicator:</b> household income</p> <p><b>Why it is successful:</b></p> <ul style="list-style-type: none"> <li>• Policy tools</li> <li>• Institutional framework</li> <li>• Data collected annually</li> <li>• Reporting system as part of the economic report</li> </ul> <p><b>Lesson(s):</b></p> <ul style="list-style-type: none"> <li>• High government support</li> </ul>
<b>Indonesia</b>
<p><b>Indicator:</b> forest cover</p> <p><b>Why it is successful:</b></p> <ul style="list-style-type: none"> <li>• Policy to monitor forest cover status (regional scale)</li> <li>• Planning agency responsible for monitoring forest cover, land use and Pas of the country (national scale)</li> </ul> <p><b>Lesson(s):</b></p> <ul style="list-style-type: none"> <li>• Given high priority</li> <li>• The assessment is conducted every year</li> <li>• Very good time series data on forest cover, changes, extent of PAs</li> </ul>
<b>Singapore</b>
<p><b>Indicator:</b> proportion of natural area</p> <p><b>Why it is successful:</b></p> <ul style="list-style-type: none"> <li>• Planning Agency 5-year Master Plan on land use</li> <li>• Helps to define clearly the boundaries of natural areas</li> <li>• Administrative biodiversity impact assessment on the natural area</li> </ul> <p><b>Lesson(s):</b></p> <ul style="list-style-type: none"> <li>• Allocation of land use is always high priority due to small size of the country</li> </ul>
<b>Philippines</b>
<b>Indicator:</b> protected area coverage

**Why it is successful:**

- Legal jurisdiction (Presidential Decree, confirmed by Congress)
- Land development has to be consistent with the Decree
- Coverage includes marine and terrestrial ecosystems
- Baseline information generated when the PA is created
- Regular biodiversity monitoring using Biodiversity Monitoring System (BMS)
- Results are published, available on line

**Lesson(s):**

- PA coverage indicator is useful for planning and decision-making (e.g. mining, tourism, logging)
- Decision-making affecting PAs must be approved by the PA management board in accordance with the PA management plan

**Malaysia**

**Indicator:** forest cover

**Why it is successful:**

- Data is available (10-year forest inventory using satellite imagery + ground validation)
- Used in planning + management
- Data is published and seminars are organised to disseminate this information

**Lesson(s):**

- Data missing on PAs because under another ministry (Wildlife)

**7.1.3 Information sources and monitoring systems for NBS updating and implementation**

**Presentation on Singapore City Biodiversity Index**

Muslim Anshari Rahman from Singapore made a presentation on the City Biodiversity Index (CBI), a CBD-led collaboration with the Global Partnership on Local and Sub-National Action for Biodiversity ([www.cbd.int/authorities](http://www.cbd.int/authorities)).

**Framework**

- Three parts:
  - Part I: Profile of City
  - Part II: Indicators
  - Part III: Scoring
- Within Part II, three core components:
  - Native biodiversity
  - Ecosystem services
  - Governance

