



**A strategic approach for
characterising
wetlands: The Asian
Wetland Inventory
(Asian Wetland
Symposium)**

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supervising scientist

**A STRATEGIC APPROACH FOR CHARACTERISING WETLANDS – THE
ASIAN WETLAND INVENTORY (Asian Wetland Symposium)**

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A STRATEGIC APPROACH FOR CHARACTERISING WETLANDS – THE ASIAN WETLAND INVENTORY

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The Asian Wetland Inventory (AWI) aims to develop a regionally, and globally, compatible and standard method for wetland inventory. The method has been developed in response to recent dissatisfaction with many wetland inventories and can support data collection at different scales and for different purposes. Some of these purposes are:

- provide core data / information on Asian wetlands to support International Conventions and Treaties on Wetlands, Climate Change, Biodiversity, Migratory Species and Desertification, and their implementation by Governments;
- analyse long term trends in Asian wetlands and their natural resources;
- enable regular revisions and updates of information on wetlands of national and international importance in Asia.

The AWI builds on past inventory effort, most notably that undertaken in the mid-1980s, and abides by the recommendations made in the review of wetland resources conducted for the Ramsar Convention. It uses a hierarchical approach for collecting core data elements within a GIS framework that enables data from disparate sources to be collated and combined. Outputs include map-based assessments at four levels of detail. The level of detail is related to the scale of the maps that are contained within a standardised Geographic Information System (GIS) format.

The method provides an effective tool for collecting information for managing natural resources derived from or dependent on wetlands, and for meeting national obligations under international agreements. It uses a strategic and hierarchical approach to collect information and takes advantage of new technologies of data collection, storage and dissemination.

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RAMSAR WETLAND CONVENTION: A CASE FOR WETLAND INVENTORY

- **Inventory is a fundamental tool for natural resource assessment, including**
 - ▶ **identifying where wetlands are, and which are the priority sites for conservation and other land uses identifying the goods and services derived from wetlands**
 - ▶ **establishing a baseline for measuring future change in wetlands and their goods and services**
 - ▶ **planning and management at both practical and/or political levels**

RAMSAR WETLAND CONVENTION: REVIEW OF EXISTING WETLAND INVENTORY

- ▶ **Wetland area** - figures vary enormously 6-12 000 000 ha
- ▶ **Habitat definition** - different classifications used, but not consistently
- ▶ **Data collation** - date collected often not stated, methods used to collect and analyse data not stated or not used consistently
- ▶ **Scale** - local, national and international scale of maps and data
- ▶ **Comparability** - not able to compare between inventories
- ▶ **Accessibility** - information hard to obtain, few copies available
- ▶ **Coverage** - many gaps still exist with specific habitats and areas poorly known

ASIAN WETLAND INVENTORY - AIM

- **Develop a regionally, and globally, compatible and standard methodology for wetland inventory to:**
 - **analyse long term trends in wetlands and their natural resources**
 - **provide core data on Asian wetlands to support international conventions/treaties, and enable their implementation**
 - **regularly update and revise information on important wetlands**
 - **disseminate these analyses for wider use**

(www.wetlands.org/awi)

AWI - GEOGRAPHIC COVERAGE

- ▶ All countries/territories in western, southern and eastern Asia, including Russia east of the Urals
- ▶ All countries/territories with biophysical (eg flyways, river basins) and socio-economic (eg trade in wetland products) linkages
- ▶ All countries/territories that would benefit from cooperative approaches for wetland management (shared wetland resources)

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AWI - DEFINITION OF WETLANDS

- **Based on Ramsar definition of wetlands but excludes truly marine habitats**
- **Areas of marsh, fen, peat land or water, either natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including all inter-tidal areas above the low water mark**

