

# Introduction of AP-BON Asia-Pacific Biodiversity Observation Network

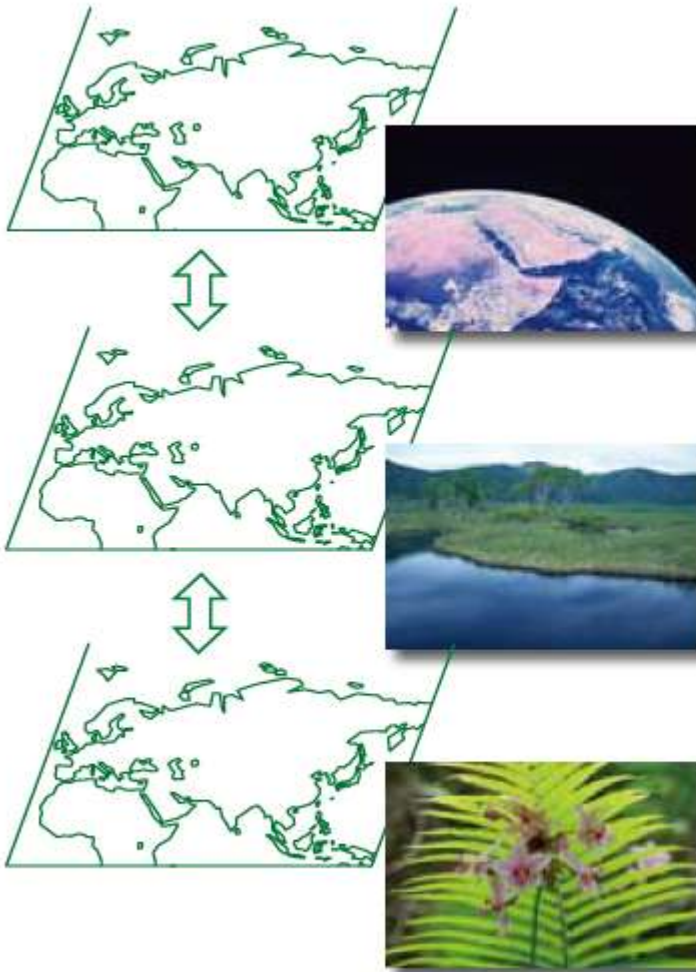
8 September 2012

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The Secretariat of AP-BON



# What is AP-BON?



## Satellite remote sensing

- Ecosystem and land-use types
- Vegetation structure
- Temporal change in ecosystems

## Research and modeling of ecological processes

- Primary production (carbon flux and cycling)
- Ecohydrology and nutrient cycling
- Ecosystem services

## Species and genetic level research

- Plant species distribution
- Wildlife habitat assessment
- Biological interactions

# Development of AP-BON

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2008	Apr.	GEO BON Meeting, Potsdam
2009	Jul.	1st AP-BON Workshop, Nagoya * AP-BON was established
	Dec.	2nd AP-BON Workshop, Tokyo * The Steering Committee was formed * Publication of AP-BON book was discussed
2010	Feb.	GEO BON Implementation Plan Meeting, Alismar, California
	Mar.	3rd AP-BON Workshop, Nagoya * Draft implementation plan for 2010-2011 was revised * Five working groups were organized
	Oct.	AP-BON side event, CBD COP10 1st AP-BON Steering Committee, Nagoya * Visions and missions of AP-BON were agreed
2011	Dec.	4th AP-BON Workshop, Tokyo * Implementation plan for 2012-2015 was discussed * Publication of the next AP-BON book was planned
		AP-BON Science Symposium, Tokyo