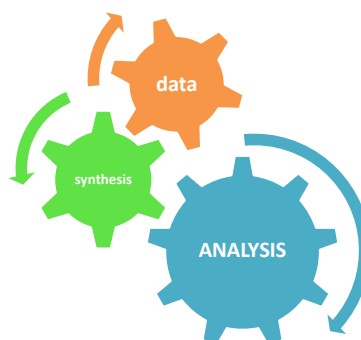
SINGAPORE INDEX ON CITIES' BIODIVERSITY				
PART I - Profile of the City	Location and size (geographical coordinates (latitudes and longitudes); climate (temperate or tropical); rainfall/ precipitation (range and average); area and include map or satellite image, and define city boundaries)			
	Physical features of the city (geography, altitude of the city, area of impermeable surface, information on brownfield sites, etc.)			
	Demographics (including total population and population density of the city; the population of the region could also be included if appropriate, and for the purpose of placing it in the regional context)			
	Economic parameters (Gross Domestic Product (GDP), Gross National Product (GNP), per capita income, key economic activities, drivers and pressures on biodiversity)			
	Biodiversity features (ecosystems found in the city, species found in the city, quantitative data on populations of key biodiversity indicators, relevant qualitative biodiversity data)			
	Administration of biodiversity (Relevant information include agencies and departments responsible for biodiversity; how natural areas are protected (through national parks, nature reserves, forest reserves, secured areas, parks, etc., references to Aichi Biodiversity Targets)			
	Link to relevant websites including the city's website, environmental or biodiversity specific websites, websites of agencies responsible for biodiversity			
PART II - Indicators	Core Components	Indicators	Maximum Score	
	Native Biodiversity in the City	1. Proportion of Natural Areas in the City	4 points	
		2. Connectivity Measures	4 points	
		3. Native Biodiversity in Built-up Areas (Bird Species)	4 points	
		4. Change in Number of Vascular Plant Species	4 points	
		5. Change in Number of Bird Species	4 points	
		6. Change in Number of Butterfly Species	4 points	
		7. Change in Number of Species (any other taxonomic group selected by the city)	4 points	
		8. Change in Number of Species (any other taxonomic group selected by the city)	4 points	
		9. Proportion of Protected Natural Areas	4 points	
		10. Proportion of Invasive Alien Species	4 points	
	Ecosystem Services	11. Regulation of Quantity of Water	4 points	
		12. Climate Regulation: Carbon Storage and Cooling Effect of Vegetation	4 points	
		13. Recreation and Education: Area of Parks with Natural Areas	4 points	
		14. Recreation and Education: Number of Formal Education Visits per Child Below 16 Years to Parks with Natural Areas per Year	4 points	
	Governance and Management of Biodiversity	15. Budget Allocated to Biodiversity	4 points	
		16. Number of Biodiversity Projects Implemented by the City Annually	4 points	
		17. Existence of Local Biodiversity Strategy and Action Plan	4 points	
		18. Institutional Capacity: Number of Biodiversity-related Functions	4 points	
		19. Institutional Capacity: Number of City or Local Government Agencies Involved in Inter-agency Cooperation Pertaining to Biodiversity Matters	4 points	
		20. Participation and Partnership: Existence of Formal or Informal Public Consultation Process	4 points	
		21. Participation and Partnership: Number of Agencies/Private Companies/NGOs/Academic Institutions/International Organizations with which the City is Partnering in Biodiversity Activities, Projects and Programmes	4 points	
		22. Education and Awareness: Is Biodiversity or Nature Awareness Included in the School Curriculum	4 points	
23. Education and Awareness: Number of Outreach or Public Awareness Events Held in the City per Year		4 points		
PART III - Calculation	Native Biodiversity in the City (Sub-total for Indicators 1-10)		40 points	
	Ecosystem Services (Sub-total for Indicators 11-14)		16 points	
	Governance and Management of Biodiversity (Sub-total for Indicators 15-23)		36 points	
	Maximum Total:		92 points	

## Presentation from ACB

Sheila Vergara, from the ASEAN Centre for Biodiversity made a presentation on information sources, available datasets and monitoring methods with a special focus on the Aichi Targets.

### Sources of Information

- GeoBon, 2011. Adequacy of Biodiversity Observation Systems to support the CBD 2020 Targets. A report prepared by the Group on Earth Observations Biodiversity Observation Network (GEO BON), for the Convention on Biological Diversity
- ACB. 2010. ASEAN Biodiversity Outlook
- ACB.2010. PA Gap Analysis
- <http://chm.aseanbiodiversity.org>
- Pers com: R.Rosales on SE Indicators
- NBSAP reports
- Global Data Sets
- National, Institution and Individual data contributions



## Presentation from IUCN

Dr Scott Perkin, Head of IUCN Regional Biodiversity Conservation Programme, Asia, provided information on IUCN, its members, its regional programmes (Biodiversity Conservation, Water, Business & Biodiversity and Marine and Coastal), and gave examples of current biodiversity projects in the region.



### Future Directions for IUCN's Regional Biodiversity Conservation Programme

- Build national **Red Listing** capacity.
- Collaborate on other **NBSAPs** and **provincial-level Biodiversity Action Plans**.
- Develop local language **field guides** (including smartphone apps).
- Promote the prevention, early detection, control and eradication of **invasive alien species**.
- Promote **Management Effectiveness Evaluations** (MEE) of protected areas.
- Work with WCPA to help develop its new theme on **urban biodiversity**.

