Role of the CHM in Supporting the Development, Implementation and Updating of NBSAPs; Getting the message across

17 January 2008, Singapore

Dr. Gary W. Theseira
Traits of Highly Successful CHMs

- Information deemed Necessary (Accessed)
- Information deemed Useful (Summarized into meta data)
  - Planning
  - Reporting
  - Assessment / Evaluation
- Information deemed Current (Regularly Updated)
- As much, if not more, for ‘Inside Users’ as for ‘Outside Users’
  - What ‘Inside Coverage’ are we achieving?
  - What ‘Inside Coverage’ do we actually need?
The CHM as a Management and Policymaking Tool

- Puts Stakeholders on the same page
- Shows strengths together with information gaps
- Helps coordinate activities and initiatives
- Facilitates communication
  - Stakeholder concerns and input
- Facilitates buy in
  - Early buy-in
  - Comprehensive buy-in
The Malaysian NBSAP Model:

- Acknowledgement of the need;
- Support for the concept;
- Approval of funding;
- Research and Information dissemination incorporated into 5-year Development Plan

- Incorporation of the findings into the National Physical Plan

THE ESTABLISHMENT OF AN EFFICIENT, EQUITABLE AND SUSTAINABLE NATIONAL SPATIAL FRAMEWORK TO GUIDE THE OVERALL DEVELOPMENT OF THE COUNTRY TOWARDS ACHIEVING DEVELOPED NATION STATUS BY 2020.
The Malaysian NBSAP Model:

- What about Policies and Development Plans that might not have a Physical Aspect or
- Policies and Development Plans that are not covered or only partially covered under the NPP
  - Automobile and to some extent, transport policy
  - Fuel policy
  - Trade policy
  - Climate change and GHG emissions policy
Identifying and Reconciling conflicting or competing policies

- **Strengths;** What are we doing right (that we should continue doing)?
- **Dire Needs;** What must we do or stop doing, or change or redirect NOW!
- **Needs;** What should we be doing to be able to do the things we are currently not doing well or are unable or unwilling to do?
- Engaging rather than marginalizing or antagonizing stakeholders and policy and decision makers involved in planning and development.

**Priority setting in Mainstreaming Biodiversity**

- What development activities are Biodiversity Unfriendly?
- What development activities are Biodiversity Neutral?
- What development activities are Biodiversity Positive?
Coverage and Penetration Challenges

- How do we capture the attention of ALL groups of pertinent stakeholders
  - Ministries
  - Government Agencies
  - Research Institutes
  - Academia
  - Media
  - Business

- How do we get the entire message across effectively to optimize impact.
Focus on Communication and Information Sharing

- Awareness building (Generating pull in addition to merely pushing)
- Informing planners and stakeholders what questions they need to be asking us, the biodiversity community, to get the ‘right answers’
FPM-Online in Pictures: Name/Fragment search

Welcome to Flora of Peninsular Malaysia Online... to be the government's reference and advisory centre for plant conservation...

Welcome Mr. Khairudin

MAIN MENU
- My Profile
- Acknowledgements
- Field Definition
- Other Plant Databases

DATABASE
- Browse Plants
- Search
- Login

Funded by
Ministry of Plantation Industries and Commodities

Search

Please use this search engine to get results.

Categories | Query by value
--- | ---
Plant Name | Habit
Author | Habitat

- Any name or fragment
- All names, fragments or combination thereof

States | Endemic/Naturalized
Any | Any

Show records with pictures only

Execute Query  Reset Form
FPM-Online in Pictures: Hits/Plant profile/Photo-illustration
Malaysia Plant Red List

View/Download the Malaysia Plant Red List - Guide to Contributors

- Document Cover (front and back)
- Table of Contents, Foreword and Acknowledgements
- Introduction and Guide to Filling in the Taxon Data Information Sheet
- Taxon Data Information Sheet 1 ver workshop (revised 3)
- Download all files in a compressed folder

File Format:
- Download pdf
- Table of Contents.pdf
- Introduction and Guide.pdf
- Data Form.doc
- Malaysia Plant Red List Guide to Contributors.doc

