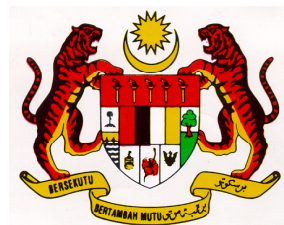


**Malaysian-Danish Country Programme
for
Cooperation in Environment and Sustainable Development
(2002-2006)**



Danced
Danish Cooperation for Environment and Development



Prime Minister's Department
Economic Planning Unit

**MALAYSIAN-DANISH COUNTRY
PROGRAMME FOR ENVIRONMENTAL
ASSISTANCE, 2002-2006**

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Glossary

ASEAN	Association of South East Asian Nations
BCSDM	Business Council for Sustainable Development Malaysia
CBD	Convention on Biological Diversity
CBO	Community Based Organisation
CBD	Convention of Biological Diversity
CCD	Convention to Combat Desertification
CHM	Clearing house mechanism of CBD
CITES	Convention on International Trade in Endangered Species
Danced	Danish Cooperation for Environment and Development
Danida	Danish International Development Agency
DID	Department of Irrigation and Drainage
DKK	Danish Krone
DLG	Department of Local Government
DOA	Department of Agriculture
DOE	Department of Environment
Duced	Danish University Consortium on Environment and Development
DWNP	Department of Wildlife and National Parks
EIA	Environmental Impact Assessment
EPU	Economic Planning Unit
EAS	External Assistance Section
EQA	Environmental Quality Act
ESCOs	Energy Service Companies
FMM	Federation of Malaysian Manufacturers
FRIM	Forest Research Institute of Malaysia
GEF	Global Environment Facility
GHG	Green house Gas
GNI	Gross National Income
IAPG	Inter-Agency Planning Group
ISO	International Standards Organisation
ITTO	International Timber Trade Organisation
JBEG	Department of Electricity and Gas Supply
MACRES	Malaysian Centre for Remote Sensing
MECM	Ministry of Energy, Communications and Multimedia
MHLG	Ministry of Housing and Local Government
MICCI	Malaysian International Chamber of Commerce and Industry
MITI	Ministry of international trade and Industry
MOA	Ministry of Agriculture
MOSTE	Ministry of Science, Technology and Environment
MOU	Memorandum of Understanding
MPI	Ministry of Primary Industries
MPOB	Malaysian Palm Oil Board
Muced	Malaysian Universities Consortium on Environment and Development
NCS	National Conservation Strategy
NGO	Non-governmental organisation
NPBD	National Policy on Biological Diversity
NRA	Natural Resource Accounting
NRM	Natural Resources Management

PSC	Programme Steering Committee
PTM	Malaysian Energy Centre
RTD	Road Transport Department
SDI	Sustainable Development Indicators
SIRIM	Standards and Industrial Research Institute of Malaysia
SME	Small and Medium Enterprise
SMIDEC	Small and Medium Industry Development Corporation
SWM	Solid Waste Management
RM	Malaysian Ringgit
TNB	Tenaga Nasional Berhad
TCPD	Town and Country Planning Department
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNFCCC	UN Framework Convention on Climate Change
UPEN	State Economic Planning Unit
WSD	Water Supply Department

1 Introduction

This document is a comprehensive Malaysian-Danish Country Programme for 2002-2006, which reflects a joint perspective on the priority areas for cooperation on environment and sustainable development. Building on the experiences of the previous two cooperation programmes and learning from the various evaluations, a process was designed where the Malaysian priorities for environmental cooperation were documented in a series of background and sectors reports and then matched with Danish priorities. Subsequent discussions between both parties led to the formulation of this Country Programme.

The document sets out the overall goal and objectives of the Malaysian-Danish Country Programme, 2002-2006. It identifies the main focus areas, the objectives and the approaches that will be used. By so doing it will provide a common basis for expectations and reduce misunderstandings by the different stakeholders of what the cooperation is meant to achieve. In turn an improved understanding of the principles and agreed areas of cooperation should reduce time wasted in preparing unsuitable proposals. This document is intended to assist EPU and Danish to monitor and guide the future cooperation as well as provide a detailed guide to project designers and implementers

The document also provides a longer-term perspective that allows participating institutions to take account of Danish cooperation in their environmental development plans and budgets. The overall Danish contribution for the cooperation programme is expected to be DKK 80 million per year for the five-year period.

1.1 Global Cooperation in Environment and Sustainable Development

Principle Seven of the 1992 Rio Declaration on Environment and Development declares that: *“States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem.”* This spirit of international cooperation and partnership is further defined by the Rio Declaration in its principle of “shared but differentiated responsibility”, which allocates a differential share of responsibility for the world's environmental problems between the developed and the developing countries. Through these statements the developed countries acknowledge the heavier responsibility they bear in the pursuit of global sustainable development, in view of the pressures that their societies place on the global environment and their greater access to the technologies and financial resources for addressing environmental degradation. Agenda 21 states: *“Given the major costs involved, it is essential that developed countries provide new and additional financial resources”*.

Some of the action programmes arising from the Rio conference are being implemented through a number of international conventions such as the Convention on Biological Diversity (CBD), UN Framework Convention on Climate Change (UNFCCC), Convention to Combat Desertification (CCD), and the international policy process on sustainable forest management (now reflected in the

Intergovernmental Forum on Forests, IFF). These mechanisms reflect the collective concerns and priorities facing many countries throughout the world.

In response to these challenges, Denmark followed up on the UN objective agreed at the Earth summit in Rio de Janeiro by establishing in 1993 a financial facility for Danish environmental assistance, now known as the Environment, Peace and Stability Fund. It was decided that the total budget should gradually increase until - by 2005 - it reaches the target of 0.5% of the Danish GNI. These resources are to be distributed equally between environmental efforts and peace and stability initiatives. Denmark provides environmental assistance to a broad range of countries and project types throughout the world (Eastern and Central Europe, the Arctic and developing countries in South East Asia and Southern Africa), each with its own needs, considerations and priorities.

On the basis of this decision, Denmark developed a strategy for regional cooperation in South East Asia and also Southern Africa. Danish cooperation on the environment in Malaysia and Thailand is administered by the Danish Cooperation for Environment and Development (Danced) whilst the Danish International Development Assistance (Danida) administers the cooperation in Vietnam, Cambodia and Laos. The Malaysian–Danish cooperation is coordinated by the Government of Malaysia, through the Economic Planning Unit (EPU) in the Prime Minister's Department.

The cooperation on environment and sustainable development between Denmark and Malaysia started in 1994 with the first Country Programme that lasted until 1998. A second Country Programme for cooperation covers the years 1999-2001. Both Malaysia and Denmark have expressed an interest in continuing and consolidating the programme of cooperation within environment. This document outlines the third Country Programme, which covers the period 2002-2006. The third Country Programme coincides closely with the 8th Malaysia Plan (2001-2005) and the process to prepare for and follow-up from the World Summit on Sustainable Development in 2002.

1.2 Malaysian Objectives for the Malaysian-Danish Cooperation

Vision 2020 describes the long-term development aspirations of Malaysia and states that, in the pursuit of economic development, Malaysia will also

“ensure that her invaluable natural resources are not wasted. The land must remain productive and fertile, the atmosphere clear and clean, the water unpolluted, the forest resources capable of regeneration, able to yield the needs of the national development. The beauty of the land must not be desecrated for its own sake or for economic advancement.”

One of the seven critical thrusts in the National Vision Policy introduced in the Third Outline Perspective Plan (2001-2010) is: *“Pursuing environmentally sustainable development to reinforce long term growth”*. Other critical thrusts include raising quality of life, eradicating poverty and strengthening human resources.

More specific environmental priorities are contained in the five-year Malaysian Plans. The 8th Malaysia Plan (2001-2005) retains the emphasis on a balanced development

with environmental considerations. One of the nine key strategies to implement the plan is ‘*adopting an integrated and holistic approach in addressing environmental and resource issues to attain sustainable development*’. In order to advance this strategy - *the government will adopt early preventive measures and apply the precautionary principle to address environment and natural resource issues. It will also put in place the enabling conditions for effective policy change.* Two of the new proposed policies are the proposed national water policy and a comprehensive waste management policy. Land use planning will be strengthened and regulations introduced to control access to biological resources and address biosafety issues. The government will also remain active in the negotiation and implementation of environmental conventions and agreements.

Malaysian objectives related to improved environmental management are included in the Draft National Environment Policy (1999):

- Ensure a safe and healthy environment for the benefit of present and future generations.
- Conserve the country’s unique natural resources and diverse cultural heritage.
- Promote lifestyles and patterns of consumption and production consistent with the principles of sustainable development.

Several specific objectives related to Environment and Natural Resource Management have been included in the 8th Malaysia Plan including for:

Urban and industrial environment

- Development and implementation of a waste management policy to address waste reduction, re-use and recycling
- Encouraging the use of cleaner production technologies especially among SMIs

Energy:

- Developing renewable energy as a fifth fuel, particularly from biomass and biogas.
- Promoting energy efficiency in the industrial, and commercial sectors

Natural resource management

- Develop and implement a national water policy to provide the framework for water conservation and management
- Give more emphasis to demand side management of water and sustainable use of groundwater resources
- Implement the national Biodiversity Action Plan in the various states
- Encourage sustainable forest management and multiple-use of forests

Cross-sectorial

- Intensify ongoing efforts and introduce new approaches to strengthen land use planning
- Enhance the level of environmental awareness and civic consciousness among the people
- Fulfil obligations under environmental conventions

- Improve management and interpretation of environmental information
- Promoting the use of appropriate market-based instruments and self-regulatory measures among industries.