## *Presentation from WCS*

Dr Tom Evans, Deputy Director of WCS Cambodia Programme, contributed information on WCS programmes in the region and opportunities from existing frameworks, datasets and monitoring systems with a focus on the status of habitats and protected areas (Targets 5+11) and the status of threatened species (Target 12).

## Summing up

Many govt/NGO joint conservation programs involve a strong monitoring element to inform management.

There is great potential to consolidate these datasets and better use them in NBSAP development/implementation.

Coverage of threatened Cambodian birds is exceptionally good.

There is also coverage at key sites of mammals and reptiles.

Final point - REDD projects will also address many of these same targets, and may generate monitoring funds. These need to be coordinated with NBSAP approaches

## *Presentation from CI*

Tracy Farrell provided information on Conservation International and its global strategy; she introduced an example of a programme in the region – the CI-Greater Mekong Programme - and provided examples of indicators used to track field progress.

## Example of Indicators for Freshwater Indicators

- FW biodiversity
  - GFBA--abundance, distribution, threat, relative to habitat size
- FW habitat extent
  - % converted land, % impervious surface, % livestock density
- FW habitat Intactness
  - % upland landcover, rivers, wetlands, and % of these areas occupied by crop and urban lands
- Invasive species
  - Proportion of non native fish species.
- Biomass
  - Plant material, fish, system productivity, etc.
- Intact hydrological regime:
  - Eflows standards like 60-80% volume remains in river
- Evapo-transpiration cycles under different patterns of forest/vegetation cover

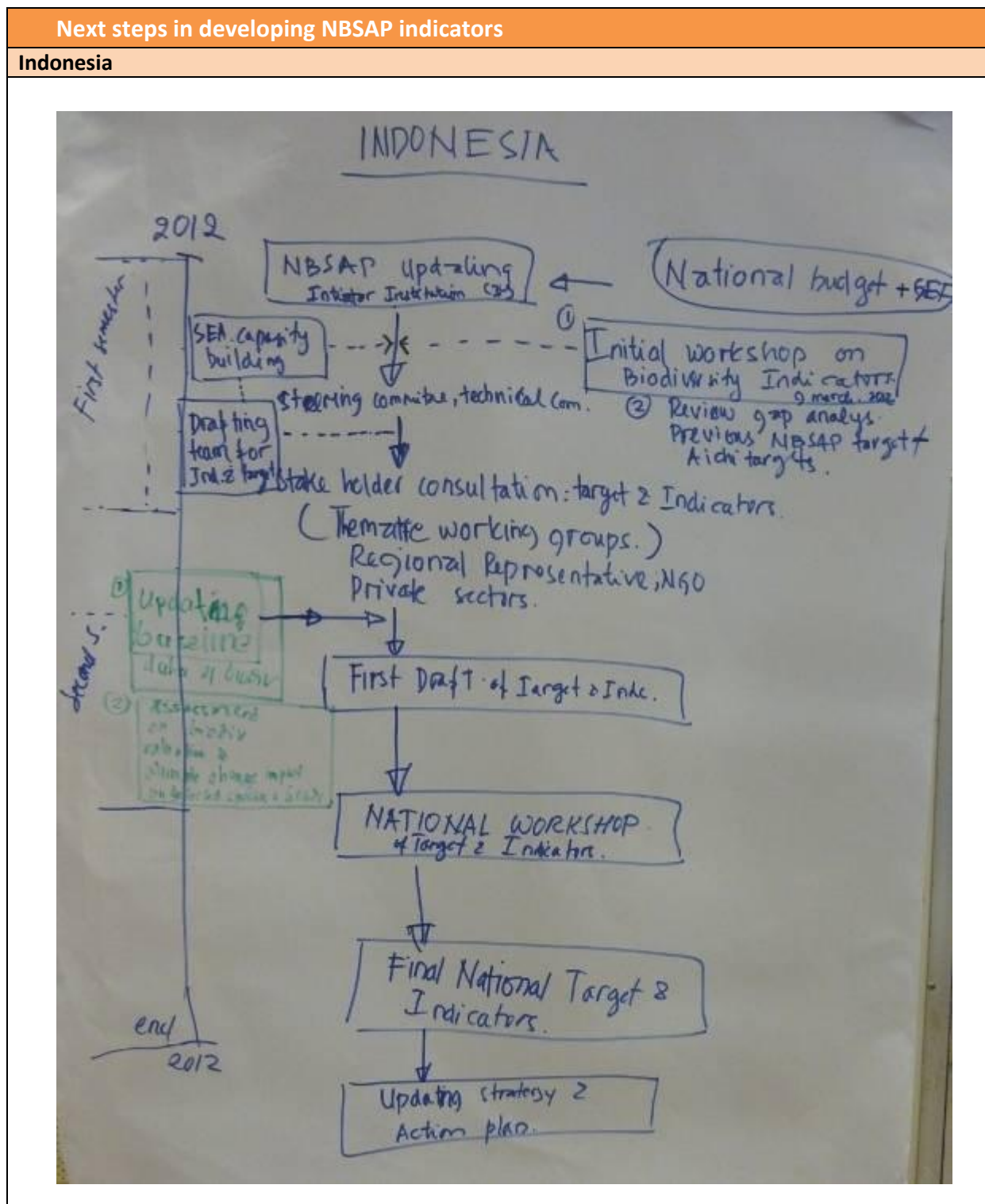
Copies of the presentations were made available to the participants on a CD.

