



## **Integration for Biodiversity in Malaysia**

### **Contents**

1. Introduction .....	3
2. Integration of Conservation of Biodiversity in National Development Plan, Policies and Action Plans...	3
Ninth Malaysia Plan (9MP) (2006-2010) .....	4
Mid-Term Review of the Ninth Malaysia Plan (2008) .....	5
National Policy on Biological Diversity (1998) .....	5
National Policy on the Environment (2002) .....	6
National Forestry Policy (1992) .....	6
National Wetlands Policy (2004) .....	7
National Agriculture Policy (2006) .....	8
National Physical Plan (2005) .....	8
National Urbanisation Policy (2006) .....	9
Farm Animal Genetic Resources Management Plan (1998) .....	9
National Biotechnology Policy (2006) .....	9
Action Plan for the Conservation and Sustainable Use of Fishery Resource Biological Diversity of Malaysia (2006) .....	10
National Action Plan for the Management of Coral Reefs in Malaysia (2008) .....	10
3. Legal and Regulatory Framework .....	11
4. Implementing Agencies .....	13

5. Institutional Framework for Implementation .....	14
National Biodiversity - Biotechnology Council (MBBN) .....	15
Other National Councils .....	16
State Biodiversity Councils.....	16

## **1. Introduction**

Malaysia reported<sup>1</sup> that efforts to protect biodiversity in Malaysia are vital. Conservation of biodiversity is cross-sectoral in nature and its implementation involves many government agencies, state governments and other stakeholders. Some agencies play leading roles compared to others.

Malaysia began its efforts to address conservation of natural resources as well as biodiversity before signing CBD in 1992. Following the ratification of the Convention in 1994, such efforts have been further strengthened. The Government has taken several major steps to strengthen its capabilities in policy-making and institutions involved in biodiversity conservation. These are:-

- A holistic country study on biodiversity in 1996;
- The launch of the National Policy on Biological Diversity in 1998;
- The establishment of the National Biodiversity-Biotechnology Council (MBBN), chaired by the Prime Minister in 2001; and
- The establishment of a dedicated Ministry to enhance environmental management by the creation of the Ministry of Natural Resources and Environment in 2004.

Conservation and sustainable use of biological diversity is consistently reflected in Malaysia's five-year plans - currently into its Ninth Malaysia Plan, as well as other policies and plans. This chapter presents the instruments such as policies, strategies, and action plans related to the implementation of CBD.

## **2. Integration of Conservation of Biodiversity in National Development Plan, Policies and Action Plans**

Recognising the important role of biological diversity in nation building and longterm development, Malaysia has continued to improve and strengthen existing provisions of policy, legal and institutional frameworks to support the integration of biodiversity considerations into policy and decision-making across all sectors.

Conservation and sustainable use of biodiversity has always been addressed within the context of sustainable development. Conservation of biodiversity has been mainstreamed in various national documents such as Malaysia's five-year Development Plan, more commonly known as Malaysia Plan as well as several national policies.

This section presents some examples of the integration of conservation in these instruments.

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<sup>1</sup> Malaysia (2009). 4<sup>th</sup> National Report to the Convention on Biological Diversity, Ministry of Natural Resources and Environment, 94 pp.

## Ninth Malaysia Plan (9MP) (2006-2010)

The 9MP recognises the value of biodiversity. This leads to the following statement “efforts will be intensified to protect and optimise the utilisation of biodiversity”.

The conclusion in Chapter 22 of 9MP states the following:

- Efforts were also intensified to protect and conserve land, water, biodiversity and forest resources.
- The promotion of sustainable natural resource management practices in relation to land, water, forest, energy and marine resources, will be intensified.
- There will also be closer cooperation with stakeholders and non-governmental organisations (NGOs) in addressing environment and natural resource concerns.
- These efforts will enhance protection of the environment and conservation of natural resources and contribute towards improving the quality of life. The overall approaches and methods mentioned are summarised in the following table (Table 1).