1.3 Danish Objectives for the Malaysian-Danish Cooperation

The overall objective of Danish environmental assistance as defined in “Strategy for Danish Environmental Assistance, 1996” is to promote increased efforts to combat global environmental problems. Initiatives are focused in two regions: South East Asia and Southern Africa, in order to:

- Prevent and limit air, water and soil pollution.
- Promote sustainable use of energy.
- Promote the environmentally sustainable utilisation of natural resources and the conservation of nature.

Emphasis is put on projects that:

- Develop capacity in environmental administration.
- Improve awareness of environmental problems and solutions.
- Establish demonstration or pilot projects.
- Facilitate environmental investments and private sector involvement.

A strategy for Danish Regional Environmental assistance in South East Asia was prepared in 1997 and provides a framework for development of regional cooperation as well as country level activities.

The Danish parliament has in recent debates and resolutions in 1996, 1999 and 2000 given mandates to the international cooperation within environment and sustainable development in the following areas:

- Enhance the ability of the cooperation countries to fulfil their obligations to international environmental conventions and agreements.
- Strengthen the recipient country’s environmental efforts through participation of civil society.
- Make use of the Danish resource base (i.e. NGOs, private sector and universities) when preparing and implementing environmental assistance programmes.
- Increase information activities and the public debate in general.
- Prioritise the use of sustainable energy.
- Regional projects should be given higher priority..

1.4 Joint Objectives for the Cooperation

The joint overall objective for cooperation between Malaysia and Denmark is:

“Assist Malaysia in achieving sustainable development, through the implementation of environment and natural resource management projects, in line with international environment conventions and agreements”.

More detailed objectives within the focus areas are given in chapter 4.

The third Country Programme is intended to consolidate what has been achieved in the two earlier cooperation programmes. There is a consensus that the third Country Programme should focus on core support to fewer areas of cooperation but still be flexible to take advantage of significant new opportunities that may arise for improving the environment. Supporting a fewer number of areas will improve the quality of support and enable a close dialogue to be built up with key partners.

Therefore, a core programme of support that is embedded in Malaysian priorities, plans and budgets should be complimented with flexible support that will be able to test new approaches and directions that probably would not otherwise have been initiated.

Generally there is a desire to see the cooperation move away from a donor–recipient relationship and towards a more cooperative partnership where commitments and obligations (including financial obligations) are equal and mutual. Thus within the core programme of support one of the important factors in future cooperation will be the adequacy of the financial and human resources of the lead Malaysian institutions involved in the main focus areas of cooperation.

There is an expectation that cooperation with Danced will strengthen the arguments and leverage of those who support greater emphasis on environment and sustainable development both within and outside the public sector – not only nationally but also regionally and globally. This rationalisation of priorities within the political and economic agenda is shared goal of Danced, EPU and the wider international community.

It is intended that the third Country Programme will support a process of consolidation of current partnerships, together with the evolution of the nature of Danced support to one which will have more focus on cooperation on regional environmental issues, together with longer term self-sustaining partnerships between government, non-government, private sector and university partners.

2 Socio-Economic and National Context

Country

Malaysia is situated in the equatorial zone of South East Asia. It has a total land area of 330,000 square km and comprises two major portions – Peninsular Malaysia (about 40% of the land area) which forms the southernmost tip of the Asian mainland and includes eleven separate states and the federal territories of Kuala Lumpur and Putrajaya. The two other states Sabah and Sarawak are placed on the northern portion of the island of Borneo, separated from the Peninsula by the South China Sea.

People

Malaysia's total population of 23 million people (2000) make up a multi-ethnic and multi-cultural society. The Malays and other Bumiputera comprise 66% of the total population, forming the largest group. People of Chinese ethnic origin are the second largest group, followed by those of Indian ethnic origin and finally, other ethnic groups. Non-Malay indigenous groups make up more than half of Sarawak's population and about two-thirds of Sabah's. About 80% of the population resides in the Peninsula. Industrialisation and expansion of the economy have led to rapid urbanisation in many parts of the country. In 1980, Malaysia's urban population was 34% of the total population; by 2000 it reached 62%.

Government and Politics

Malaysia is a constitutional monarchy, nominally headed by the King. Executive power is vested in the Cabinet led by the Prime Minister. There is both a Senate and the House of Representatives, comprising the parliament. The 193 Representatives of the House are elected from single-member districts by universal adult suffrage. Legislative power is divided between federal and state legislature. Sabah and Sarawak retain certain constitutional prerogatives (e.g. the right to maintain their own immigration controls). Malaysia's predominant political party, the United Malays National Organization, has held power in coalition with other parties since Malaysia's independence in 1957.

The Economy

Malaysia has, for many years, enjoyed rapid economic growth, with an annual average growth rate of about 8% from 1990 until 1997. Low inflation, almost full employment and a high national savings rate accompanied the high growth rate. The per capita gross domestic product is estimated at 3200 USD (2000).

The regional economic crisis of 1997 led to a negative growth rate in 1998 but there are encouraging signs of recovery with a GDP growth for 1999 and 2000 of 5.8% and 8.5% respectively, and a growth rate of more than 5% predicted for 2001. However the effect of the crisis was to push back Malaysia a number of years in terms of its development targets. Measures are being taken to strengthen the country's macroeconomic management and revitalise the manufacturing, services and corporate sectors, as well as to consolidate the financial sector. There is also emphasis on the need to harness the benefit of information technology, whilst promoting the growth of the agricultural and rural sectors. In the social dimension, poverty reduction and distributive policies will continue to be a key strategy to improve the overall quality of life for Malaysians.

Since 1999, a Malaysian quality of life index has been prepared by the government. This index takes account of 10 main factors including: income and distribution; education; health; public safety; social participation and environment. All areas show positive developments since 1980 except public safety (due to road accidents) and environment.

Income and distribution statistics show that the real income (per capita GDP) has doubled since 1980 whilst the inequality in income has reduced marginally (Gini index fell from 0.52 in 1980 to 0.47 in 1997). The incidence of poverty has reduced from 32% in 1980 to around 5% in 2000. Hardcore poverty (defined as income levels below half of the subsistence level) has reduced from over 7% in 1980 to less than 1.5% in 1999. These results reflect the fact that eliminating poverty has been a major goal of the Malaysian five-year Plans. Poverty alleviation strategies have included efforts at not only raising productivity and real incomes, but also improving access of the lower income groups to better social services - education, health care, housing and public amenities, and to better income opportunities.

The percentage of clean rivers has fallen from 56% in 1980 to 32% in 1999. The index on air pollution records a slight improvement from 1980 to 1998. Natural forest cover has also declined to just above 50% nationally and under 40% in the Peninsula. The quality of many of the remaining forests has also deteriorated through heavy levels of logging. An emerging challenge is the need to address environmental and resource issues without compromising economic productivity and growth. In the context of the drive towards revitalising the economy, the Government of Malaysia also made the commitment to ensure that the conditions necessary for achieving sustainable development will not be undermined.

National Planning System

Vision 2020 is the overarching national development policy objective. The national policy framework effects this objective. This policy framework can be sub-divided into three broad categories:

- The national development plans, such as the ten-year Outline Perspective Plans and the five-year Malaysia Plans, which set out the broad policy objectives for the overall economic development of the country.
- The macro- or cross-sectoral policies, which address the integrated and cross sectorial issues, such as the National Environmental Policy (draft) and the National Policy on Biological Diversity.
- The sectoral policies, such as the National Forestry Policy, the National Mineral Policy or the National Agriculture Policy.

The Malaysia Plans are a system of national development plans, setting out the development priorities and goals of the Government. The Malaysia Plans are now increasingly prepared through consultative processes, involving government agencies, non-governmental organisations and the private sector. Malaysia is currently at the start of the Third Outline Perspective Plan (2001-2010) and the 8th Malaysia Plan (2001-2005).

3 Environmental Management and Sustainable Development in Malaysia

Development policies in Malaysia had initially focused on the basic parameters of natural resource exploitation, infrastructure development and poverty alleviation to cater for social and economic growth objectives. During the 1970s a broader and more cross-sectoral approach to environment and sustainable development was adopted in Malaysia. The concept of protecting the environment, as part of the development planning process, was first given prominence by the Government in the 3rd Malaysia Plan (1976-1980) where it was emphasised that the objectives of development and environmental conservation should be kept in balance, so that the benefits of development were not negated by the costs of environmental damage. However, it was not until the 6th Malaysia Plan (1991-1995) that serious efforts to balance environmental with economic goals in the national development planning process were undertaken. The 6th Malaysia Plan adopted specific environmental and sustainable development goals. The approach was taken further by the 7th Malaysia Plan (1996-2000), which promulgated the policy objective of integrating environmental considerations within the economic and development planning process.

Significantly, the 7th Plan linked these considerations to the continued sustainability of the economic growth of the country. Economic growth remains paramount as a development objective, but it is also recognised as an important means towards sustainable development.

The 8th Plan stresses the need to address environmental and resource management issues in an integrated and holistic manner. Steps will be taken to identify prudent, cost effective and appropriate management approaches that yield multiple benefits in order to ensure that development is sustainable and resilient.

Over the past 20 years, Malaysia has undergone the economic transition towards an urban and industrial economic base, away from agriculture and primary production. As a consequence, the socio-economic change has brought about many new pressures to bear on the environment, and similarly, on the institutions and mechanisms established to manage the environment. The environmental issues are, therefore, a mixture of problems related to natural resource depletion and exploitation, and the lack of environmental management in areas such as industrial pollution.

The Government of Malaysia acknowledges that major challenges have emerged as a consequence of rapid expansion in the economy; in particular, managing and sustaining the rapid economic growth, ensuring the equitable distribution of the benefits of such growth and the balancing of economic growth with the protection of the environment and natural resources. This balancing requires adjustments to the existing policies and programmes and the adoption of new approaches.