Note: All enquiries should be forwarded to:
The Secretary,
Malaysia Plant Red List Project
c/o Tropical Forest Biodiversity Centre
Forest Research Institute Malaysia (FRIM)
52109 Kepong
attn: Dr. Saw Leng Guan or Dr. Lilian Chua Swee Lian
What is missing from the CHM?
Terima kasih!
Thank you!
Malaysia and the CBD

Status
- Convention Party since: 1994-06-24
  - By: Ratification
- Protocol Party since: 2003-12-02
  - By: Ratification

National Reports submitted: 3
- National Policy on Biological Diversity - April 16 1998
- National Biodiversity Strategy Action Plan

Implementation of the Convention
- Measures Taken to Achieve the 2010 Target
- Initiatives in Protected Areas
- Initiatives in Access and Benefit Sharing
- Initiatives for Article 8(j)
Bio-D database activities to date ... 

- Hiring of additional staff
  - Information Officers
  - Research Assistants
  - GIS/RS Specialists
- Purchase of software
- Purchase of hardware
- Upgrading of existing web and data servers
- Meetings with stakeholders
  - Universities
  - Government Agencies
    - Federal
    - State
    - District/Local
  - Relevant NGOs
- Meetings with Web Development and Database Consultants
  - Database development
    - Content Management System (CMS)
    - Member Management System (MMS)
    - Spatial data management
Current Status of the Bio-D Database

- Maintained as part of the CBD National Clearing House Mechanism
- Links to more than 100 web locations
  - MEAs
    - Membership particulars and pertinent documents
  - Policy Documents
    - Environmental policy documents
    - Relevant legislation
  - Implementing Agencies and National Focal Points
  - Research Institutes
  - Universities
  - Non-Governmental Organisations
  - Biodiversity and Environment-related Publications
    - Books
    - Periodicals and newsletters
Current Status of the Bio-D Database

- Biodiversity Checklists
  - Vascular flora (Peninsular Malaysia)
  - Mammal
  - Reptile
  - Amphibian
  - Marine Algae
  - Freshwater Crabs
  - Freshwater Fish
  - Marine Fish
- Expert database
- Specimen database
- Habitat/Ecosystem Information
- Threat Assessment and Conservation Status
Malaysia’s NBSAP at a glance

- Formulated over the course of several retreats, workshops and meetings.
- Consists of 14 strategies and 87 actions.
- OBJECTIVE: To ensure that biodiversity in Malaysia will be conserved and utilized in a sustainable manner.
- VISION: To transform Malaysia into a centre of excellence for conservation, research and sustainable use of tropical biodiversity by the year 2020.
- Development of additional sectoral policies and laws governing biodiversity:
  - policy for protection of plant genetic resources;
  - inventorying poorly-known groups of biological organisms such as lower plants and insect diversity;
  - increasing the number of Virgin Jungle Reserves;
  - implementing the National Policy for Integrated Coastal Zones Management;
  - commitment to maintain at least 50% of its forest cover and trees in perpetuity at the Rio Summit in 1992.
National Biodiversity Policy Strategy 1: Improve the scientific knowledge base

- **Programmes and Activities:**
  - Listing of Literature on vascular and non-vascular plants, fungi, and vertebrate (estimate: 12,500 species)
  - Department of Agriculture (DOA) – Database on insects collection 1905-2005 is in progress.
  - DOA program survey on itch grass (*rotboella cochinchinensis*),
  - survey on golden apple snail (*Pamocea insularis*) and survey on white flies and leaf miner (planned for 2006/2007)
  - Forest Research Institute of Malaysia (FRIM) organized workshop June 2005 on status of biodiversity in Malaysia
  - Wildlife Department’s programmes on species recovery through in situ conservation
  - KRSTE.my - information portal - single point access facility by Ministry of Science, Technology and Innovation
  - Integrated Spatial Biodiversity database programme – using Remote Sensing technology
National Biodiversity Policy Strategy II : Enhance sustainable utilization of the components of biological diversity