Table 1. 9MP – Summary of Approaches and Methods

Focus Area	Approaches/Methods
Biodiversity conservation	<ul style="list-style-type: none"><li>– Efforts will be intensified to protect critical habitats. Towards this end, existing management plans will be reviewed to further strengthen the protection of threatened flora and fauna. The EIA processes will be reviewed to include the assessment of impacts to ecosystems. The Highland Conservation and Management Strategy study for Sabah and Sarawak will be implemented<sup>27</sup>.</li><li>– The Guidelines for Access and Benefits Sharing (ABS) of Biological Resources will be developed to ensure equitable sharing of benefits from the use of biodiversity resources as well as address issues of biopiracy.</li><li>– Research institutions and universities will develop a comprehensive biodiversity inventory to facilitate bio-prospecting</li></ul>
Forest resources	<ul style="list-style-type: none"><li>– The conservation and sustainable use of forest products, watersheds and water catchments will be emphasised to promote sustainable forest management.</li><li>– The development of sustainable sources of wealth from forest products such as herbal and medicinal products, eco-tourism and bioprospecting activities will be promoted.</li><li>– Centres on Forest and Non-Forest Products will be established to further develop capacity in environmental and natural resources management.</li><li>– The Malaysian Criteria and Indicators (MC&amp;I) system will be strengthened to consolidate efforts for sustainable forest management.</li></ul>
Marine and coastal resources	<ul style="list-style-type: none"><li>– Marine and coastal resources conservation and protection measures will be incorporated into the ongoing development programmes</li><li>– The rehabilitation and improvement of the coastline will be intensified through regeneration and re-vegetation programmes.</li><li>– A comprehensive management plan for mangroves and coastal forests will be developed to arrest the mangrove depletion rate to ensure a continuous supply of resources as well as to mitigate the impact of coastal erosion and tsunamis.</li></ul>
Managing water resource	<ul style="list-style-type: none"><li>– Emphasis will be placed on maintaining and enhancing the ecosystem functions of river systems through the restoration and maintenance of highland catchments, wetlands, river buffers and riparian zones.</li><li>– The suitability of market-based instruments will be explored to internalise environmental costs, including scarcity, into water pricing systems.</li><li>– Measures to reduce water demand will be emphasised including through the provision of tax rebates for industries that recycle water.</li></ul>
Landuse planning	<ul style="list-style-type: none"><li>– The application of the spatial development approach, which integrates environmentally sustainable development concepts and methodologies, will be promoted. The strategies in the NPP will be implemented via incorporation into structure plans – Appropriate methods and parameters will be developed to identify and manage environmentally sensitive</li></ul>

### **Mid-Term Review of the Ninth Malaysia Plan (2008)**

The implementation of 9MP since 2006 has witnessed many concerted efforts to fulfil the goals of creating a healthy and safe environment as well as promoting sustainable management of resources. In this regard, wider usage of environmental planning tools such as Strategic Environmental Assessment and Sustainability Assessment will be encouraged.

The Mid-term review also states that programmes on in-situ and ex-situ conservation, propagation, breeding and rehabilitation of degraded forest areas will be expanded to reduce pressure on flora and fauna in its natural habitat. Two conservation initiatives, namely the Central Forest Spine in Peninsular Malaysia and the Heart of Borneo in Sabah and Sarawak will be carried out to improve connectivity of forests for wildlife mobility, biodiversity reservoir, protection of watershed areas and create a destination for eco-tourism. Land use planning for development will be improved in line with the National Physical Plan.

Commitments on programmes and strategies related on conservation of biodiversity include:

- A database on Malaysia's biodiversity to be established.
- Polluted river basins to be upgraded from Class III category to Class II category through Pollution Prevention and River Quality Upgrading Programme.
- Capability in legal issues regarding biodiversity, biotechnology and biosafety in Malaysia to be enhanced.

### **National Policy on Biological Diversity (1998)**

The National Policy on Biological Diversity (NPBD) is the most important guiding document for the implementation of CBD in Malaysia. It was drafted among others, to fulfil the country's obligation and requirement in implementing CBD.

The policy contains long-term direction, strategies and action plans for the conservation and sustainable utilisation of biodiversity, thus providing an overarching framework to streamline policies, strategies and action plans in respective sectors. It provides direction and strategies to all government agencies, including the State Governments, on the conservation and management of biological diversity in the country.