## 7.2 Exercises

### 7.2.1 Next steps in developing NBSAP indicators

In the afternoon of Day 4, each country team was asked to draft and share their next steps, including stakeholder involvement and addressing capacity and information needs.

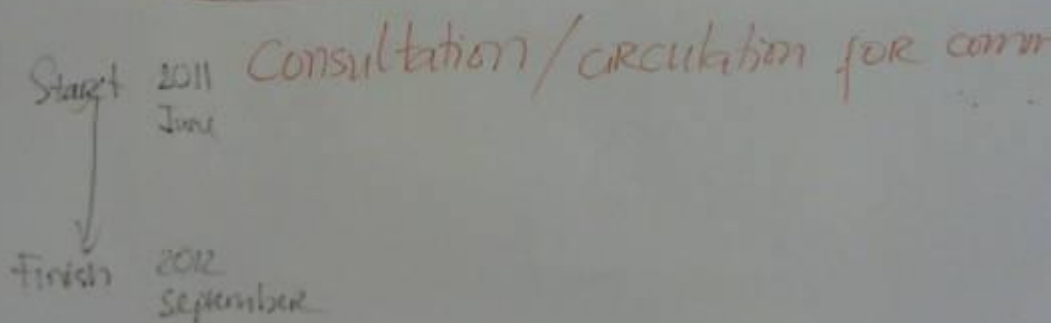
#### Results of the exercise:



Vietnam DAY 4

Arch targets	National target	Indicator	Baseline	Actions
1				
2				
...				

- ① Thematic working groups + national experts
- ② Drafting team (inter-ministerial committee) - focal point from different sectors
- ③ Workshops/meeting on specific indicator. Eg. fishery (tag 6) PAs (tag 11)
- ④ Result/framework presented at national consultation
- ⑤ Feedback, revision → dev. draft NBSAP



## NBSAP process in M'sia

\* National Biodiversity Strategy & Policy 1994  
⇒ needs updating

Process since COP 10

\* ~~Appt~~ Funding secured from GEF  
for NBSAP updating - March 2012

\* Launch of Project - April 2012

\* State holders' consultation process ⇒ launching workshop

- Review to 1998 Biod. policy

- updating ~~some~~ of the strategies &  
Action plan

- Data collection/collation

⇒ what is available?

⇒ what needs to be gathered?

- Start of development of indicators  
& targets.

⇒ Target setting  
& indicator  
workshop

.....

Testing, communication, validating  
indicators



# SINGAPORE



## - Current Status

- ID Stakeholders & started consultation
- Requesting 4 data
- Indicator considerations: CBI, AHTEG

## - Next Steps

- Determine key qns to help to set priorities
- Relevant conceptual model
- Take into considerations other indicators
  - ↳ ASEAN Provisional Indicators
- Communication tools to enhance presentation of our indicators
- Endorsement by our Ministry

# Lao PDR

Status: targets and indicators as draft

Next step: What we are going to do ???