- **Programmes and Activities:**
  - Establish Herbal Tropical Centre in FRIM (GMP std); Research related to Natural Resource Accounting;
  - Establishment of a Proteomic centre
  - IGS collaboration and MOUs with other agencies and the private sector
  - Provide technical consultants undertaken for private sector
  - Maximize utilization of lesser-known timber and wood resources; waste minimization; recycle wood waste and agriculture by-products
  - Drug discovery programmes, medicinal plant research, macro and micro propagation, molecular breeding and genetic engineering of selected species, proteomic research
  - Assessment of fauna and flora for Environment Impact Assessment by Department of Environment to assess development projects
National Biodiversity Policy Strategy III: Develop a centre of excellence in industrial research in tropical biological diversity

Programmes and Activities:

- All departments and government agencies have regular capacity building programmes, education and training programmes for staff members
- FRIM established Timber Technology Centre provides incubation programmes, equipment and machinery demonstration, product design and prototyping, product quality testing and consulting services
- MARDI is developing useful and commercially potential products from agrobiodiversity
- Genetic enhancement and genetic base broadening in PGRFA by MARDI
- Phytochemical and nutriceutical analysis of plants for useful products by MARDI
- Human Resource Development Fund for Science and Technology by Ministry Of Science, Technology and Innovation
National Biodiversity Policy Strategy IV: Strengthen the institutional framework for biological diversity management

- **Programmes and Activities:**
  - The establishment of Ministry of Natural Resources and Environment (NRE) in April 2004
  - National Council on Biodiversity and Biotechnology was established in 2002
  - Malaysia also added National Physical Plan (NPP) which includes conservation natural resources and the environment as a major element in the national physical development.
    - Integrate ESAs in the planning and management of land use and natural resources to ensure sustainable development.
  - Establish a CFS to form the backbone of the Environmentally Sensitive Area network.
  - Sensitive coastal ecosystems protected and used in a sustainable manner.
  - Land development in highlands strictly controlled to safeguard human safety and environment quality.
  - All surface and ground water resources are strategic assets to be safeguarded and use optimally.
National Biodiversity Policy Strategy V: Strengthen and integrate conservation programmes

Programmes and Activities:

- Inclusion of Permanent Forest Areas as Protected Areas (under Min of Primary Industries – forested State Land to be gazetted as Forest Reserves; degazetted areas to be reviewed; expansion of VJR focusing on mountainous areas; Seed Production Areas; public participation for in situ conservation)
- Department of Wildlife determines minimum viable population sizes for species and critical minimum size of conservation areas;
- Department of Wildlife involves public participation in conservation
- FRIM has Ex-situ collections of dipterocarps, lesser known tree species, fruit trees, monocotyledons (palms, orchids, ginger), conifers, species associated with ethnobotany held in arboreta
- MARDI conduct programmes on Species and Genetic variability; arboreta, seed gene banks and planning on farm Conservation for indigenous fruits, herbs and medical plants
- Department of Fisheries established Protected Areas for Fisheries such Kelisa breeding and Turtle
National Biodiversity Policy Strategy VI: Integrate biological diversity considerations into sectoral planning strategies

Programmes and Activities:
- National Physical Plans incorporate Environmentally Sensitive Areas
- Strategic Environmental Assessment in national physical development
- Malaysian Criteria Indicators for sustainable forest management
- Department of Fisheries introduces Code of Conduct for Responsible Fisheries
- Biodiversity conservation and sustainable utilisation component in National Agriculture Policy (NAP3)
National Biodiversity Policy Strategy VII: Enhance skill, capabilities and competence

Programmes and Activities:
- Increase the number of young graduates to be trained in the fields of botany, entomology, zoology and biotechnology at local universities.
- Ministry of Science, Technology and Innovation is creating Database on experts/researchers
- Collaboration with International Organizations to enhance skill, knowledge and capacity in all sectors
Programmes and Activities:
- Reviewed legislations – Town Country Planning Act 1976 s.36A – inclusions of Sensitive Environmental Area among others
- Wildlife Protection Act 1972 is under review to include more holistic biodiversity management
- New Plant Variety Protection Bill which includes phytosanitary research and provisions for identification and monitoring of alien species
- Proposed Environmental Impact Assessment review in Environment Quality Act
- Proposed Biosafety Bill by Ministry of Natural resources and Environment
- Proposed ABS Bill by Ministry of Natural Resources and Environment
- New Plant Variety Protection Act which includes phytosanitary and provisions for alien species
National Biodiversity Policy Strategy X: Minimize the impact of human activities on biological diversity