The document consists of the following:

- Policy which enunciates vision and policy statements and lists the Principles on which conservation and sustainable utilisation of the nation's biological diversity are based.

- Objectives of the nation with respect to biological diversity and provides the Rationale for conservation and sustainable utilisation.
- Strategies and action plans for effective management of biological diversity

### **National Policy on the Environment (2002)**

The National Policy on the Environment aims at achieving continued economic, social and cultural progress in Malaysia and enhancing the quality of life of its people, through environmentally sound and sustainable development. One of its three objectives is to 'conserve Malaysia's unique and diverse cultural and natural heritage with effective participation by all sectors of society'. A broad-based strategic approach is adopted to promote environmental soundness through research and development, economic efficiency, social equity, responsibility and accountability.

The key strategy of the policy that is relevant to biodiversity is Strategy 2. Effective Management of Natural Resources and the Environment. Among others, this strategy states the following:

2.1 National inventory and audit of environment and natural resources will be maintained and regularly updated, with particular emphasis on depletion and renewability, to serve as a guide to policy formulation and decision making. Appropriate environmental monitoring systems shall be established to facilitate the evaluation of programmes and projects.

2.2 Natural resources areas, particularly those containing biologically rich habitats and ecosystems will be established and maintained as zones for the conservation and protection of indigenous flora and fauna and genetic resources.

2.5 The nation's forests and their resources will be managed sustainably to ensure continued and sustainable economic benefits and compatibility with environmental stability, ecological balance and social stability of communities inhabiting such areas.

2.8 Seas, coastal zones, lakes, rivers, mangroves and other wetlands, islands, seagrass and coral reefs shall be managed in an environmentally sound manner; including the prevention of ecologically unsustainable harvesting of living marine and aqua.

### **National Forestry Policy (1992)**

The tropical rainforests of Malaysia constitute the largest core of biodiversity in Malaysia. In 1977, the National Forestry Policy was accepted by the National Forestry Council and later endorsed by the National Land Council on 19 April 1978. This Policy was revised in 1992 to take cognisance of the current concerns expressed by the world community on the importance of biological diversity conservation and sustainable utilisation of genetic resources, as well as the role of local communities in forest management.

The acceptance of the Policy is considered as a major breakthrough in strengthening the institutional base and enhancing the co-operation and understanding between Federal and State Governments in the

field of forestry sector development and management. The selected points of the revised National Forestry Policy relevant to biodiversity are as follows:

(i) To dedicate as Permanent Forest Estate sufficient land areas strategically located throughout the country in accordance with the concept of rational land use. The Permanent Forest Estate will be managed and classified under four major functions:

(a) Protection Forest for ensuring favourable climatic and physical conditions of the country, the safeguarding of water resources, soil fertility, environmental quality, conservation of biological diversity and the minimisation of damage by floods and erosion to rivers and agricultural lands;

(b) Production Forest for the supply in perpetuity at reasonable rates of all forms of forest produce which can be economically produced within the country and are required for agricultural, domestic and industrial purposes, as well as for export;

(c) Amenity Forest for the conservation of adequate forest areas for recreation, ecotourism and in promoting public awareness in forestry; and

(d) Research and education forest for the conduct of research, education and conservation of biological diversity.

(viii) To provide for the conservation of biological diversity and areas with unique species of flora and fauna, including specific areas for the purpose of forestry education and other scientific studies;

(ix) To develop a comprehensive programme in community forestry to cater for the needs of the rural and urban communities and to promote active local community involvement in forestry management projects, including agro-forestry projects; and

(x) To undertake and support intensive research programmes in forestry and forest products aimed at enhancing maximum benefits from the forest.

### **National Wetlands Policy (2004)**

The National Wetlands Policy was passed by Cabinet in 2004. The aim of this policy is to ensure conservation and wise-use of the wetlands to benefit from its functions and to fulfil its obligation under the Ramsar Convention. The policy's objectives are:

1. Protect and conserve each type of wetlands.
2. Manage wetlands in integration with water catchment areas and river basins,
3. Optimise socio-economic benefits of wetlands through sustainable harvesting of wetlands products.
4. Integrate wetlands conservation interest into overall natural resource planning, management and decisions.