Poverty-induced environmental problems are on the decrease in Malaysia in line with the increasing success of poverty alleviation programmes. Compared to other countries in the region, problems such as deforestation and soil erosion are not problems that are related to core poverty but rather a result of lack of enforcement and technical knowledge. Environmental problems do however tend to further reduce the

quality of life of those on low incomes or marginalized by the mainstream economy. Examples include low income families that live in the vicinity of polluting industries; high density housing that is subject to traffic and air pollution and squatter settlements that are flooded and without infrastructure or services. In some areas ethnic groups that are dependent on natural resources such as fishing or forestry have had their livelihood affected by logging, river pollution and loss of biodiversity.

The 8th Malaysia Plan recognises that sustainable development requires an integrated and coordinated approach by the public sector, private sector interests and the general population. Proper incentive measures must be in place if the private sector and communities are to be encouraged to support sustainable development objectives. Smart partnerships based on consultation, dialogue, mutual trust and transparency between government, the private sector and communities are encouraged.

Malaysia is a party to a range of international environmental conventions that provide an important orientation to environmental planning and implementation in Malaysia. Important conventions to which Malaysia is a party are: Convention on Biological Diversity (CBD); Ramsar Convention on Wetlands; Montreal Protocol on Reduction of Ozone Depleting Substances; and the UN Framework Convention on Climate Change (UNFCCC). Other conventions to which Malaysia is a party include the Convention on International Trade in Endangered Species (CITES), Basel Convention on transboundary movement of hazardous wastes. In addition a number of new conventions are still under negotiation or are not yet in force such as the Kyoto Protocol, the Cartagena Protocol on Biosafety and the Convention on Persistent Organic Pollutants.

3.1 Environmental Challenges and Opportunities – Regional and National

Regional Context

Serious environmental challenges are looming ahead for the South East Asian region. Increasing population, especially in the urban growth centres, is putting stress on the environment. The continued rapid economic growth and industrialisation efforts have the potential to cause further environmental damage and will lead to increased pollution of air, water and land, deforestation, and less ecological diversity in time to come. In addition the demand for primary energy in Asia is expected to double every 12 years (the world average is 28 years). At least one in three Asians has no access to safe drinking water. Freshwater will be a limiting factor for food and industrial production in the future.

Six main environmental problem complexes have been identified in S.E. Asia – notably: competing demands for water resources; unsustainable use of agriculture and forestry resources; pollution and waste management problems associated with rapid urbanisation; pollution and health and safety problems linked with rapid industrialisation; unsustainable use of coastal and marine resources and, rapid increase in energy demand and supply, leading to pollution, degradation of natural resources and climate change.

The root causes of these problems can be attributed to a number of factors such as the inevitable consequence of rapid population and economic growth. Institutional and

policy failures are also a cause in some instances and are often a result of transitions in political and economic systems. Changes in social structures and value systems are also important factors.

National Context

Urban and industry

Increasing urban migration has resulted in more than half of Malaysia's population being located in urban areas. Malaysian urban centres suffer from air pollution due to industry and transportation. Traffic congestion, and problematic air and noise emissions are commonplace and in some areas lead to a severe reduction in the quality of life. Excessive pollution of urban river stretches coupled with indiscriminate garbage-dumping lead to rivers becoming channels for waste and encourage a general disregard for the environment. Urban rivers are increasingly silted due to upstream erosion and urban flooding is an increasing problem. Poor solid and hazardous waste management leads to pollution of air, land and water as well as imposing a serious health risk especially in the poorer communities. Inadequate sewage and industrial wastewater treatment is a persistent feature of many towns. Improperly managed land –clearing and construction activities involving commercial, residential and infrastructure development exacerbate the problems.

A key issue is the lack of effective environmental planning despite the introduction of EIA and similar procedures. Policies, strategies, legislation and enforcement are inadequate. The land management system encourages environmental degradation by making conversion from forest and agricultural to urban or industrial land one of the main sources of revenue for developers and local governments alike. There is still insufficient awareness of the long-term costs and problems associated with unsustainable development and environmental degradation.

Environmental management is relatively new as a political priority. Consequently, sufficient capacity and technical capability within enforcement and other environment-related agencies still need to be built up. Urban services require cost recovery if they are to be maintained and extended. The systems and culture of payment are not sufficiently rooted within the population and the institutions that serve them – although this is steadily improving as evidenced by higher water supply tariffs and cost recovery rates. The collection of revenue for wastewater and solid waste services is an ongoing challenge. The rapid pace of economic and industrial growth leads to an increase in waste generation outpacing the collective ability of the authorities to respond.

Natural Resources

Malaysia has a wide variety of natural ecosystems and habitats and these support a rich and diverse fauna and flora. Malaysia is one of the world's 12 mega-diversity countries. Major threats to Malaysia's terrestrial biodiversity include unsustainable forest management practices, land conversion (particularly for agriculture and plantation development) and hunting of wildlife or over collecting of non-timber forest products. Coastal and marine biodiversity faces threats relating to land reclamation, pollution from land based sources and marine shipping, poorly planned development and over exploitation of fishery and other resources. Freshwater biodiversity is threatened by domestic, industrial and agro-pollution siltation, removal

of riverine and floodplain forests, canalisation of river courses, dam construction, over-harvesting of fishery resources and over-extraction of freshwater.

Efforts need to be made to preserve biological diversity not only within but also outside the protected area system. As development and intensified land use have proceeded rapidly in Malaysia during recent years, biodiversity outside the protected areas has declined significantly over the last decades and the protected areas have simultaneously become increasingly isolated.

The tropical forests of Malaysia represent some of the most rich and diverse ecosystems in the world, having evolved over millions of years. Forests cover about 60 percent of the country's total land area. Apart from some areas where customary rights apply (mainly in Sarawak), Malaysian forests are all government-owned, and land administration falls within the jurisdiction of the States concerned. Forests are significant not only for their contribution of revenue from the exploitation of timber, but also because of their important non-timber forest products. Forests also provide valuable ecological services such as flood control, catchment protection and carbon storage.

Malaysia's freshwater resources include rivers, lakes, marshes and wetlands as well as the water itself. These freshwater ecosystems are of great importance for biodiversity conservation as well as support to rural livelihoods. There are more than 150 river systems in Malaysia, many of them being important for biodiversity, fisheries and other uses. However many of them are also polluted, negatively impacting their natural values.

The country has abundant rainfall of about three metres per year, however there are increasing problems with supplies due to concentrated demands in some river basins combined with periodic droughts. Severe water shortages have occurred in Selangor, Malacca, Penang and Sabah states. The national approach to water resources has been to focus on supply management – increasing the number of dams and pipelines to cater for growing demand from urban and industrial sectors. There has been little focus on or incentives for water efficiency or recycling and this has contributed to the shortages. The 8th Malaysia Plan has recognised the need for a strong focus on water demand management as well as securing alternate water sources such as rainwater harvesting and sustainable groundwater use.

Energy

Demand for energy is growing much faster than the GDP and increasing an exceptionally high energy use per unit of GDP. The traditional domestic sources of fuel such as oil and natural gas are rapidly being depleted. Oil resources may run out in less than 20 years while gas reserves may last for more than 60 years. Malaysia is expected to become a net importer of energy in the next decade. In this context there is a need for rapid development of renewable energy.

While in the past, the Government of Malaysia had maintained the supply demand balance with supply side instruments, greater attention has recently shifted to include demand side management issues.

There is a need for the establishment of a consistent analytical framework for overall planning, financial decisions and policy analysis within the energy sector with a clear and consistent link to natural resources and environmental management concerns. An improved balance between command and control approaches and economic approaches to regulation is required including the use of economic instruments such as incentive focused tariffs and subsidies, demonstration of best practices and participation of the consumers through consumer associations in information and awareness campaigns.

3.2 The Policy and Institutional Framework

Environmental Policies, Plans and Legislation

Prior to the 3rd Malaysia Plan (1976-1980) environmental provisions were ad-hoc and sectoral, relating mainly to water and wildlife. Such legislation included the Fisheries Act, the Continental Shelf Act, the Petroleum Mining Act, the Merchant Shipping Ordinance, the Land Conservation Act and the Local Government Act in the 1960s. Later sectoral legislation included those for Forestry and the Exclusive Economic Zone.

In 1974 the Environmental Quality Act was gazetted following the UN Conference on Human Environment held in Stockholm in 1972. Many of the subsequent policies were incorporated into regulations in the framework of the act such as the EIA Order of 1987. Further promotion of environment was more seriously instituted with each of the Development Plans and Outline Perspective Plans. The National Forestry Policy was adopted in 1992 and the national Biodiversity Policy in 1997. A Draft National Environment Policy is still under consideration.

Most of the States have separate enactments pertaining to land and water resources over which the States have direct jurisdiction. The most prominent among these are the Natural Resources and Environment Ordinance of Sarawak resulting in its Natural Resources and Environment (Prescribed Activities) Order, 1994, and the Conservation of Environment Enactment 1996 of Sabah.

The Government Framework

The Federal-State system in Malaysia and the corresponding legal and institutional frameworks present inherent constraints to holistic and integrated environmental planning. The legislative and executive authority over issues with environmental implications is allocated between the Federal and State Governments by the Federal Constitution. The Federal Government has jurisdiction over matters such as commerce, trade and industry, and by virtue of this jurisdiction, is regarded to be responsible for general environmental protection and pollution prevention. Jurisdiction over matters such as development control, local government, land, water, forests and mining is largely allocated to the State governments.

Natural resource (e.g. forestry, fisheries, wildlife protection, mining and water) and environmental management legislation has been enacted at both federal and state level. The constitutional division of powers underpins the processes by which natural resources in the country are managed. It is therefore, of crucial importance that the State Governments' involvement and participation is present in the implementation of policies relating to environmental and natural resource management. Whilst the

Federal Government may formulate policies, the mandate for the implementation of the policies lies, in many cases, within the jurisdiction of the State Governments.