- **Programmes and Activities:**
  - Department of Wildlife – Tiger encroachment capture programme, translocation and compensation scheme
  - Establishment Genetic Modification Committee (GMAC) in 1998 - administrative and monitoring mechanism on transboundary movement of GMO and LMO. Malaysia also introduced Guideline on Releasing Genetic Modified Organism to the Environment 1998, by Ministry of Science, Technology and Environment.
  - EIA provisions on assessment of fauna and flora for some specific development projects
  - Department of Agriculture (DOA) have Plant Quarantine Act to minimize the impact on biodiversity; promotes Best Agriculture Practice and enforce pesticides registration to minimize the impact on biodiversity
  - Department of Forestry – monitoring impacts on development of peatland ecosystems
  - Town and Country Department – enforcing Section 21a Town Country Planning Act 1976 LCP process has provision for Island development and creating Green areas/recreational areas.
  - Integrated Coastal Zone Policy to reduce impact on coastal biodiversity
National Biodiversity Policy Strategy XI: Develop policies, regulations, laws and capacity building on biosafety

- **Programmes and Activities:**
  - Biosafety Bill to be tabled in the parliament
  - Department of Chemistry provides Facilities to detect Genetically Modified Organisms
Programmes and Activities:

- Collaboration with ASEAN members in many aspects of biodiversity research and management such as ASEAN Agreement on Nature and Natural Resources, ASEAN Agreement on the Establishment of ASEAN Centre for Biodiversity, Sulu-Sulawesi marine ecoregion.

- Collaboration and cooperation at the regional level such as Bay of Bengal large Ecosystem Projects.

- Collaboration and cooperation with several developed countries in many aspects of biodiversity research and management such as Borneo Biodiversity (BBEC) project with Japanese government, and many biodiversity projects with Danish government (DANIDA).

- Collaboration and with international organizations such as GEF, ITTO, ITPGRFA, CIFOR, JICA, DANIDA.

- Collaboration through MARDI Plant Genetic Resources network for example COGENT, RECSEA, AARNET, ASEANET. Malaysia is also a signatory to JTPGRFA.
National Biodiversity Policy Strategy XIII: Promote international cooperation and collaboration

Programmes and Activities:

- Collaboration with ASEAN members in many aspects of biodiversity research and management such as ASEAN Agreement on Nature and Natural Resources, ASEAN Agreement on the Establishment of ASEAN Centre for Biodiversity, Sulu-Sulawesi marine ecoregion.
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**Programmes and Activities:**

- **KRSTE.my** information portals developed by Ministry of Science, Technology and Innovation.

- Integrated Biodiversity Database using Remote Sensing technology by Malaysia Centre For Remote Sensing (MACRES) with training conducted by Forestry Department. Workshops were carry out to assess status biodiversity.

- Workshop June 2005 on status of biodiversity conduct by FRIM with participation from government agencies, universities and NGOs.

- Checklist of the Flora of Peninsular Malaysia is available online.

- Dipterocarpaceae distribution in Southeast Asia is available online through the Southeast Asia Botanical Collection Information Network.

- Penang Tree Information System (PETIS)

- Tree Flora of Malaysia and Tree Flora of Sabah and Sarawak publication.
Programmes and Activities:

- Fact sheet on threatened plants (spatial information .25m species in collection) by FRIM
- Listing of tree flora in Sabah and Sarawak to date 5 volumes (3 to go) (estimated 12,500 species)
- Forestry Department conduct National Forestry Inventory – in Permanent Forest Area – dipterocarp, non-dipterocarp, bamboo, palms and rattans
- Wildlife Department conduct Wildlife survey – rapid and monthly assessment – coverage sanctuaries and forest reserves
- Drainage and Irrigation Department conduct Hydrobased data; Dam fingerprinting and river registry.
- MARDI establish National Information sharing mechanism such as a) National Information sharing Mechanism (NISM) for PGRFA (in progress), b) Agro biodiversity Information System (in-progress), and c) Rice Gene Bank Information System (in place)
Programmes and Activities:

