

**CAPACITY BUILDING WORKSHOP  
FOR SOUTH, SOUTH-EAST AND EAST ASIA  
ON THE PREPARATION OF THE 4NR  
*Tsukuba, Japan, 2-4 December 2008***

**Country Perspective: Biodiversity  
Indicators**

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# Biodiversity Indicators

Indicator should be **SMART**

- **Specific:** precise, narrow to the point;
- **Measurable:** number, %, ...
- **Attainable:** acceptable, practical, data available;
- **Relevant:** useful;
- **Timeframe:** on time or time bound.



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# **Biodiversity Indicators**

## **Use for:**

- **4 National Report**
- **M&E of National Biodiversity Conservation & Management**

# Process of Indicator Development



# Provisional Biodiversity Indicators

Goals / Targets	Provisional Indicators	Data Sources
<b><u>Goal 1.</u></b> Promote the conservation of the biological diversity of ecosystems, habitats and biomes		
<b><u>Target 1.1</u></b> At least 10% of the world's ecological regions effectively conserved	<ul style="list-style-type: none"> <li>- Total Areas Protected (ha/sq km)</li> <li>- Percentage of country areas (coastal, low land, up land) protected.</li> </ul>	CI, Prontier, WCS, GDANCP-MoE
	<ul style="list-style-type: none"> <li>- Total/percentage of forest area protected (in-Situ/Ex-Situ)</li> </ul>	MAFF, GDANCP-MoE
	<ul style="list-style-type: none"> <li>- Number of PAs well/effetely managed base on national setting criteria</li> </ul>	GDANCP-MoE
<b><u>Target 1.2</u></b> Areas of particular importance to biodiversity protected	<ul style="list-style-type: none"> <li>- Number (ha/sq km)/ percentage/ proportion of areas protected as sanctification for biodiversity protection.</li> <li>- Number (ha/sq km)/ proportion of areas recognized as key biodiversity areas that are not included in PA system but sustainably managed for biodiversity.</li> </ul>	WCS,CI

# Provisional Biodiversity Indicators

Goals / Targets	Provisional Indicators	Data Sources
<b><u>Goal 2.</u></b> Promote the conservation of species diversity		
<b><u>Target 2.1</u></b> Restore, maintain or reduce the decline of populations of species of selected taxonomic groups	<ul style="list-style-type: none"> <li>- Numbers of important native species (well-known, economically important, endemic, threatened) that are successfully captive-bred or artificially propagated in the country, divided into taxonomic groups.</li> <li>- Proportion or percentage of important native species in the different groups above that are successfully captive-bred or artificially propagated</li> </ul>	MAFF, CI
	<ul style="list-style-type: none"> <li>- Numbers of important native species (well-known, economically important, endemic, threatened) that are the <i>subject of in-situ conservation programmes</i> in the country, divided into taxonomic groups.</li> <li>- Numbers of important native species <i>whose population status has stabilised or improved as a result of in-situ conservation programmes</i>.</li> <li>- Proportions of important species.</li> </ul>	MAFF, CI, GDANCP-MoE
	<ul style="list-style-type: none"> <li>- Proportion of plant species native that is cultivated.</li> </ul>	MAFF, GDANCP-MoE
<b><u>Target 2.2</u></b> Status of threatened species improved	<ul style="list-style-type: none"> <li>- List of national threatened species</li> <li>- Number of threatened species conservation programs.</li> </ul>	CI, Frontier, WCS

# Provisional Biodiversity Indicators

Goals / Targets	Provisional Indicators	Data Sources
<b>Goal 3. Promote the conservation of genetic resources</b>		
<b>Target 3.1 Genetic diversity of crops, livestock and of harvested species of trees, fish and wildlife and other valuable species conserved, and associated indigenous and local knowledge maintained</b>	<ul style="list-style-type: none"> <li>- <i>Number of different kinds of livestock or crop varieties.?</i></li> <li>- <i>Conservation status of different kinds of livestock or crop varieties.?</i></li> <li>- <i>Population trends in different varieties.?</i></li> <li>- <i>Genetic diversity of harvested tree species.?</i></li> <li>- <i>Genetic diversity of harvested fish.?</i></li> <li>- <i>Genetic diversity of harvested wildlife.?</i></li> <li>- <i>Genetic diversity of other valuable wildlife.?</i></li> </ul>	<b>MAFF, FAO ?</b>
	<ul style="list-style-type: none"> <li>- <i>Numbers of accessions in different groups in laboratories germplasm collections and genebanks.?</i></li> </ul>	<b>MAFF, FAO ?</b>
	<ul style="list-style-type: none"> <li>- <i>Number of different export certificates for plant varieties issued.?</i></li> <li>- <i>Number of different plant varieties exported under certificate.?</i></li> </ul>	<b>MAFF, FAO ?</b>