The institutional framework in Malaysia is sectorally-structured; meaning that the administration of natural resources and environmental protection is dealt with, sector by sector, by many agencies in various Ministries. Within the Federal government alone, some 20 agencies can be said to have some environment-related function or responsibility. Responsibilities for water, land, agriculture, forestry and wildlife are spread out between the Federal Ministries and various State level agencies. The institutional framework for environmental planning and management is therefore complex, involving both Federal and State agencies.

At the Federal level, the EPU in the Prime Minister's Department plays the central planning and coordinating role. It is responsible for coordinating the formulation and development of the 5-year Malaysia Plans, and is therefore, in charge of the comprehensive consultation process required to identify the development priorities for the country. At the State level, the equivalent of the EPU is the **State Economic Planning Unit (UPEN)**, which coordinates and implements macro planning in each State.

In the broadest terms, the EPU can be regarded as the key macro policy and planning agency within the administrative structure. The policies and plans emanating from EPU are then translated into sectoral policies and implemented accordingly by the various Federal Ministries. Thus, the national development plans such as the Eight Malaysia Plan provide the general, multi-sectoral policy framework, from which the policy directions for the different sectors are obtained, then interpreted into specific sectoral policies and guidelines for implementation.

The Federal institutional structure is duplicated, to some extent, at the State level; particularly in the case of the planning and resource management agencies. Whilst national policies and plans may be developed by the Federal Government, the State level agencies and local governments are responsible for the implementation of many of them. Some Federal agencies have undergone decentralisation, and have offices in the respective States. The State level arms of Federal agencies include the Department of Environment and the Department of Wildlife and National Parks. Some of the key sectoral agencies at both State and Federal levels with responsibilities for aspects of environmental planning and management are listed below.

The **Ministry of Science, Technology and the Environment (MOSTE)** is a key agency in terms of environmental management and protection. MOSTE's mandate is to develop and expand science and technology activities for national development, whilst preserving the quality of life and the country's natural resources. The implementation of this mandate is tasked to several departments within MOSTE, such as the Department of Environment (DOE) and the Department of Wildlife and National Parks (DWNP). At the State level, the DOE and DWNP have their State offices to carry out the implementation and enforcement aspects. The DOE is the implementing agency for the Environmental Quality Act 1974, and the EIA process. DWNP enforces the Wildlife Protection Act 1972 and is responsible for the management of the protected areas (wildlife sanctuaries and reserves) established under the Act.

The **Ministry of Energy, Communications and Multimedia** (MECM) is responsible for coordinating the implementation of energy policies. The Department of Electricity and Gas Supply currently regulates the supply of electricity and licenses the installation of electrical equipment. There are a number of utilities companies that have monopolies in the transmission and distribution of electricity. In 1998 the MECM set up a Malaysian Energy Centre (PTM) to help in programme implementation. A number of important issues are dealt with by multi sector committees such as the privatisation committee and the electricity supply planning committee. Recently an Energy Commission has been set up to improve the regulation of the sector.

The **Ministry of Agriculture** (MOA) through its Department of Agriculture, Department of Fisheries and its Department of Irrigation and Drainage has significant environmental responsibilities including responsibility for maintenance of river systems and conservation of aquatic biodiversity.

The **Ministry of Primary Industries** (MPI) is responsible for the development of Malaysia's primary commodities. The Federal Forest Department under this Ministry has a wide range of environmental responsibilities including the overseeing of the management of the nation's forests. Other agencies with importance for management of land include the Malaysian Rubber Board and the Malaysian Oil Palm Board, which oversee the large plantations sector.

The **Ministry of Housing and Local Government**, Ministry of Transport, Department of Marine, Ministry of Finance and the Town and Country Planning Department of the Ministry are responsible for physical planning and the integration of environment into development planning in cooperation with local authorities. The Department of Local Government under the Ministry is in the process of establishing a national framework for solid waste management

Society and NGOs

The Public at large as well as local communities are becoming more concerned about environmental degradation and impacts on the quality of life. As a result they are becoming more active in debate and discussions on environmental issues and also engaged in sustainable development and environment improvement initiatives. The government is now actively encouraging public and community involvement in environment management with one of the strategic policy thrusts of the 8th Malaysia Plan being "*empowering local authorities and engaging local communities in addressing environmental problems*". During the 8th Plan period the government will "*continue to enhance collaboration with relevant NGOs that have the necessary expertise and experience to help implement programmes in and activities in specific areas*". Malaysia has a relatively small but active environmental NGO sector with about 15 environmental NGOs and another 10 NGOs with some environmental activities. NGOs range from professional advisory groups to advocacy or community based groups. The working relationship between the government and NGOs has been steadily improving over the past 10 years with government recognising the role of NGOs especially in providing technical advice as well as generating public awareness and supporting community mobilisation.

The Private Sector

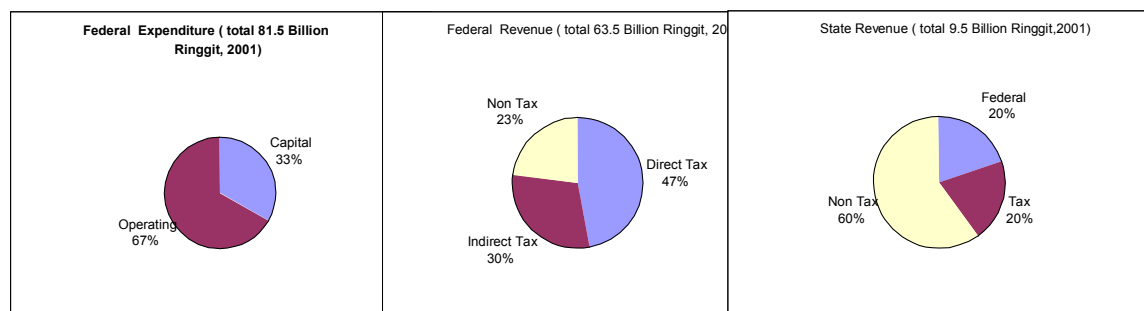
The private sector is represented by a number of business associations and chambers of commerce and industry, one of the most significant being the Federation of Malaysian Manufacturers which has a membership of more than 2000, of which 60% are small or medium scale businesses. The Business Council for Sustainable Development Malaysia (BCSDM), and the Malaysian International Chamber of Commerce and Industry (MICCI) are representatives of the prominent businesses in Malaysia. The manufacturing sector, both large and small scale, is considerable in Malaysia. The private sector has many skilled agents working in consultancies and businesses that are able to provide environmental services and this is expected to grow in the future, but currently is relatively small. This sector has faced difficulties since the economic downturn in 1997 due to a reduced local market for environmental services. It is hoped that this will improve in the period 2002-2006.

The Universities

Malaysia has more than 15 universities, including a few with a history of more than 30 years but many of which have been established in the past five years. Almost all of the universities have departments related to the environment or natural resources, although most have traditionally taken a sectoral rather than an integrated approach to teaching and research in these fields in the past. In recent years there has been a trend to increase the number of courses at undergraduate and postgraduate levels relating to the environment. The university sector is also very active in research with many applied environmental research projects being funded under the research fund of the Ministry of Science, Technology and the Environment (which is being increased to RM 1 billion under the 8th Malaysia Plan), as well as being commissioned by public and private sector agencies.

3.3 Funding

The anticipated Federal and total State Expenditure and Revenue for 2001 is summarised in the diagrams below (from the 2001 Budget).



As can be seen the state revenue is only a small proportion of the federal revenue. The States' own sources of revenue account for about 80 percent of total revenue. It consists of tax revenue (about 25 percent), which comprises largely land-based and entertainment taxes, and non-tax revenue, comprising royalties from forestry and petroleum and other sources (about 75 %). Some of these revenue-generating activities have a detrimental effect on the environment (reclamation and conversion of land, logging, etc). In certain states like Penang, which for historical reasons does not have significant government owned land, the state permits private developers to

reclaim land cheaply so that it can receive a percentage of the reclaimed land from the developer.

Line ministries and State governments submit their 5-year plans and budgets to EPU for approval and inclusion in the national 5-year Malaysia Plans. All the plans and budgets are discussed and taken through a process of negotiation and adjustment in order to arrive at a unified national plan. Once the 5-year plan is approved by parliament, the line ministries and state governments submit to EPU for approval annual plans and budgets that are within the 5 year plan framework. Finally, the Ministry of Finance presents annual budgets for federal and state expenditure to parliament for approval. Allocations are then approved and expenditure can take place in line with national accounting and expenditure standards.

Environmental Expenditure

Environment does not have a separate budget line in the budget system. The budget for MOSTE and a proportion of Federal and State Ministries responsible for natural resource management and administration, pollution control, environmental education and training, research and development could be classified as environmental expenditure.

In the 7th Malaysia Plan the budget for environment-related development expenditure in Malaysia was estimated to be RM 1.9 billion or about 2 percent of the RM 83 billion in overall development expenditure. The corresponding figures for expenditure in the social sector such as health and education is RM6.1 billion and about RM10 billion respectively. No specific estimate was given for the overall environment-related expenditure in the 8th Malaysia Plan, but the allocations for forest management, water resources management all got substantial increases.

3.4 Donor Activities

Compared to other South East Asian countries, Malaysia receives a relatively small contribution from the international donor community. Within the funds received however, environmental and social activities have a priority.