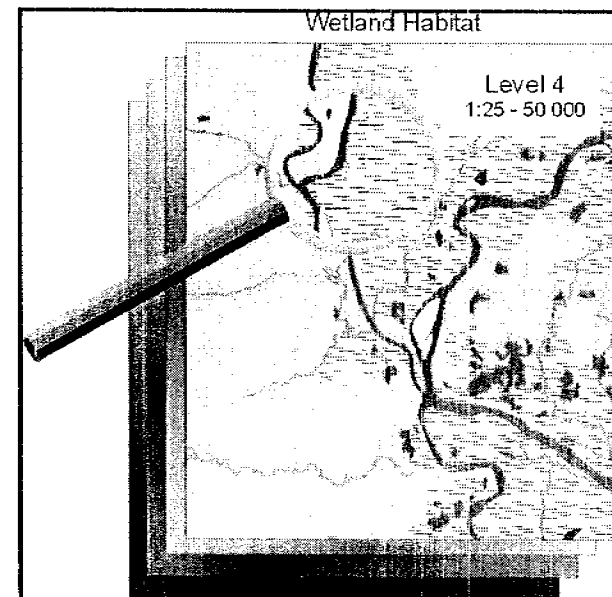
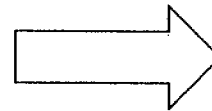
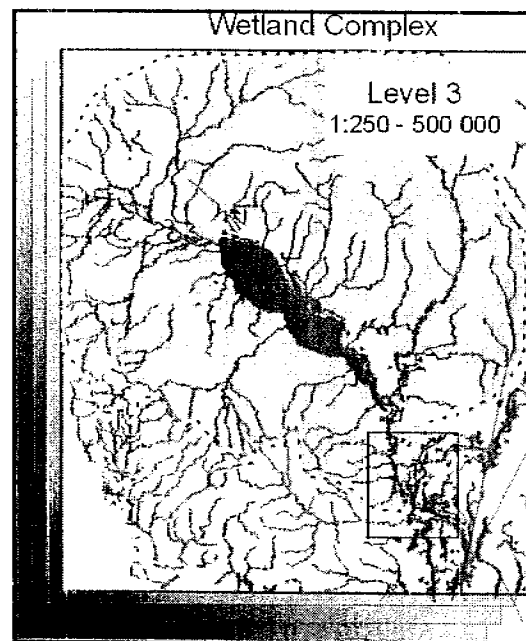
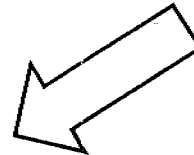
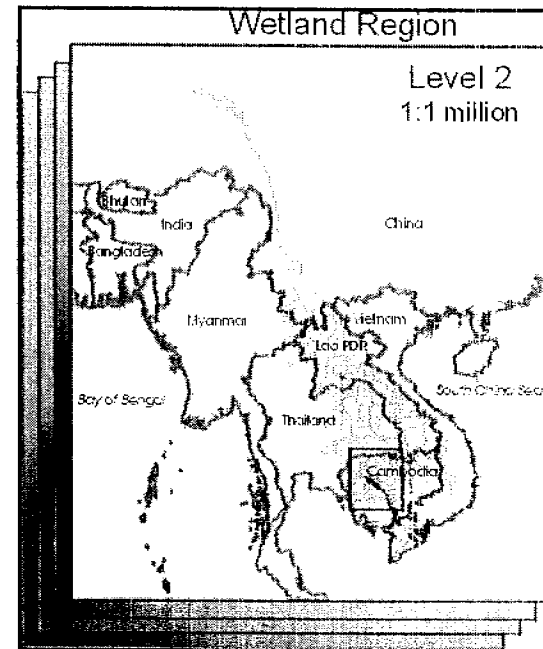
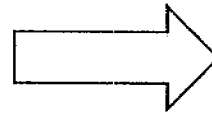
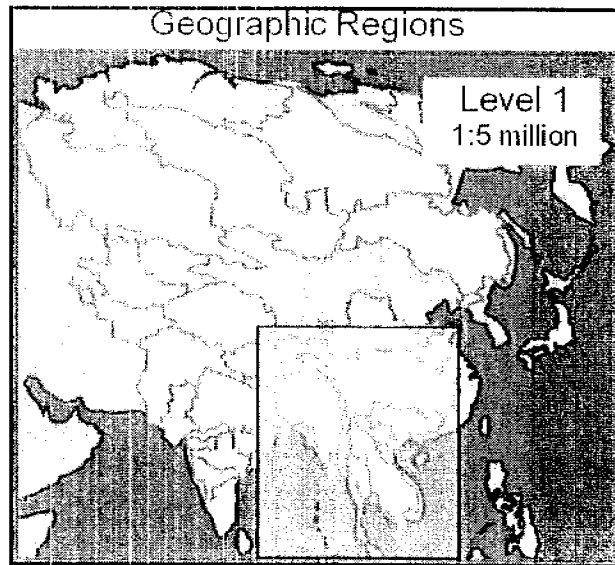
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AWI - THE METHOD