- ① collate more comments / suggestions on indicators with key stakeholders.
- ② Each sector WG adopt key ID
- ③ Consultation WSH - Share update at central levels
- ④ Consultation WSH @ regional levels to raise awareness NBSAP - Targets & ID for receiving feedback and suggestion
- ⑤ Gap analysis based on NBSAP assessment in order to improve on/or focusing:
  - institutional arrangement
  - capacity building

Completion's expectation  
data base / baseline

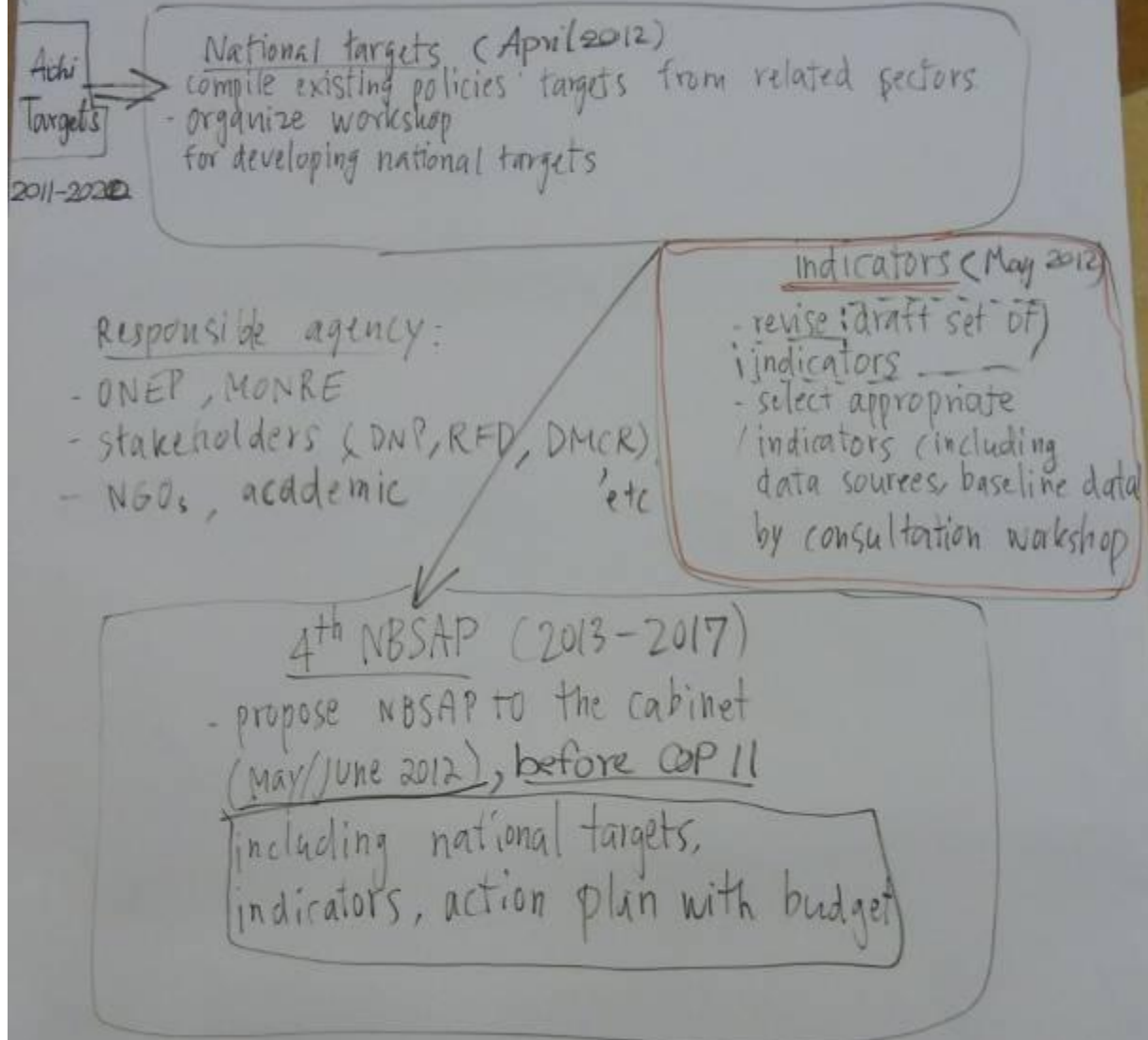
JUNE 2012

Myanmar

NEXT STEP	ORGANIZATIONS	TIMELINE
1. Capacity building on (multi-stakeholder) & Aichi Target 21 Indi	<ul style="list-style-type: none"> <li>- MOECAP. - Lead. org</li> <li>- line ministries</li> <li>- local / Regional / Inter. NGOs</li> </ul>	Oct 2012 <del>Nov</del>
2. National consultation WS on updating NBSAP	MOECAP & Line ministries - LOCAL NGOs	Nov / Dec 2012
3. National WS on setting up national targets 21 Indicators		Dec, 2012
4. Updating NBSAP	<ul style="list-style-type: none"> <li>- MOECAP</li> <li>- Working Groups.</li> </ul>	Jan - March 2013
5. Approval & Adoption	- MOECAP Cabinet	Apr 2013

# Thailand

## Next steps of NBSAP & indicators



[DAY 4]

Philippines

1) Indicator: Protected Area Coverage  
 - protected area has legal jurisdiction  
 (Presidential decree, confirmed by Congress)

2) Why is it Successful  
 • ⇒ Land development has to be consistent with the Decree.

⇒ coverage include marine + terrestrial ecosystem

⇒ baseline information generated when the PA is created

⇒ regular bio-d monitoring using Bio-d Monitoring System (BMS)

⇒ results are published, available online

3) key lesson why this indicator is successful

⇒ ~~Results~~ PA coverage indicator is useful for planning + decision making.

(e.g: mining, tourism, logging)

⇒ Decision making affecting PAs must be approved by the PA mgmt board, in accordance with the PA management plan.

CAMBODIA

- 1) Conduct 2<sup>nd</sup> meeting of ~~the~~ TWG for NBSAP Updating
- 2) Analyze Aichi target
- 3) Stakeholder Consultation (including NGOs) to select national targets
- 4) Steering Committee of TWG meet to review + finalize national target
- 5) TWG defines indicators + data plan
- 6) Compile + analyze data for baseline
- 7) fill data gaps / <sup>produce</sup> ~~final~~ NBSAP doc
- ~~8) Report (5<sup>th</sup> National report) EOD~~
- 8) 2<sup>nd</sup> steering committee mtg approve final NBSAP
- 9) 5<sup>th</sup> national report 2014