5. Increase scientific and technical knowledge on wetlands.
6. Increase public appreciation on the functions and benefits of wetlands.
7. Restore degraded wetlands.

In order to achieve these objectives four strategies are emphasised as outlined below:-

- Ensure adequate legislation for conservation and wise use.
- Provide coordination for the efforts of all stakeholders.
- Encourage research on local wetlands.
- Enhance appreciation of the functions and benefits of wetlands respective to stakeholders.

### **National Agriculture Policy (2006)**

The Third National Agricultural Policy sets the strategic directions for agricultural development to the year 2010. These focus on new approaches to increase productivity and competitiveness, deepen linkages with other sectors, venture into new frontier areas as well as conserve and utilise natural resources on a sustainable basis.

One of the policy's objectives is to conserve and utilise natural resources on a sustainable basis. One of the thrusts of this policy states that: Sustainable management and utilisation of resources will be the guiding principle in pursuing agricultural and forestry development. Rules, regulations and incentives will be strengthened to encourage environment-friendly agricultural and forestry practices and to minimise the negative impact of these activities on the environment.

### **National Physical Plan (2005)**

The NPP was passed in 2005. It contributes towards the conservation of the Country's biodiversity through its fourth objective to secure spatial and environmental quality and diversity for a high quality of life. This objective is supported by two environmentally sound principles:

- Protect national heritage areas and locations, under which greater resolve are dedicated from all quarters to conserve, among others, the natural resources and manage it in a sustainable manner in particular for areas of natural beauty and ecological richness such as pristine forests, hills and wetlands, and habitats for the Malaysian fauna and flora.
- Avoid disrupting ecological stability, by promoting incorporation of guidelines on development on environmentally sensitive into the NPP, at the same time discourages coastal land reclamation for certain purposes, encourages careful monitoring of developments within water catchment areas and other environmentally sensitive areas, including application of the concept of Integrated River Basin Management.

In terms of conserving biodiversity, the NPP articulated the following policies:-



- NPP 18: Environmentally Sensitive Areas (ESA) shall be integrated in the planning and management of land use and natural resources to ensure sustainable development.
- NPP 19: A Central Forest Spine shall be established to form the backbone of the Environmentally Sensitive Area network.
- NPP 20: Sensitive coastal ecosystems shall be protected and used in a sustainable manner.
- NPP 22: All surface and ground water resources are strategic assets to be safeguarded and used optimally.

### **National Urbanisation Policy (2006)**

The National Urbanisation Policy (NUP), passed in 2006, has addressed the following concerns that are related to conservation of biodiversity:

- NUP 5. Optimal and balanced land use planning shall be given emphasis in urban development ☐ Ensure each new development is compatible with the surrounding land use
- NUP 8. Environmentally sensitive area and prime agricultural area shall be conserved ☐ Protect and maintain ESA and prime agricultural area ☐ Establish green areas a buffer zones to limit urban development
- NUP 19. A planned, effective and sustainable solid waste and toxic management system shall be implemented.
- NUP 26. A sustainable and environmentally friendly development shall form the basis of environmental conservation and improve the urban quality of life.

### **Farm Animal Genetic Resources Management Plan (1998)**

The FAnGR Management Plan for Malaysia was developed in 1998. It includes a policy statement, which states that the National Policy on FAnGR is to conserve and utilise these resources in a sustainable manner for food security and nutritional wellbeing of the nation. This document also provides objectives, rationale and 17 strategies for effective management of farm animal genetic resources. It is used as a supporting document for the development and management of animal genetic resources at the Department of Veterinary Services in farms in Malaysia.

### **National Biotechnology Policy (2006)**

The formulation of the National Biotechnology Policy provides a framework for the Government, in partnership with key stakeholders, to harness the benefits of biotechnology development that is in accordance with established social and ethical norms. One of its main objectives is to create greater values from agriculture and natural resources utilising unique biodiversity and natural environment.