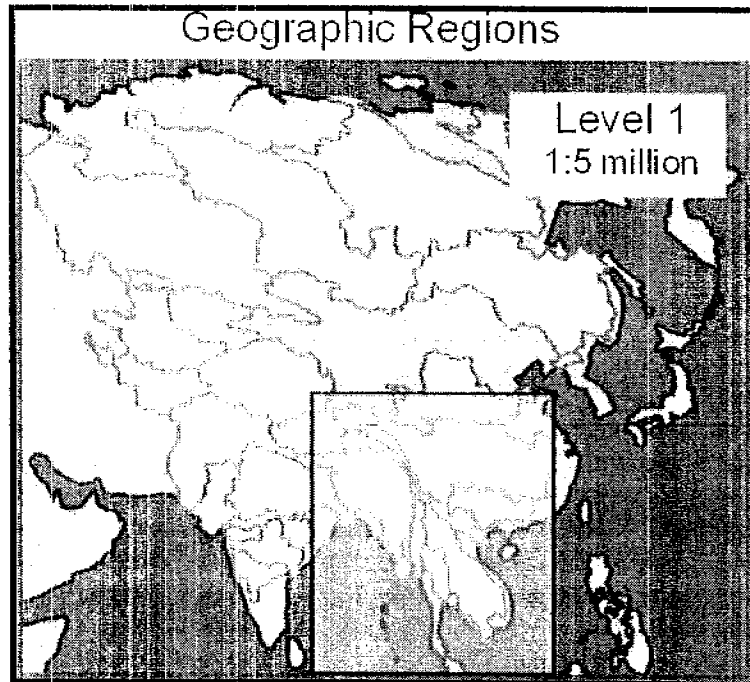
- **Hierarchical approach to collate existing and further data**
- **GIS-based maps at four scales for different purposes**
- **Core data set for biophysical description**
- **Discretionary data set for specific management purposes**
- **Established reporting and information management steps**

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AWI - THE METHOD

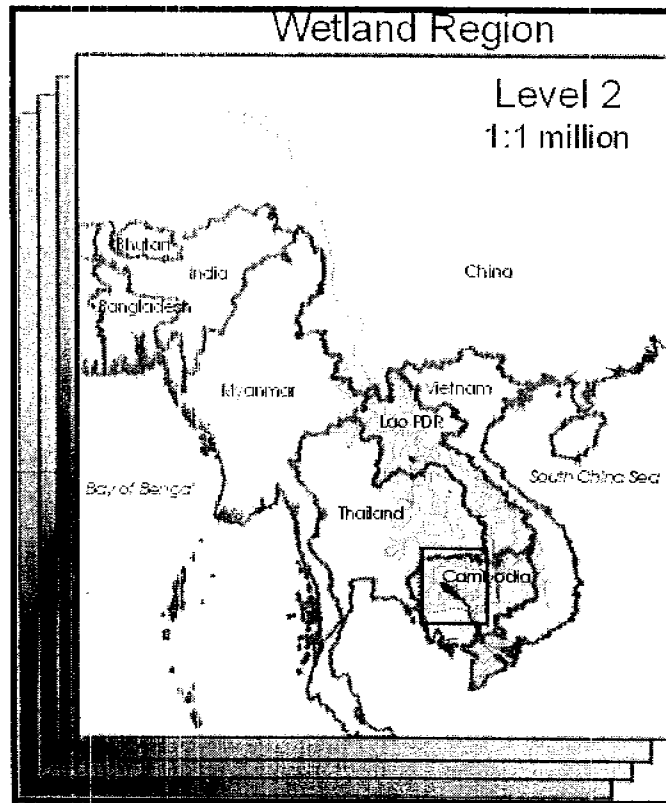


Level 1 - Geographic regions



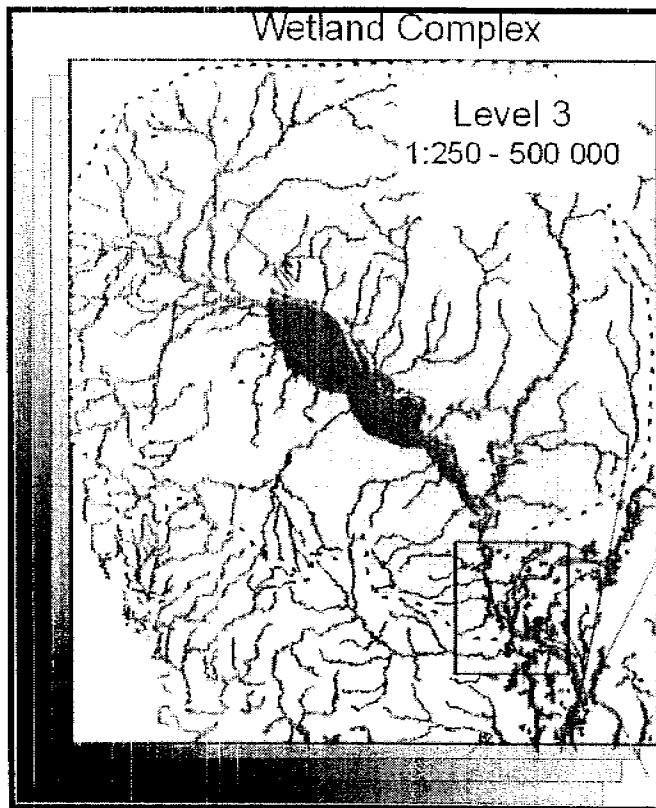
- **Geographic regions based on river basins and major islands**
- **GIS-map of the regions at a scale of 1:10 000 to 1:5 000 000**
- **Continental overview of the geologic, climatic and vegetation context for major basins**