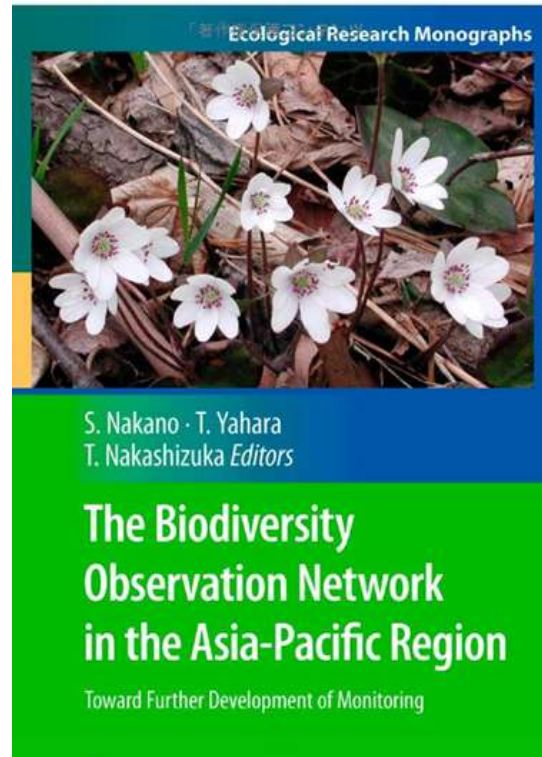


1st AP-BON Workshop, Nagoya, 2009



AP-BON Science Symposium, Tokyo, 2011

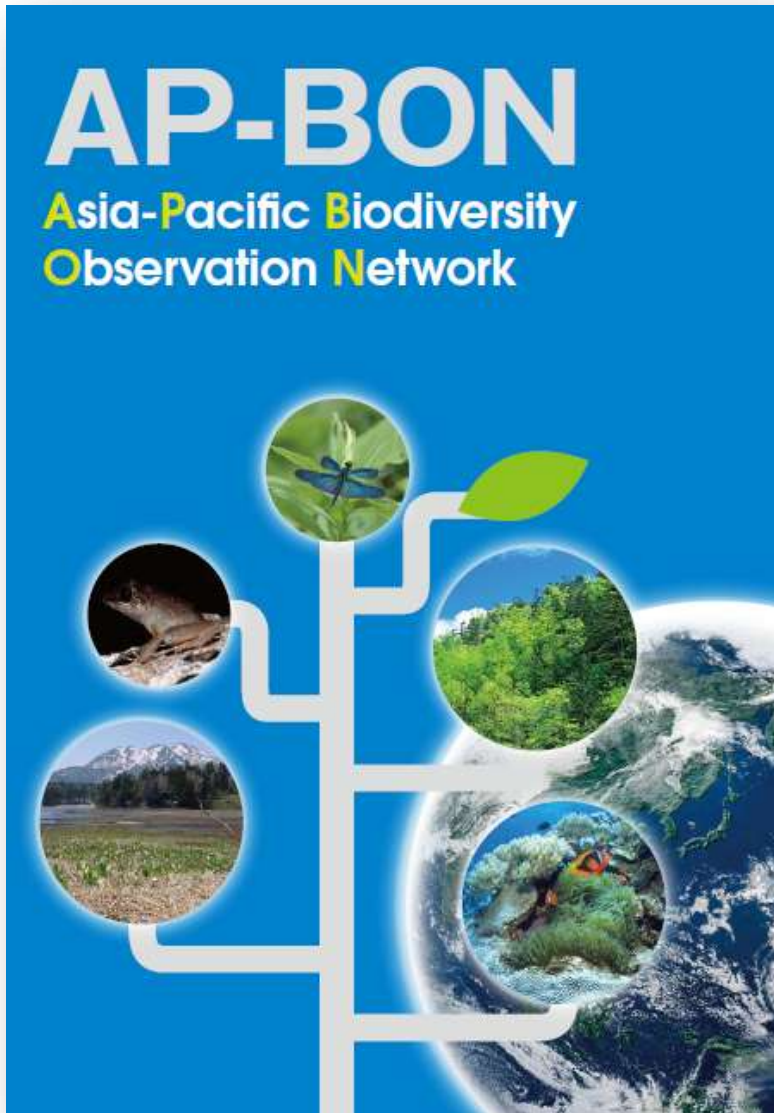
# AP-BON's 1<sup>st</sup> book



## Contents

- Part 1** General Introduction
- Part 2** Networks of Monitoring and Research on Biodiversity in Asia-Pacific Region
- Part 3** Establishing Biodiversity Database
- Part 4** New Methods & Analyses for Biodiversity Studies
- Part 5** Biodiversity and Ecosystem Services