### **Action Plan for the Conservation and Sustainable Use of Fishery Resource Biological Diversity of Malaysia (2006)**

This document was prepared by the Department of Fisheries Technical Committee on Biodiversity. The Action Plan for the Conservation and Sustainable Use of Fishery Resource Biological Diversity of Malaysia consists of 62 actions that are grouped into nine strategies as follows:

1. Effective Fishery Resource Conservation and Management
2. Reduce Loss of Biological Diversity
3. Strengthen Research on Fishery Resource Biological Diversity
4. Improve Capacity Building
5. Enhance Information Dissemination and Networking
6. Control and Management of Fish Trade
7. Control and Management of Invasive Alien Species
8. Regulation in Biosafety Management
9. Control and Management of Biopiracy

### **National Action Plan for the Management of Coral Reefs in Malaysia (2008)**

The National Action Plan for the Management of Coral Reefs in Malaysia was formulated by the Department of Marine Park Malaysia to guide efforts in the management of marine parks and at the same time conserve and protect marine biodiversity. The action plan was formulated through consultation and participation of all stakeholders. It provides a regional overview, consented future directions and guidelines to those utilizing marine parks, stakeholders, agencies and organisations for their planning and decision making. The plan includes strategies on:

1. Conservation
2. Resource management
3. Education, communication, consultation and commitment
4. Research and monitoring
5. Integrated planning
6. Capacity building
7. Recognition of local communities and stakeholder interests
8. Management processes and

## 9. Legislation

### 3. Legal and Regulatory Framework

Various legislations, mechanism and practices have been implemented in specific sectors prior to 1992 towards conservation of biological diversity. In other words, each sector has its own sets of laws and regulations, and guidelines to regulate biodiversity related issues. Indirectly, this also provides a platform for the mainstreaming process.

Some of these legislations were established before the country's ratification of the CBD in 1994. There will be on-going efforts to ensure that specific consideration on the issues of conservation and management of biological diversity as a whole will be improved. For instance, the government is in the process of amending its Protection of Wild Life Act 1972 to place more emphasis on biodiversity conservation. In addition, a new legislation to regulate the access of biological resources and the sharing of benefits resulting from the utilisation of those resources is being prepared. The following is a non-exhaustive list of main legislations that contribute towards implementation of CBD in the country:

- Waters Act 1920
- Animal Act 1953 (Amended 2006)
- Aboriginal People Act 1954
- Land Conservation Act 1960
- National Land Code 1965
- Protection of Wild Life Act 1972
- Environmental Quality Act 1974
- Pesticides Act 1974
- Local Government Act 1976
- Plant Quarantine Act 1976
- Town and Country Planning Act 1976
- National Parks Act 1980
- National Forestry Act 1984
- Fisheries Act 1985
- New Plant Variety Protection Act 2004
- Biosafety Act 2007

- International Trade in Endangered Species Act 2008

#### Sabah

- Land Ordinance Cap 68
- Land Acquisition Ordinance
- Mineral Enactment
- Interpretation of the Native Ordinance 1952
- Fauna Conservation Ordinance 1963
- Forest Enactment 1968
- Forest Rules 1969
- Sabah Forestry Development Authority Enactment 1981
- Parks Enactment 1984
- Native Court Enactment 1992
- Native Court (Native Customary Laws) Rules 1995
- Wildlife Conservation Enactment 1997
- Cultural Heritage (Conservation) Enactment 1997
- Sabah Water Resources Enactment 1998
- Sabah Biodiversity Enactment 2000
- Environment Protection Enactment 2002
- Environment Protection (Prescribed Activities) Order 2005
- Environment Protection (Prescribed Activities)(Environmental Impact Assessment) Order 2005

#### Sarawak

- State Local Authorities Ordinance
- Forest Ordinance 1954
- Forest Rules 1962
- Native Courts (Amendment) Ordinance 1992

- Natural Resources and Environment (Amendment) Ordinance 1993
- Public Parks and Green Ordinance 1993
- Sarawak River Ordinance 1993
- Water Ordinance 1994
- Sarawak Forestry Corporation Ordinance 1995
- State Land Code Ordinance 1997
- The Forests (Planted Forests) Rules 1997
- Wild Life Protection Ordinance 1998
- National Parks and Nature Reserves Ordinance 1998
- Protection of Public Health Ordinance 1999
- State Veterinary Public Health Ordinance 1999
- Sarawak Biodiversity Centre (Amendment) Ordinance 2003
- Sarawak Biodiversity Regulations 2004

#### 4. Implementing Agencies

The implementation of CBD is carried out by various agencies. The programmes of work for thematic areas and cross-cutting issues under CBD are coordinated by ministries which are supported by several other implementing agencies. For instance, the MOA is the lead ministry for invasive alien species. Its Department of Agriculture (DOA) coordinates with other agencies that deal directly or indirectly with invasive alien species such as DOFM, MARDI, FRIM and DWNP.