## 7.2.2 Regional co-operation and international support

Each country team was requested to identify and write their needs for indicator development and NBSAP updating on a set of cards (one need per card) and what they may offer in support to the others on another set of cards (one offer per card). The cards were put up on a wall under a 'Needs' and an 'Offers' sections so that participants could identify possible matches for cooperation and support.

### Your Offers...examples

What have you done? What do you know?


- Data/Information... We have data on endangered species
- Expertise We have a GIS expert in our team
- Experience We have done target-setting exercise  
We are willing to host/organize workshops
- Services We can share our experience on PAs

### Your Needs...examples

What are your needs?

- Data/Information... We need data on invasive species
- Expertise We need expert assistance with ecosystem assessment
- Experience We would like to hear others' experience on PAs  
We need training on IAS
- Services We would like to know about others' experience with data collection

### Next...Matchmaking

Regional Cooperation and International Support Exercise 29 March 2012 - Riverside Forum	
Name: _____	
Matches Made	
Needs	Offers
1	1
2	2
3	3
4	4
5	5
Notes:	
	
YOUR PERSONAL COPY	

- Note down possible matches
- Go and talk to the person, exchange contacts if possible
- Make sure to make a copy for yourself and the workshop!



### 7.3 Workshop conclusions

The last session of the workshop consisted in a group discussion on the main conclusions generated from participating in the workshop. These can be summed up as follow:

- **“The workshop was very useful in preparation of NBSAPs, especially in interpretation of Targets and indicators”**
- **“Good teamwork! I would like to see how knowledge and experience sharing can continue”**
  - **“The workshop taught me a lot. I learned from experience in the region”**
    - **“Conservation has a chance in our region”**
- **“I was very happy to hear from other countries. Everything from the workshop is useful from a rural development viewpoint”**
  - **“This was an amazing model of workshop”**
  - **“I hope to continue back in my home country”**
    - **“So much information is produced/used/monitored in the region!”**
- **“Indicators are a lot more complex than I thought but many resources and support are available”**
  - **“Good to see indicators addressed upfront, not as a last minute add-on”**
- **“I’ve attended many workshops but now I am more confident. I’ve got new ideas on national and international experience and linkages”**