The major donor within the environment and natural resource sector is Japan followed by Danced and UNDP-GEF. Japan supports toxic waste management, cleaner production, energy, waste management, forest management and water resource and supply as well as wastewater treatment projects. The Global Environment Facility has channelled funds through UNDP for a major programme in the Energy sector as well as smaller projects relating to biodiversity (conservation and sustainable management of peat swamp forests and marine parks). UNDP is also supporting some projects with its own resources such as work on better environmental planning and management in the highlands. Other donors with activities in Malaysia include Australia, Canada, the European Union, Germany, UK and USA. The multilateral development assistance agencies such as the World Bank and Asian Development Bank have small programmes in Malaysia.

The Directorate for External Assistance in EPU coordinates the donor programmes. Donors in the environmental and other sectors are coordinated bilaterally i.e. there is no common forum for donors, but the coordination works well and there are few cases of overlap or donor programmes not in line with government priorities.

4 Malaysian-Danish Cooperation Programme

The Malaysian –Danish cooperation programme has four main channels each with their own characteristic type of project intervention:

- Government to Government
 - International conventions.
 - Capacity development in environmental administration.
 - Support to policies, strategies, financing and regulation.
 - Environmental information management.
- Private Sector
 - Transfer of Danish technology and know-how.
 - Demonstration of industrial environmental management/cleaner production.
- Universities
 - Long term environmental capacity building.
- Non Government Organisations
 - Environmental awareness raising.
 - Community involvement.

Cooperation between Malaysia and Denmark between 1994-2001 has resulted in the development of a number of key principles representing shared criteria, values and choice of emphasis between Malaysia and Denmark. They are listed below and discussed in the following sections of this chapter either under focus areas, integrated and cross sectorial issues, participation of non-government stakeholders or modalities of cooperation.

- Focus on limited number of environmental problems.
- International environmental conventions.
- Local ownership and participation.
- Capacity building.
- Increased awareness.
- Demonstration projects.
- Environmental investments.
- Increased support to state and local level.

The cooperation between Malaysia and Denmark has been a catalyst for change and it is important that many states and local governments have the opportunity to come in contact with and be exposed to the approaches and mindsets that the cooperation has shown it can bring. There should not therefore be any specific geographical focus in the third Country Programme.

A process whereby the Malaysian priorities for external cooperation within environment were matched with Danish policies has guided the selection of priority areas. Important considerations included the need to link to and further consolidate the present programme of cooperation. Priorities have tended to be set in those areas where significant potential to address key environmental management problems are combined with a close connection to implementing global environmental conventions.

The presence of ongoing plans, programmes and resource allocation together with a demonstrable need for external assistance was also an important factor in programme design.

As a result of these considerations the focal areas for the programme within the main environmental themes were chosen as follows.

The solid waste management sector was selected as a focus area within the urban environment, since it is recognised in the 8th Malaysia Plan as a major and growing problem. It is also one where the Danish experience on implementing preventative and demand-based solutions would be invaluable and have far reaching effects. Within the industry sub-sector, the ongoing programme of promoting cleaner production was selected as a continuing focus area since this supports the drive towards greater involvement of the private sector, is an area of limited Malaysian experience and is responsive to the growing environmental threat posed by rapid industrialisation.

The Malaysian authorities and the emerging private sector cooperation although an area of past cooperation was not chosen since what has been achieved so far can sustain toxic waste management. A small amount of follow up training will probably be needed and can be provided during the present cooperation programme. Domestic wastewater or sewage treatment is another major area within the urban environment that is not chosen principally because the technical solutions are well known to the Malaysian organisations and the main challenge is cost recovery where Danish assistance is not expected to generate solutions.

It was decided that the main focus of the active cooperation within energy should be continued into the third Country Programme. Thus, development of biomass as a renewable energy source and improvement of energy efficiency will continue to be the focus areas. The third programme will put more emphasis on developing the potential for private sector involvement and will link the efforts closer to actions related to the UN Framework Convention on Climate Change (UNFCCC).

Within natural resource management it was decided to focus the future cooperation on integrated water resource management, as this is a major problem for Malaysia and one which has a considerable political support for early solution. It is also an area of special Danish expertise. Biodiversity and forest resources are also areas of focus as they have a global relevance, represent continuity with past cooperation and are closely linked to many of the most important international conventions.

Marine and coastal resources were not chosen as a focus area partly because the previous assistance to coastal zone management now needs to be replicated by Malaysia rather than being duplicated through more Danish supported projects. One of the main outcomes of the previous cooperation on coastal zone management is that environmental planning needs to be well integrated into development planning – a concern that is now addressed as a new integrated and cross-sectoral topic. The fact that tropical marine ecosystems are not a special area of Danish expertise has also influenced the choice. Cooperation on agriculture was not chosen due to the lower priority allocated in Malaysia as well as the need to consolidate existing areas rather than open up too many new areas of cooperation.

In addition to the focus areas, a number of very important integrated and cross-sectorial initiatives were selected for special attention. These include support for:

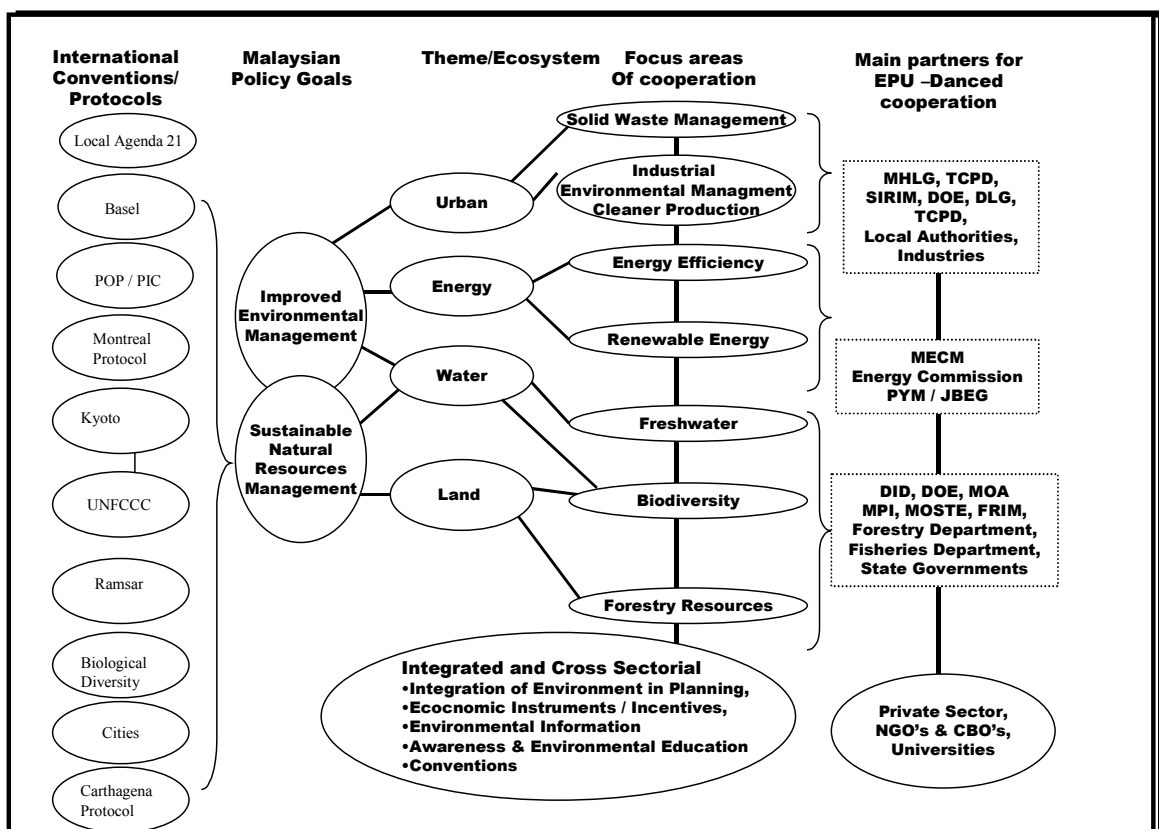
- Environmental knowledge building and information management.
- The application of economic instruments and the financing of environment investments.
- Awareness and environmental education.
- Implementation of environmental conventions.
- The integration of environment into development and land use planning.

Cooperation on a regional basis is an important element of the programme and this is described in the Danish strategy for regional environmental assistance in South East Asia which identifies a range of elements for regional collaboration including:

- Enhancing capacity to participate in environmental agreements and conventions.
- Promoting cooperation between two or more countries on shared resources ecosystems or problems.
- Strengthening capacity of regional institutions.
- Increased collaboration on research training and technology and skills transfer in the region.
- Building up regional environmental networks.
- Pilot projects for regional dissemination.
-

The third Country Programme will work closely with the regional programme of support to strengthen Malaysia's involvement in regional activities.

The diagram below summarises the focus areas indicating the main partners within Malaysia and the link to global conventions where relevant.



The beneficiaries of the third Country Programme comprise a large and varied group. A major beneficiary will be future generations of Malaysians who have the most to gain from an early boost to environmental awareness, conservation of natural resources and improved environmental management. To the extent that many of the problems being tackled directly or indirectly are regional and global in nature (climate change, conservation of biodiversity) the beneficiaries are not only limited to those living in Malaysia. Public sector officials working within environmental management are a very significant group of beneficiaries. The resources made available to carry out their mandate will be increased both directly and indirectly in the sense that the third Country Programme will help to increase environmental funding channels. The private sector in both Malaysia and Denmark will benefit in so far as they respond to the industrial environmental management initiatives. They will also benefit from providing services and from the longer-term aim of boosting environmental business both nationally and regionally. Improved industrial environmental management increases long-term commercial sustainability.

The improved environmental regulation and administration envisaged by this programme will assist the poorer and more marginalized groups because they are often those that suffer most from pollution and dwindling natural resources.