- Annual operating budget to all ministries and departments
- Malaysia 5-year Development Plans
- Establishment of Trust Funds for example Wildlife Trust Fund
- Research funding/grants (IRPA) for scientific project research by the Malaysian government
Gaps in the current Bio-D Database

- Currently more gaps than data
  - Fungi
    - Microfungi
    - Macrofungi
  - Bacteria
  - Viruses
  - Other Arthropod Orders
  - Bryophytes
  - Freshwater algae
  - Biodiversity of Sabah and Sarawak
- Expert databases
- Specimen databases
- Habitat/Ecosystem Information
- Threat Assessment and Conservation Status
Issues in implementing the National Bio-D Database

- Data fragmentation
  - Research Institutes
  - Universities
  - Government Agencies
  - NGOs

- Causes
  - Mandates
  - Funding
  - Expertise
  - Competition
    - Funds
    - IPR
    - Expertise
  - Lack of coordination by, and between Federal, State and Local Government
Issues in implementing the National Bio-D Database

- Data heterogeneity
  - Database maturity
    - Mature – archaic
    - Immature – adaptable
  - Database formats
    - Text
    - Numerical
    - Spatial
  - Software options

- Lack of Expertise
  - Local
  - Foreign

- Lack of Funding
  - Sufficient
  - Sustained

- Philosophical approach
- National Values and Priorities
Opportunities in implementing the National Bio-D Database

- Repatriation of data and specimens
  - Herbaria
  - Natural History Museums
- Collaborative Research
  - N-S & S-S
  - Data sharing
  - Joint Expeditions
  - Research Fellowships
  - Sabbaticals
- Cross-cutting issues
  - Other MEAs
  - Sustainable development issues
  - Indigenous knowledge and IPR
Welcome to Flora of Peninsular Malaysia (FPM) Online, a searchable database of the flora of Peninsular Malaysia and Singapore.

As a registered member you will be given full access to the database, which includes not just plant names but also ancillary data such as habitat, habitat, taxonomic synonymy, distribution within Peninsular Malaysia and Singapore and endemic status with respect to Peninsular Malaysia. Plant images are being added to the database on a regular basis.

Registered users will also receive an e-mail newsletter detailing any amendments to the database as well as recent additions of plant images to the database. In addition, each issue of the newsletter will highlight a feature taxon.
FPM-Online in Pictures: Login

Enter your user name and password to login.

User Name: 

Enter Password:  
Log in

Get a FREE user name and password to access to Flora of Peninsular Malaysia Online.

For comments or suggestions e-mail: floraonline@frim.gov.my
FPM-Online in Pictures: Registration

Conserving the Floristic Heritage of Malaysia...

Sign up for your FREE FPM Online user account
Fill in the form below to gain access to the Flora of Peninsular Malaysia Online and other FPM Online services.
Note: Fields that are marked with an asterisk (*) are required.

### Personal Information

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Execute Query | Reset Form

Endemic/Naturalized

Any
FPM-Online in Pictures: Hits/Plant profile/Photo-illustration
Planned work for 2008 and beyond

- Addition of bird and some insect group checklists
- Bryophyte checklist
- Type specimens of selected flora and fauna
- Enhancement of existing databases
- Additional meetings with stakeholders and cooperating agencies
  - Assessment and upgrading of data sets
  - Funding of data collection to fill information gaps
  - Linking of mature databases

- Additional meetings with web and database consultants
- Enhancement of CMS and MMS and search engines
- Workshop for stakeholders
Terima kasih!
Thank you!
Singapore
- Diffuse model leads to a lack of clarity
- Singapore green plan – focuses on brown issues, but biodiversity is only a small component of this.
- Need to build up biodiversity component which is lacking.
- Need to choose and drive the priority areas.
- Use existing laws as bolster
- Sites identified as important for conservation
- Develop with the biodiversity in mind
- Pulls in different agencies as necessary
- Mechanism is national development ministry – Singapore master plan
- Industry/housing/etc submit to ministry which routes the proposal to the agency in question
- Measure of success?
- At least 8-10% areas conserved in some way
- Protected though administrative action

Coverage?
- Appropriateness?
- Do we REALLY know what is happening to our biodiversity (monitoring, trends, assessment)?

Penetration into other sectors
- Penetration into

Need to find common ground from which issues that arise can be dealt with