Goals / Targets	Provisional Indicators	Data Sources
<b>Goal 4. Promote sustainable use and consumption</b>		
Target 4.1 Biodiversity-based products derived from sources that are sustainable managed, and Production areas managed consistent with the conservation of biodiversity	<ul style="list-style-type: none"> <li>- Total areas (ha/sq km)/percentage/ proportion areas used for biodiversity base products with sustainable manner.</li> </ul>	WCS, GDANCP-MoE, MAFF
	<ul style="list-style-type: none"> <li>- Proportion of sustainable selection of NTFPs derived from PAs, Forest Conserved Areas, and other natural habitats areas.</li> <li>- Proportion of CITES-listed species in cultivation.</li> </ul>	WCS, GDANCP-MoE, MAFF
<b>Target 4.2</b> Unsustainable consumption of biological resources, or that impact upon biodiversity, reduced	<ul style="list-style-type: none"> <li>- Increase of eco-tourism's revenues (annually, \$/year).</li> <li>- Ecosystem is balanced and maintained.</li> <li>- Number of community protected areas have been established and effectively functions.</li> <li>- Number (ha sq km)/percentage of plantation areas.</li> <li>- Total areas of natural habitat have been restored (ha/sq km/%).</li> <li>- of forest cover, natural habitat. (ha/sq km/%).</li> <li>- Number (ha/sq km)/ percentage/ proportion of illegal logging areas.</li> <li>- Number (ha/sq km)/percentage/ proportion of clearing forest/ natural habitat for shifting agriculture or cultivation.</li> <li>- Number of species, species population.</li> </ul>	WCS, GDANCP-MoE, MAFF
<b>Target 4.3</b> No species of wild flora or fauna endangered by international trade	<ul style="list-style-type: none"> <li>- List of Species in trade (legally + illegally)</li> </ul>	WCS, GDANCP-MoE, MAFF
	<ul style="list-style-type: none"> <li>- Number of certificates for wildlife export issued by national CITES office</li> </ul>	WCS, MAFF
	<ul style="list-style-type: none"> <li>- Number of Joint memorandum or regional agreement for biodiversity protection</li> </ul>	ASEAN
	<ul style="list-style-type: none"> <li>- Number of programs/ projects/ activities and agreements of transboundary cooperation (related to wildlife &amp; fauna international trade)</li> </ul>	GDANCP-MoE, MAFF??
	<ul style="list-style-type: none"> <li>- Number of species and quantity of endangered wildlife species in captured breeding for international trade</li> </ul>	WCS, GDANCP-MoE, MAFF??
	<ul style="list-style-type: none"> <li>- Number of endangered wildlife captured breeding farms certificated by national CITES office</li> </ul>	WCS, MAFF



# Provisional Biodiversity Indicators

Goals / Targets	Provisional Indicators	Data Sources
<b>Goal 5.</b> Pressures from habitat loss, land use change and degradation, and unsustainable water use, reduced		
<b>Target 5.1</b> Rate of loss and degradation of natural habitats, decreased	<ul style="list-style-type: none"> <li>-The comparison of the loss of natural habitat areas (ha, sq km, %)-up to 2010</li> <li>-The comparison of the lost of mangrove/coral/ wetland areas (ha, sq km, %) up to 2010</li> </ul>	MAFF, GDANCP-MoE
	<ul style="list-style-type: none"> <li>-Number of MPA</li> <li>-Total areas or percentage of MPA.</li> <li>-Number of PAs' management plans, including MPA</li> </ul>	MAFF, GDANCP-MoE
	<ul style="list-style-type: none"> <li>-Total budget (\$) for eco-system compensation</li> </ul>	MAFF, GDANCP-MoE
	<ul style="list-style-type: none"> <li>-Total areas (ha, sq km,) of urbanization extension.</li> </ul>	MAFF, GDANCP-MoE

**Thank You!**