The third Country Programme will assist the local levels to a greater degree than in the previous cooperation. There will thus be a large number of local beneficiaries from the individual projects.

The university programme will benefit individuals studying for higher degrees and ultimately the country as a whole as these skills are applied for the common good. The NGO programme will benefit a number of individual environmental NGOs and it will stabilise the platform for future NGO activities and contribute to developing a constructive engagement in environmental protection as well as community involvement and mobilisation.

4.1 Solid Waste Management

Main Issues

Malaysia is facing considerable environmental problems from growing waste generation and disposal. By the year 2000 the quantity of solid waste generated was estimated to exceed 6 million tons annually. Statistics on solid waste generation in local authorities indicated a projected doubling in the quantity of waste generated from 1990 to 2010. A majority of the present sanitary landfills will be exhausted in 2 years time. Disposal practices are far from adequate and indiscriminate dumping is on the increase. The environmental impacts are severe and well documented. There are considerable technical, social, financial and institutional constraints to ensuring a greater degree of control over waste generation and disposal. The privatisation programme has gone ahead very rapidly and there is a need now to consolidate and learn from experience.

Lead Partners

The lead Malaysian partner is the Ministry of Housing and Local Government and the Department of Local Government under the Ministry together with local authorities and the Department of Environment.

Policies, Plans and Financing

The 8th Malaysia Plan stress the importance of an improved management of solid waste. The Malaysian objective is to eliminate indiscriminate dumping, introduce privatised collection and provide a fully integrated waste management system in the local authorities. As part of these wide-ranging objectives there are plans for an increased focus on reducing waste generation and on adopting preventative options for waste management. The Ministry of Housing and Local Government is about to launch a master plan for solid waste management which will identify a series of actions to be undertaken at various levels including options for improving the results of recent privatisation. A solid waste management bill has been recently finalised and is awaiting resolution of the financing issues before being presented to Parliament.

Awareness raising combined with the application of economic instruments and cost recovery are major policy thrusts that identified in the 8th Malaysia Plan. Ultimately the aim of policies is that resources for waste management come from the waste generators. There are considerable financial resources set aside in national, state and local budgets for solid waste management including significant allocations for proposed incineration projects. Improved waste minimisation and adoption of preventative approaches are expected to significantly increase the efficiency of such investments.

Rationale and Nature of the Malaysian-Danish Cooperation

The scale of the solid waste problem is increasing and is new for Malaysia although not for developed countries such as Denmark. Denmark through a combination of awareness raising, application of economic instruments, adoption of preventative approaches and improved management and use of technology has considerable experience of waste management. External assistance is needed to help develop a correct set of strategies and options for dealing with the challenges. External assistance is especially needed for improving demand side management and waste minimisation, including reuse, recycling and material reduction. Many of the approaches, developed in Denmark, are seen by the Ministry of Housing and Local Government, as relevant for adaptation in Malaysia.

Objectives, Environmental Outcomes and Indicators

The objective of cooperation within solid waste management is a subset of the wider Malaysian objectives and is formulated as follows: "Improved solid waste management arising from an increasingly successful adoption of demand side approaches such as waste minimisation, recycling, cost recovery and awareness raising."

The expected environmental outcome from this component of the cooperation programme is that Malaysia will gain experience on how to better manage its solid waste, thus the physical environmental impact will be a reduction in future contamination of soil, ground and surface waters as well as reduced air pollution.

Potential indicators of success will be: the presence of working demonstrations of the preventative approaches; evidence of replication of these approaches elsewhere in Malaysia; increased knowledge and awareness amongst stakeholders of the preventative approaches; a greater degree of cost recovery in waste management; reduction of illegal dumping; increased activity of recycling plants and development of waste to energy plants; improved performance of privatised and outsourced functions; greater capacity in and cooperation amongst the public authorities for regulating and managing solid waste.

4.2 Industrial Environmental Management - Cleaner Production

Main Issues

The private sector and especially the small and medium scale enterprises are the engines of future growth and economic prosperity. However, the environmental impact of these industries needs to be brought under control so that economic growth and improvements in quality of life can be sustained. There are an estimated 20,000 small and medium scale manufacturers who could to a varying extent benefit from introduction of cleaner production practices.

The pollution problems of the small and medium industry sector are complex. There is a large diversity of processes, there is limited information on the industries and awareness within industry of cleaner production not widespread partly due to poor distribution of information. The incentives for engaging in cleaner production are not clear and the economic situation for many industries is still tight following the 1997-1999 regional economic crisis, thus restricting the introduction of new practices and technology. Most of the constraints and opportunities lie in shifting industrial management attitudes and practices.

Lead Partners

The lead partners in this area are the industries themselves supported by institutions such as SIRIM, SMIDEC, the Department of Environment and industry associations. Other partners are MITI and the Ministry of Domestic Trade.

Policies, Plans and Financing

Introduction of cleaner production, which focuses on preventative approaches and attempts to mobilise the economic self-interest of the factory owners and managers is a major strategy in the 8th Malaysia Plan and the Third Outline Perspective Plan. In the long term, the Malaysian objective is to bring the small and medium industrial sector up to the standards of the developed world also in terms of environmental performance. The Department of Environment is actively engaged in making plans for encouraging cleaner production including the setting up of a cleaner production centre at its Environmental Skills and Training Institute. SIRIM Berhad will also intensify efforts during the 8th Malaysia Plan to collect and disseminate information on cleaner technologies.

Financing of cleaner production should primarily come from industry itself. Many of the most significant improvements are potentially self-harvesting with payback periods of six months or less. Quick payback investments, such as improved housekeeping, will be the first areas for action. SMIs will be encouraged during the 8th

Plan period to take advantage of the funding facilities available at SMIDEC to undertake environmental related activities.

Rationale and Nature of the Malaysian-Danish Cooperation

Attempts are being made in Malaysia to introduce cleaner production as part of improved industrial environmental management but they need to be accelerated and their impact strengthened. Exchange of experience and knowledge with Denmark, which has had cleaner production programmes for many years, will be invaluable. As well as appropriate technology and industrial processes, it will also be important to consider appropriate incentive measures to encourage adoption of cleaner production methods. Opportunities for cooperation between Danish and Malaysian industries further demonstrate the potential for cleaner production will be considered under the already established Private Sector Partnership Facility.

Within cleaner production, attention may be given to new techniques for treating domestic and industrial wastewater to remove additional substances as required by the proposed revisions of the Environmental Quality regulations. In addition, the handling of toxic chemicals and associated risk assessment and management will be considered – contributing to improving the working environment. It is also proposed to consider broadening the support to also include the business and production management-related aspects that are key drivers in adoption of cleaner production.

Objectives, Environmental Outcomes and Indicators

The objective of cooperation within cleaner production is “Reduced pollution from and enhanced productivity in industries through adoption of appropriate industrial environmental management including cleaner production strategies with support from Danish companies with a focus on the smaller and medium sector”.

The expected environmental outcome of this component is that waste production and consumption of raw materials, water and energy from the targeted small and medium industries is reduced for a given level of production. In physical terms this will lead to reductions in the waste streams reaching the environment (land, water, air) as well as reducing the life cycle environmental impact of the products being manufactured. The working environment should also be improved where possible. The capacity within Malaysia to replicate cleaner production should be increased thus making these impacts perpetual and sustainable.

Potential indicators of success include: the number of demonstrations of new approaches and technology; the replication of these approaches at non-demonstration sites; an increased awareness of cleaner production and innovative industrial environmental management within relevant stakeholder groups; greater availability of information on cleaner production; increased capacity within the public sector and the business associations to promote the continued adoption of cleaner production.

4.3 Energy Efficiency and Renewable Energy

Main Issues

Energy use is increasing rapidly as the GDP grows. In Denmark and other countries the link between growth and energy consumption has effectively been uncoupled.

Whilst this may be difficult to fully achieve for an industrialising nation there is much that can be done. The price of energy and the use of economic instruments is one of the important tools that have already been used as evidenced in the 2001 budget. A focus on demand side as well as supply side management is another important tool.

Use of energy from fossil fuels is a significant source of greenhouse gases (GHG) – thus increased energy efficiency and use of renewable energy will be an important part of a strategy to reduce growth in GHG emission thus mitigating climate change.

Lead Partners

The lead partners are the Ministry of Energy, Communications and Multimedia and the Energy Commission together with private sector and consumers. Other important partners are MOSTE (focal point for the UNFCCC), Ministry of Education, and PTM.

Policies, Plans and Financing

The energy sector is guided by the National Energy Policy of 1979 and the Fuel Diversification Policy introduced in 1981. Since then an Energy Commission Bill (2000) to create a regulatory commission to serve the sector has been approved and amendments have been made to the Electricity Supply Act (1990) in line with an increasing role being given to the private sector. The 8th Malaysia Plan places emphasis on the strategic role of improving energy efficiency and increasing the use of renewable energy. The 2001 budget includes for the first time, incentives for energy efficiency and renewable energy.

Renewable energy has been identified as a source of alternative fuel as early as the 6th Malaysia Plan (1991-1995). Recent initiatives, including the Danced supported project on strategy for the development of renewable energy as the fifth fuel, have highlighted the abundant renewable energy resources in Malaysia in the form of biomass (palm oil wastes and wood residues) and the economic viability of producing energy from this biomass.

One of the objectives of the national energy policy is to promote efficient energy utilisation and to discourage non-productive and wasteful patterns of energy consumption. Two initiatives taken by the government are the development of the energy efficiency regulations and the code of practice for energy efficiency and renewable energy in buildings. These are expected to be ready for implementation by mid 2001. In addition, MECM plans to initiate demonstration of energy efficiency practices and technologies in government buildings. The above initiatives will create a market for energy service companies in Malaysia. These companies will mobilise finance from the market and gain revenue from electricity sales.