The table below presents ministries and relevant implementing agencies involved in terms of programmes of work by thematic areas and cross cutting issues (Table 2).

Such involvement ensures effective coordination among them which is necessary for the successful implementation of CBD. It also demonstrates that concerns on biodiversity are integrated in the roles and functions of these agencies.

Table 2. CBD: Main Implementing Agencies

Ministries/State Agencies	Agencies
Ministry of Natural Resources and Environment (NRE)	Forestry Department of Peninsular Malaysia (FDPM) Department of Wildlife and National Parks (DWNP) Department of Marine Park Malaysia (DMPM) Department of Irrigation and Drainage (DID) Department of Environment (DOE)

	Forest Research Institute Malaysia (FRIM) National Hydraulic Research Institute of Malaysia
Ministry of Agriculture and Agrobased Industries (MOA)	Department of Agriculture (DOA) Department of Fisheries, Malaysia (DOFM) Department of Veterinary Service (DVS) Department of Agriculture - Sabah Department of Agriculture - Sarawak Malaysian Agricultural Research and Development Institute (MARDI)
Ministry of Housing and Local Government	Town and Country Planning Department
Ministry of Plantation Industries and Commodities	Malaysian Palm Oil Board Malaysian Cocoa Board Malaysian Rubber Board
State Agencies	State Forestry Departments Department of Agriculture Protected Area Management Authorities: - Johor National Parks Corporation - Perak State Park Corporation - Selangor State Park Corporation - Sabah Parks - Sabah Wildlife Department - Sarawak Forestry Corporation Sabah Biodiversity Centre Sarawak Biodiversity Centre

In addition to the implementing agencies above, many centres of excellence have been established to support the implementation of the NPBD, including the Centre of Excellence for Biodiversity Law (CEBLAW) for issues related to ABS and biosafety, the Malaysian Mountain Ecosystem Research Initiatives (MMERI) based at the Institute for Environment and Development (LESTARI), and Marine Ecosystem Research Centre (EKOMAR) at UKM, Malaysia Institute of Ocean and Earth Science (IOES) at Universiti Malaya, and the Borneo Marine Research Centre at Universiti Malaysia Sabah. Private sector involvement, environmental-based NGOs and universities also play important roles in supporting the various activities related to CBD.

## 5. Institutional Framework for Implementation

The existing institutional framework for implementing conservation of biological diversity reflects the cross-sectoral integration of the many agencies involved in implementation. Through this, the process of mainstreaming is also achieved.

### National Focal Point

The Conservation and Environmental Management Division (CEMD) of the NRE is the focal point for the implementation of CBD in Malaysia. The CEMD works closely with other institutions and agencies in various areas such as in scientific assessments, indicators, technological transfer and cooperation, access and benefits-sharing, traditional knowledge, biosafety, liability and redress, financial resources and mechanisms for CBD, clearing house mechanism (in collaboration with FRIM), national reports, education and public awareness.

### **National Biodiversity - Biotechnology Council (MBBN)**

The National Biodiversity-Biotechnology Council or Majlis Biodiversiti-Bioteknologi Negara (MBBN) was established in 2001. The MBBN is chaired by the Prime Minister and is attended by relevant ministers and chief ministers of all states and other decision makers. The function of MBBN is to deliberate on biodiversity and biotechnology issues at the national level.

The members are:

- Prime Minister as the Chairman
- Chief Minister of all States
- Minister of Natural Resources and the Environment (NRE)
- Minister of Science, Technology and Innovation
- Minister of International Trade and Industry
- Ministry of Agriculture and Agro-Based Industry
- Minister of Plantation Industries and Commodities
- Minister of Education
- Minister of Higher Education
- Minister of Domestic Trade and Consumer Affairs
- Minister of Health
- Minister of Energy, Water and Communications
- Chief Secretary of the Government of Malaysia
- Attorney General
- Science Advisor to Prime Minister
- Secretary General of NRE as the secretary

The terms of reference of the MBBN are as follows:

- Determine and endorse the direction, policy and strategy for conservation of biodiversity and biotechnology.
- Coordinate conservation of biodiversity and development of biotechnology.