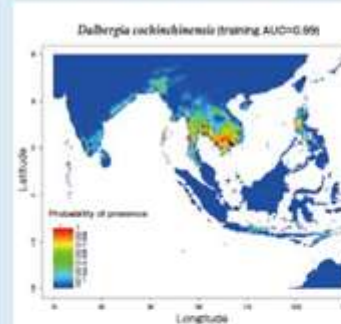
# AP-BON brochure



## Studies by each working group

### Working Group 2

#### Estimation of the distribution range of a rosewood, *Dalbergia cochinchinensis* Pierre



*Dalbergia cochinchinensis* is a species of an evergreen broadleaf tree of the Fabaceae. It is called "rosewood" and is used for such as furniture, musical instruments taking advantage of its beautiful color and texture of heartwood. As a result of excessive logging, it has been listed as a threatened species (VU) in the IUCN Red List. Although available specimen records of this species are not so many, the original distribution range was estimated using Ecological Niche Modeling method. The result suggests that the center of distribution of this species would be southern Indo-China.

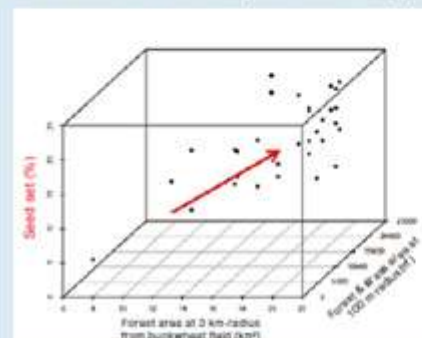
The working group assesses the present status of each species by distribution ranges and local land-use change, and distributes the results through the Red Data Book and other media to citizens and policymakers for conservation and sustainable use of biodiversity.



*Dalbergia cochinchinensis*

### Working Group 3

#### Evaluation of the ecosystem service (pollination service) of farmlands



Pollination of buckwheat (*Fagopyrum esculentum*) is performed by insects such as bees, ants, flies, hoverflies and cetoninae beetles.

The results of this study show that the seed-set rate of buckwheat is proportionate to the size of the forest area within a 3 km radius, which is within the migration range of a Japanese honeybee (*Apis cerana*), and the size of forest and grassland area within a 100 m radius, which is within the migration range of insects other than the honeybee.



*Apis cerana*

*Chrysotoxum fuscum*

*Formica japonica*

# Major Activities for 2012-2015

## Major Activities for 2012-2015

### (1) Editing and networking national biodiversity outlook

AP-BON will help with the efforts in Asia Pacific countries to document the state and trends of biodiversity. This work would be promoted by organizing a national BON in each country.

### (2) Publication of additional AP-BON books

- ### (3) Promotion of collaborative projects using “Integrative Observations and Assessments of Asian Biodiversity (S9)” by the Environment Research and Technology Development Fund as a pilot project
- The Japanese project (S9) funded by the Ministry of the Environment will be used as a good opportunity to develop collaborative projects in the Asia Pacific region.

### (4) Development of shared database

Data sharing/exchange, analysis and synthesis/integration are one of the key missions of AP-BON. In terms of existing tools, Darwin core and its extension used in GBIF provide a basic tool for this mission regarding distribution records and other data associated with a taxon name and coordinate data, and EML (Ecological Metadata Language) provides a basic tool for database metadata of various ecological observations. The link between these databases and other databases, such as DNA and satellite images will be developed.

### (5) Capacity building

AP-BON will provide capacity-building opportunities for such tools as DNA barcoding, distribution modeling, plot data analyses, etc.