Malaysia's Initial National Communication to the UNFCCC (July 2000) on Climate Change identified a range of mitigation options to reduce CO₂ emissions including: energy efficiency in the transport and industrial sectors, use of biomass waste in power co-generation, sequestration through improved forest management and demand-side management.

Rationale and Nature of the Malaysian-Danish Cooperation

The key needs are external support and exposure to international experience in order to improve decision making and implementation of plans.

The participation of the private sector is relatively new and a crucial feature of the policies and this is an area where external assistance is expected to be valuable. Technology for improved energy efficiency and renewable energy is available but needs to be demonstrated in a way that will encourage local adoption.

Energy efficiency will require support for the implementation of a proposed code of practice for buildings as well as the proposed energy efficiency regulations. These codes and regulations are ambitious and well conceived tools that will have a significant impact on energy consumption.

Renewable energy from biomass has enormous potential and is an important untapped resource. Local assessment of the potential of biomass as a renewable energy source is very promising. It is an area where external assistance would help to accelerate progress to the point where working demonstrations can be made available for wider replication. There are synergies between this support and that proposed to be provided by UNDP to improve grid connectivity.

These policy and strategy changes come at a time when the sector is already over-stretched and in need of external support both to directly assist but also to guide activities. It is important that cooperation develops local capacity as well as meeting short term needs.

In addition to technology demonstration, planning support, capacity building and awareness, support will also be considered for studies on necessary fiscal policies and incentive measures to promote implementation especially by the private sector. There are also considerable opportunities in this area for cooperation between Malaysian and Danish firms under the Private Sector Partnership Facility.

Objectives, Environmental Outcomes and Indicators

The objective of cooperation within renewable energy is “Increased use of biomass as a form of renewable energy and an increased capacity with the public and private sector to make use of renewable energy”.

The expected environmental outcome from this component of the cooperation is that a trend of relying more on renewable energy will be strengthened thus in physical terms it will lead to a reducing the pressure on dwindling sources of traditional energy. There is also an important contribution towards reducing the impact on climate change.

Potential indicators of success include: demonstration of the use of biomass as a renewable energy source; evidence of replication of the demonstration plants; ongoing collaboration between Danish and Malaysian companies within energy generation and management; an increased capacity and awareness amongst government agencies to promote and manage the use of renewable energy.

The objective of cooperation within energy efficiency is: ”An increase in the efficiency of energy use and an increased capacity within the public and private sector to manage energy efficiently”.

The expected environmental impact from this component of cooperation is that energy will be used more efficiently thus preserving future energy sources and reducing environmental impacts such as CO₂ emissions. The impact will be made through building up incentives and capabilities within the Malaysian public and private sector.

Potential indicators of success include: demonstration of energy efficiency management; evidence of replication of the demonstration projects; the emergence of a market for energy efficiency services; the provision of training and capacity building within the sector; collaboration between Danish and Malaysian companies within energy efficiency.

4.4 Integrated Water Resource Management

Main Issues

Integrated water resource management is considered as a priority area. It is a challenge related to both natural resource management as well as urban and industrial environmental management. The effective and integrated management of water resources is considered one of the top government priorities and a prerequisite for sustainable development. The two priority areas where Malaysia has launched a number of initiatives are: integrated river basin management and rehabilitation; and reducing the human demand for water supply through demand management strategies. In both areas one of the major issues has been the lack of effective coordination between sectors combined with a strong uni-sectoral approach to the development of water resources.

Lead Partners

The lead partners for integrated river basin management are the Ministry of Agriculture and within it the Department of Irrigation and Drainage, together with the Forest Department, Department of Environment and other state agencies. The lead partners for water demand management are the Water Supply Department in the Ministry of Public Works, the Department of Irrigation and Drainage together with state government water management agencies. A number of private sector agencies and NGOs are also active in the water resource management arena and can be important partners in the programme.

Policies, Plans and Financing

Integrated water resource management is identified as a priority in the Third Outline Perspective Plan and the 8th Malaysia Plan. Integrated river basin management and rehabilitation will be given priority in the National Water Resources Policy. According to the 8th Malaysia Plan, the policy will also “*emphasise the need to keep development to a level that is within the carrying capacity of river basins while protecting and restoring the environment*” as well as the Integrated river basin management has been strongly prioritised in the National Water Resources Study (2000) as well as at the state level through legislation such as the Selangor Water Management Authority Enactment (1999) and the Sarawak Rivers Enactment (1997). Other states will be encouraged in the 8th Plan period to establish water management bodies to ensure proper planning, monitoring, enforcement and management of water resources on a river-basin basis.

To reduce exploitation of new water resources, emphasis will be given in the 8th Plan to *demand side management instead of concentrating on water supply*. This will “include measures to improve the efficiency of supply and use, recycling water and studying the feasibility of rainwater harvesting”. Market instruments as well as awareness campaigns will be used. Measures to assess and ensure protection and sustainable use of groundwater will be supported.

Considerable resources have been allocated for river management and the promotion of integrated management approaches in the 8th Malaysia Plan. The allocations for flood control/irrigation and water supply have been increased by 15% and 30% to RM2.2 billion and RM4 billion respectively of which significant proportions will go to address river basin management and water demand management issues.

Rationale and Nature of the Malaysian-Danish Cooperation

Integrated river basin management is a new concept for Malaysia that holds out much promise for integrating upstream and downstream interests as well as integrating across the strong sectoral interests that have prevented effective environmental management of Malaysian rivers. Demonstration of preventative as well as rehabilitation approaches are needed to inspire river management authorities, service providers, local authorities, environmental agencies, special interest groups and the communities at large to cooperate and ensure that the river and water resources are well managed.

Objectives, Environmental Outcomes and Indicators

The main objective for the cooperation related to river basin management is “*establish and test frameworks for integrated river basin management and initiate river rehabilitation demonstration activities*”.

Environmental outcomes include the improved management of river basins which will lead to improved water quality, improved fisheries, improved status of biodiversity due to cleaner rivers and better protection/rehabilitation of riverine ecosystems; and reduced hazard to people living in the neighbourhood of rivers.

Indicators of success include: The increase in number of integrated river basin plans approved or in preparation; the increased number of relevant stakeholders involved in the development of IRBM plans and policies; the increased number of plans for rehabilitation or clean-up of rivers prepared or approved; additional resources allocated for integrated river basin management and clean-up in the 9th Malaysia plan; overall water quality index of Malaysian rivers stabilising or improving.

In relation to water demand management, the objective is to “*Reduce the rate of increase in demand for water resources and encourage use of recycling, rainwater harvesting and better groundwater management.*” Environmental outcomes would include more effective use of existing water resources and therefore less use of water with a greater preservation of the amount of water available for ecosystems; and keeping developments in line with the carrying capacity of river basins.

Indicators would include reduced growth curve of water demand; prevalence of rainwater harvesting or sustainable groundwater use; lower average water use by domestic and industrial users; reduction in inter-basin water transfer projects.

4.5 Multiple-use Management of Forest Resources

Main Issues

Forests cover 60% of the land area of Malaysia and are one of the most important natural resources. Most of these resources are under the responsibility of the state forest departments whose primary focus in the past has been on managing them for production of timber. It is now recognised that other values of the forests may be as or more important in both social and economic terms. These include the role of forests in protection of slopes against erosion, protection and storage of freshwater resources, flood control, control of micro-climate, carbon storage and climate change mitigation, conservation of biodiversity and provision of opportunities for recreation and tourism.

In order to secure and benefit from the broad range of forest resources there needs to be a change from the uni-sectoral management to multiple use management of forests. However the institutional and revenue generating mechanisms currently in place are not well suited to this future role. At the same time there is increasing pressure from other land-use sectors such as agriculture, industry and housing to clear additional forest areas and convert them to other uses.

Lead Partners

The lead partner for the management of forest resources is the Ministry of Primary Industry and within it the Forest Department of Peninsular Malaysia together with the Forest Department of Sabah and the Forest Department of Sarawak. The forests lie under state jurisdiction and the state planning units can play an important role in promoting multiple-use management of forestland. Other partners in multiple use management include the nature conservation, water resource, plantation and tourism sectors as well as local communities, NGOs and the private sector.

Policies, Plans and Financing

The importance of multiple-use management of forests has been recognised in the framework of sustainable forest management adopted by the Malaysian government – such as in the 1992 National Forest Policy, and further emphasised in 3rd National Agriculture Policy (1998) and the National Policy on Biological Diversity (1997).

Additional work is needed to put this principle into practice. Some progress has been made in the period 1995-2000 according to the review of the 7th Malaysia Plan, but further work is needed in the 8th Plan period – in particular “*sustainable logging practices will be expanded, multiple use management of forests encouraged and timber certification expanded*”.

The forestry sector is a significant generator of state and federal revenue and forest management is funded by federal and state allocations as well as specific funds supported by timber royalties and export levies. However most of the resource allocation has focused on developing systems for improved harvesting, marketing and rehabilitation of forest resources rather than into harnessing multiple-use values. There is thus a need to develop new revenue generation mechanisms such as from water catchment functions or ecotourism values, so as to balance the development focus. The 8th Malaysia plan allocation of resources for the forestry sector has been increased by more than 50% to RM225 million. In addition allocation under other budgets may support multiple use management of forests such as the issue of

catchment management under the allocation for water resources or the allocation for environmental protection under the budget for tourism.

Rationale and Nature of the Malaysian-Danish Cooperation

The implementation of the multiple use management is constrained at institutional and individual levels. Envisaged needs for external assistance include: sharing of experience and training in multiple use forestry approach; development of strategies and guidelines; demonstration projects and models; mechanisms for strengthening involvement of local communities, consumers and the private sector, development and testing of new revenue sources from forests; and introduction of incentives and cost recovery mechanisms. A specific approach will be to support for the implementation of the Malaysian Criteria and Indicators for Sustainable Forest Management in particular those relating to conservation of biological diversity and water resources.