- Identify and monitor the implementation of the relevant obligations of multilateral environmental agreements related to biodiversity and biotechnology that Malaysia have signed.

The MBBN is supported by the National Technical Committee on Biodiversity and Biotechnology, which in turn is supported by two task forces, the Biodiversity Task Force and the Biotechnology Task Force. Within the Biodiversity Task Force, five working groups were initially formed to involve institutes of higher learning in areas of forest biodiversity, marine biodiversity, mountain ecosystems, wetlands and agro/rural biodiversity.

### **Other National Councils**

In addition to the MBBN, issues related to biodiversity would also be addressed in other national councils such as the National Land Council, National Forestry Council, National Mineral Council, National Water Council, and National Physical Planning Council. This is because agencies from federal ministries and state governments that are involved in implementing activities on conservation and management of biodiversity would be represented at these national councils. Incidentally, the NRE is the secretariat of all these councils except for the National Physical Planning Council in which the secretariat is based at the Ministry of Housing and Local Government.

### **State Biodiversity Councils**

State governments have also established similar or equivalent councils to carry out conservation of biodiversity at state level, and also to ensure that development within the state and local levels are aligned with the NPBD and decisions made at the MBBN.

For instance, the states of Sabah and Sarawak have created councils towards the conservation and sustainable use of biodiversity.

#### **Sabah**

The Sabah Biodiversity Council is the highest policy making authority of biodiversity and ecosystems conservation in the state. It is responsible for the implementation of Sabah Biodiversity Enactment 2000. However, the responsibility is taken up by the Sabah Biodiversity Centre (SABC), which is established under the enactment. The State Water Resource Council as well as the Environment Protection Council also act as platforms to address issues related to biodiversity.

#### **Sarawak**

The Sarawak Biodiversity Centre Ordinance was enacted by the State Government of Sarawak in 1997 to initiate programmes for the conservation, utilisation, protection and sustainable development of biodiversity in Sarawak. Subsequently, the Sarawak Biodiversity Centre (SBC) was established in the following year. The Sarawak Biodiversity (Access, Collection and Research) Regulations was also enacted in 1998.



In December 2003, taking into consideration Sarawak's potential for intensive biotechnology based research and product development, the State Legislative Assembly passed the Sarawak Biodiversity Centre (Amendment) Ordinance 2003, as well as reviewed and passed the revision of the Sarawak Biodiversity Regulations in 2004. The amendment relieved SBC of its role in conducting general biodiversity inventory and regulating general biodiversity research. Instead, it is now entrusted to initiate intensive biotechnology-based research and development on the State's biological resources – particularly those that have been utilised by indigenous communities and to facilitate the documentation of the fast disappearing traditional knowledge of how indigenous communities utilise the State's biological resources.

Box 1. Example of Private Sector Initiative

Voluntary Carbon Offset Scheme for Conservation of Biological Diversity of Pahang Peat Swamp Forests

Malaysian Airlines and its subsidiaries have introduced a mechanism to off-set green house gas emissions in June 2008. Passengers of Malaysian Airlines, Firefly and MASwings are able to make voluntary contributions to reduce their carbon footprints of their flights by contributing towards a trust fund that is managed by the Forest Research Institute (FRIM) on behalf of the Ministry of Natural Resources and Environment.

The fund has been earmarked for programmes to protect rainforests. Projects that are planned include conservation of 10,000 ha tropical peat swamp forests in Pekan, Pahang.

Contributions made by passengers will be used for the management, protection and rehabilitation of this peat swamp forest. Similar efforts in Sabah and Sarawak are being considered.

The voluntary payment for a one-way journey range from about RM35 for flights to European destinations, RM15 for Asian destinations and RM10 for domestic flights.

Passengers also have an option to contribute a token amount of RM5. Corporate clients will also get a "carbon statement" at the end of each month. This programme also helps to create awareness among passengers on the need to save the planet.