### ***Line-up assessment***

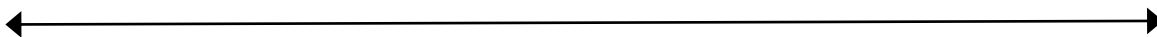
At the end of the workshop, the participants were asked once more to represent their level of confidence in developing indicators for NBSAPs by ‘voting with their body’:

#### **Q4: How confident am I in developing indicators for NBSAPs?**

##### **DAY 1:**

*Completely confident*

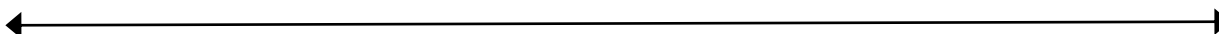
*Not confident at all*



##### **DAY 4:**

*Completely confident*

*Not confident at all*



## **7.4 Evaluation and thanks**

Philip Bubb thanked the Biodiversity Conservation Agency of Viet Nam and the ASEAN Centre for Biodiversity for organising a very successful workshop and being wonderful hosts. He also thanked all workshop participants for their active participation and commitment. He extended his gratitude to the project funders, UNEP, and the MEA Focal Point from the UNEP Regional Office for Asia and the Pacific, for her dynamism and very active support. NatureServe and all the organisations present were acknowledged for their valuable contribution to the workshop. Jackie Han and his team from Haobin Tourist and Convention Company were thanked for their committed and efficient support with logistics throughout the workshop.

Participants were asked to complete a feedback form before leaving. 25 forms were completed, and the average score for the question “*How useful was this workshop in helping to develop your capacity to produce and use biodiversity indicators, on a scale of 0 to 10?*” was 9. The comments

have been evaluated and the lessons identified so they can be utilized when developing future workshops.

***Evaluation - Some of the participants' comments:***

<b>How useful was this workshop in developing your capacity to update your NBSAP with indicators, on a scale of 0 to 10?</b>
<ul style="list-style-type: none"> <li>• The framework in general serves as a good guide in going through the flow of setting up national target.</li> <li>• The step-by step workbooks were useful</li> </ul>
<ul style="list-style-type: none"> <li>• This is the most participative workshop I have been to. The organisers have really thought through the programme and identified the real <u>needs</u> of countries in the region. However, I was hoping to learn more about AHTEG indicators and going through individual indicators.</li> </ul>
<ul style="list-style-type: none"> <li>• The workshop was useful in providing a framework for Biodiversity indicator development as well as the step-by-step exercises in a mixed (non-country) group to share diverse experiences among the members. The ideas obtained from the sharing would help countries to further explore possible indicators.</li> </ul>
<ul style="list-style-type: none"> <li>• Pros: Give clear ideas on how to work with Aichi targets, provides structured and organised way of thinking to develop national target and makes me more confident to work on ministry level and later for national level</li> <li>• Cons: no chance to exercise on existing national targets/document.</li> </ul>
<b>What were the most valuable topics or knowledge that you learnt about in the workshop?</b>
<ul style="list-style-type: none"> <li>• Learning how to develop a conceptual model serves as a reminder of the other issues that may have slipped the working groups' mind after looking at the same issue for many years.</li> <li>• The constant reminder of "what is the purpose of each indicator"</li> <li>• Defining key questions</li> </ul>
<ul style="list-style-type: none"> <li>• Conceptual framework and workflow of how we should conduct the indicator process</li> </ul>
<ul style="list-style-type: none"> <li>• The Biodiversity Development Framework and in particular 1) the development of a conceptual model that explores and guides the selection of indicators, 2) linking our targets and indicators to the key questions we want answered. It gives focus.</li> </ul>
<ul style="list-style-type: none"> <li>• Pressure, State, Benefit, Response framework</li> <li>• Indicator Development exercise</li> <li>• But it is also a daunting task to develop national target/NBSAP after understanding how complex each issue/element is.</li> </ul>

## 8. Annexes

### 8.1 Annex 1: Workshop participants

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## 8.2 Annex 2: Workshop programme