Level 2 - Wetland regions



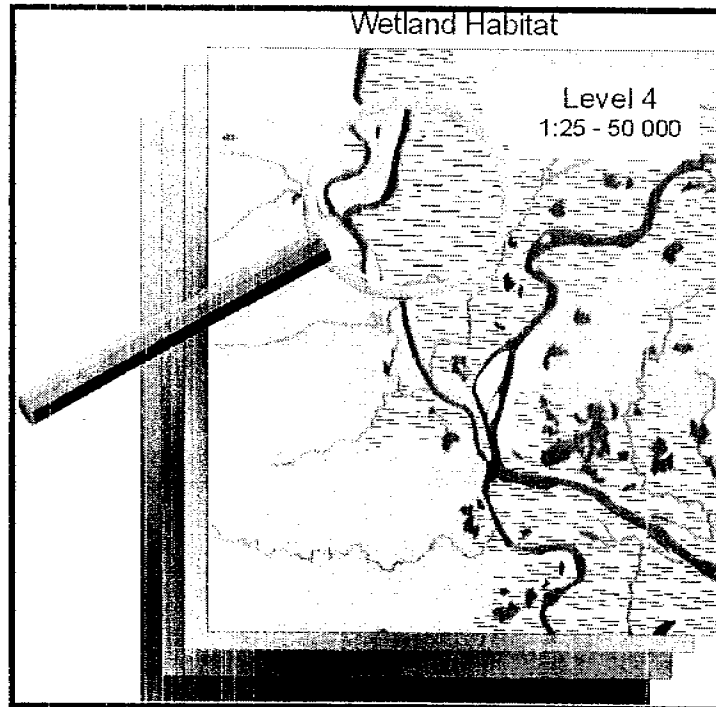
- Areas within a basin with similar landforms and water regimes -
- Provides information on wetland types for broad biodiversity assessment purposes
- GIS-map of the regions at a scale of 1:1 000 000 to 1:250 000
- Physical and vegetation features described from existing sources of information using standard terms and measures (metrics)

Level 3 - Wetland complexes



- ▶ Groups of wetlands that share more specific features within each region
- ▶ Produce more detailed inventory of biophysical features
- ▶ GIS-map of each complex at a scale of 1:250 000 to 1:100 000
- ▶ Core data set of main biophysical features as well as goods and services collected using standard terms and measures (metrics)
- ▶ Substantial effort required to collect field data and analyse imagery and other data sources

Level 4 - Wetland habitats



- ▶ Detailed inventory of individual habitats
- ▶ Data on biophysical features of interest collected using standard terms
- ▶ Data on management issues collected using standard terms
- ▶ GIS-map of the wetland habitats at a scale of 1:50 000 to 1:25 000
- ▶ Substantially more field work for collecting biophysical and management data

AWI - STATUS AND NEXT STEPS

- **AWI manual drafted and assessed - being revised**
- **Complete standardised data sheets and software**
- **Provide training to interested parties**
- **Review and collate suitable existing inventory into the AWI data formats and database**
- **Undertake further inventory in collaboration with other parties and national/regional authorities and initiatives (eg flyway initiatives)**
- **Provide information and advice to international initiatives (eg climate change assessments, Millennium Ecosystem Assessment, Ramsar wetland inventory protocol)**

(www.wetlands.org/awi)

AWI - Acknowledgements

- **Ministry of Environment, Japan**
- **Wetlands International - Japan**
- **Wetlands International - Asia Pacific**
- **Wetland Inventory & Monitoring Specialist Group**
- **National Centre for Tropical Wetland Research
(Australia)**
- **Scientific & Technical Review Panel of the Ramsar
Wetlands Convention**
- **Standing Committee of the Ramsar Wetlands Convention**