**24th March – Arrival of participants**

**25<sup>th</sup> March, Day 1 - Understanding indicators in NBSAP updating and Training Exercise**

9.00	<p><b>Welcome</b></p> <p>Mr. Hoang Thi Thanh Nhan, Deputy Director of Biodiversity Conservation Agency, Viet Nam</p> <p><b>Introductions, agree workshop programme</b></p>
9.45	<p><b>Rapid assessments</b> of plans for NBSAP updating &amp; capacity for indicators.</p>
10.00	<p><b>Introduction to the Strategic Plan for Biodiversity 2011-2020</b></p> <p>A quick overview of its vision, mission, the strategic goals and how they relate to each other, the Aichi Targets, the recommendations of SBSTTA-15, and the framework of global indicators.</p>
10.30	<p><b>Updating and implementing NBSAPs,</b></p> <p>A brief discussion on making NBSAPs an effective part of cross-sectoral government policy and planning and supported by other sectors of society (mainstreaming).</p>
11.00	<p><i>Break</i></p>
11.20	<p><b>Target setting as part of national planning</b></p> <p>What is required for successful target setting and ‘ownership’, including the role of information? Including sharing the experiences of the participants to date.</p>
11.50	<p><b>What is an indicator and the uses of indicators</b></p> <p>A brief introduction and discussion. This subject will be further developed in the role-play exercise.</p>
12.20	<p><b>The distinctions between targets and indicators</b></p> <p>Presentation and discussion. This subject will be developed in the role-play exercise.</p>
13.00	<p><i>Lunch</i></p>
14.00	<p><b>Steps in updating NBSAPs with the Aichi Targets and the roles of information on biodiversity and ecosystem services</b></p> <p>An introduction, to be developed in the role-play exercise.</p>
14.20	<p><b>Training Exercise– Setting 2020 Targets and choosing indicators</b></p> <p>This role-play exercise will start on Day 1 and continue on Day 2. In the exercise participants will develop national targets and indicators for a fictional country.</p> <p>Workbook 1. Analyse a given Aichi Target and determine relevant key questions to guide national target setting.</p>
15.20	<p><i>Break</i></p>
15.40	<p>Workbook 2. Draft national versions of the Aichi Target.</p>
16.30	<p>Workbook 3. Develop a conceptual model to guide indicator selection &amp; communication.</p>
17.30	<p>End of Day 1.</p>

## **26<sup>th</sup> March, Day 2 – Training Exercise Part 2 and Analysing the Aichi Targets**

9.00	<b>Continue Training Exercise– Setting 2020 Targets and choosing indicators</b> Workbook 4. Identify possible indicators.
10.30	Workbook 5. Gather and review data.
11.20	Break
11.40	Workbook 6. Calculate and communicate indicators.
12.30	<b>Identify conclusions from the Training Exercise</b> for NBSAP updating and information needs.
13.00	Lunch
14.00	<b>Analysing the Aichi Targets</b> Working groups will examine the information needs and possible indicators for the Aichi Targets, including common relationships and needs between the Targets.
16.00	<b>Indicators for NBSAPs – examples and analysis from the region</b>
17.15	Prepare for Field Trip
17.30	End of Day 2

**27<sup>th</sup> March, Day 3 – Field Trip** to Tam Dao National Park to explore the application of ecosystem services concepts and the use of indicators in management.

## **28<sup>th</sup> March, Day 4 – Biodiversity monitoring, information sources & next steps.**

09.00	<b>NatureServe Dashboard Program for monitoring biodiversity indicators</b> Discussion on how the Dashboard Program presents biodiversity indicator data and catalyses sustainable national investment for biodiversity monitoring,
11.00	<i>Break</i>
11.20	<b>Information sources &amp; monitoring systems for NBSAP updating &amp; implementation.</b> Presentations, compilation of information, & discussion
13.00	<i>Lunch</i>
14.00	<b>Next steps in developing NBSAPs</b> Each country team will draft and share their next steps, including stakeholder involvement and addressing capacity and information needs.
15.30	<i>Break</i>
15.50	<b>Regional co-operation and international support</b> Identification of opportunities for ‘South-South’ co-operation, exchange of expertise, and international support to NBSAP updating and indicator development.
16.40	<b>Workshop conclusions and thanks.</b>
17.00	<b>End of workshop.</b>