In terms of international commitments support will be given to implement aspects of the Intergovernmental panel on Forests (IPF) Proposals for Action as well as issues emerging from ongoing discussions under the Intergovernmental Forum on Forests (IFF).

There is considerable Danish, international and regional experience in this area which could be shared with Malaysia through Danced support. A focus on multiple use management builds on the modality of previous Danced interventions in Malaysia, which have looked at multiple-use management in mangroves, peat swamp and lowland forests as well as the experience of multiple use management of protected areas. This focus also will enable strategic linkage with the other natural resource components of the third Country Programme – integrated river basin management and conservation of biological diversity.

Objectives, Environmental Outcomes and Indicators

The overall objective is to “*promote widespread acceptance of multiple-use forest management concepts through capacity building and demonstration activities*”

The objective will be achieved by:

- Increased implementation of multiple-use management of forests including use of relevant criteria and Indicators for SFM.
- Increased area of forest protected for catchment protection, biodiversity conservation, ecotourism, recreation and other non-timber functions.
- Improved protection of the forests by local communities
- Active promotion at national and international levels of experiences and lessons learned.

The environmental outcomes in terms of physical impacts will be a reduction in the loss or degradation of natural forest areas; an increase in biodiversity arising from improved forest management; and an improved protection of the catchment including its water and soil resources. There will also be a positive climate change impact.

The main indicators will be: the increased area of forests managed for multiple use functions; higher level of training and resource allocation for multiple use management of forests at the state level; more involvement of local communities and

other stakeholders in the management of forests; increase in level of government revenue from non-timber forest utilisation; and increased area of forests certified as sustainable managed.

4.6 Conservation of Biological Diversity

Main Issues

Malaysia is one of the world's 12 mega-biodiversity countries with exceptionally high diversity of biological resources. Many of the species have important socio-economic, cultural or ecological values but the pressure on species and habitats from over exploitation, pollution or conversion is already significant and increasing. For this reason improved protection and sustainable utilisation of ecosystem, species, and genetic diversity is of utmost importance.

Key issues identified by the Malaysian government for action include the implementation of the National Policy on Biological Diversity and the associated Biodiversity Action Plan together with related conventions and agreements as well as the improved protection and sustainable use of biodiversity in key ecosystems.

Lead Partners

The lead partners in the area of biodiversity are the Ministry of Science Technology and the Environment (CBD focal point) and within it the Department of Wildlife and National Parks, together with the Fisheries Department under MOA and the Federal and State Forest Department under MPI. Terrestrial, freshwater and coastal biodiversity occur in habitats primarily under the control of the state governments while marine biodiversity falls primarily under the federal jurisdiction. A number of NGOs have been active in biodiversity conservation.

Policies, Plans and Financing

The National Biodiversity Policy, but are also influenced by the National Agriculture Policy and the National Forest Policy primarily guides activities related to biodiversity. The mid-term review of the 7th Malaysia Plan identifies some specific priorities for improving the status of poorly protected ecosystems such as mangroves and peat swamp forests.

The 8th Malaysia Plan indicates that during the period 2001-2005 “the government will implement the biodiversity action plan in the various states; regulations will be introduced to control access to biological resources and to address biosafety issues relating to genetically modified organisms. Management plans will be formulated for all protected areas to ensure their integrity and promote them as conservation, research and ecotourism areas. Critical habitats that need protection will be identified and the national biodiversity database will be further developed”

All of the above actions will need input and assistance which could be provided through the third Country programme.

At present there is not a specific allocation of resources for implementing the NPBD but respective agencies have allocations for conservation of biodiversity within their specific mandates, although current resource allocations appear inadequate.

Rationale and Nature of the Malaysian-Danish Cooperation

Implementation of the NPBD will advance and consolidate previous conservation measures. International support is needed for the implementation of the NPBD including capacity building especially at the state level, education and awareness activities, demonstration projects and development of incentives.

Another major area of importance is the implementation of Biodiversity-related conventions and agreements to which Malaysia is a party such as the CBD, Ramsar Convention and CITES and those of which it may become a party during the third Country Programme period such as the Biosafety Protocol or the Convention on Migratory Species. Needs for international assistance include: support to strengthen institutions and set up the necessary implementation arrangements, exchange of information and implementation tools.

Associated with the NPBD is the need to support improved protection and sustainable use of biological diversity, by strengthening the national system of protected areas, improving protection of biodiversity outside protected areas and developing management and incentive measures for the protection and utilisation of biodiversity by local communities. Some of the priority ecosystems for consideration are those where the current protection status is poor such as mangroves, swamp forests, riverine ecosystems as well as threatened systems such as seagrass beds or corals. Priority needs for international assistance include: development of a detailed action plan for protected areas and biodiversity conservation capacity building especially at state and local level; education and awareness raising especially through NGO and CBO involvement; strengthening of the protected area system, and action to involve local communities in the protection and sustainable use of biodiversity.

Objectives, Environmental Outcomes and Indicators

The overall objective is for *“the National Policy on Biological Diversity and associated conventions and agreements being more actively implemented at national and state level and biological diversity in key ecosystems being better protected and more sustainable used”*.

The objective will be achieved through:

- The effective implementation of the National Policy on Biological Diversity and biodiversity-related conventions.
- Strengthened capacity at national and state level to implement the NPBD and related legislation.

Physical environment outcomes include improved protection of key ecosystems and species within protected areas and improved protection and more sustainable use of biodiversity outside the protected area system through involvement of local communities.

The key indicators are proposed as:

Advanced level of completion, approval, funding and initiation of implementation plans for the NPBD and related biodiversity conventions; the national protected area network strengthened and expanded especially in poorly represented ecosystems; higher number of trained staff and resource allocations at national and state level for

biodiversity conservation; more active involvement of local communities in protection and sustainable use of biodiversity.

4.7 Integrated and Cross Sectorial Initiatives

Integrated and cross-sectorial areas are areas of cooperation, which do not necessarily contribute to a single environment theme or ecosystem. In some cases they are part of projects that are undertaken within the focus areas but in other cases stand alone, projects specifically targeted at the integrated and cross sectorial areas will be initiated. Five integrated and cross-sectorial areas have been identified as priorities for action under the programme as follows:

- Integration of Environment in Development and Land Use Planning.
- Environmental Education and Awareness.
- International Environmental Conventions and Agreements.
- Economic Incentives.
- Environmental Knowledge Building and Information Management.

Activities in some of these areas such as education and awareness will be in the form of free standing projects while in others such as economic incentives may be integrated into projects in the different focal areas.

4.7.1 Integration of Environment in Development and Land Use Planning

Main Issues

Rapid economic growth, land development and urbanisation have caused a variety of environmental problems in Malaysia that are well known from other developing and developed countries. Some of these problems are inevitable but others can be minimised through effective preventive measures. Physical planning and land development control are essential tools in the prevention of many environmental problems and the development of sustainable management of natural resources and as well as management of the urban environment.

There are many constraints such as: relatively recent integration of environmental issues in physical planning, insufficient know-how and ability with the planning authorities in this field, a lack of environmental guidelines to support the implementation of structure plans and local plans, incomplete environmental analysis in the land development applications, insufficient coordination amongst the authorities and EIA conditions that are often not effectively monitored or incorporated in the planning permits.

Strengthening the integration of environmental considerations in development planning is likely to have a considerable impact over time as development is controlled and directed in ways that are environmentally neutral or at least minimise negative impacts.

Lead Partners

The lead partner in this area is the Town and Country Planning Department supported by the Department of Environment, the State Planning Units (UPENs) and local authorities.

Policies, Plans and Financing

Malaysia has a system of land use planning based around city plans, district structure plans and local plans, development planning through EPU and UPEN plans and control of environmental impacts of development through EIAs. These systems are in place and working but the quality and consistency of application is variable. The Department of Environment and the Town and Country Planning Department have an ongoing plan to constantly improve the application and design of current planning instruments. Initiatives are currently being taken by the Town and Country Planning Department such as the introduction of strategic environmental assessments for major development projects

The programme to improve the integration of environment and development planning is featured prominently in the 8th Malaysia Plan, which indicates that *“the government will intensify ongoing efforts as well as introduce new approaches to strengthen land use planning. This will include the identification of and integrated planning for environmentally sensitive areas. New physical planning guidelines will be developed including for urban regeneration, optimal land development and development in catchments”*.

The financing of the planning systems is a core part of the budgets for the Town and Country Planning Departments and also the UPEN and the local authorities. The cost of EIA and the subsequent environmental mitigation measures are in general borne by the developers. Nevertheless, resources are a problem and one, which can in part be addressed through further streamlining and passing the associated costs to the private sector institutions that stand to benefit from development.

Rationale and Nature of the Malaysian-Danish Cooperation

Malaysia already has the planning systems in place and has received support at the federal and state level during the previous cooperation programme. Further strengthening is required at state and local authority levels in order to provide examples and demonstrations of best practice that are relevant for the range of constraints faced at these levels. External assistance with its catalytic effects of changing mindsets and broadening the range of planning tools and methodologies will support Malaysia in its attempts to raise the status of environmental considerations in development planning.

Objectives and Indicators

The objective is *“The environmental impact of development is minimised through early introduction of environmental management principles in the planning and approvals processes”*.

The expected environmental impact from this component of the cooperation programme is that the procedures and systems already established function better and more consistently. If successful, this cooperation will lead to a potentially large impact on the environment as the negative environmental impact of each development project is further mitigated and positive impacts are further enhanced.

Potential indicators of success include: demonstration of the improved application of procedures by representative state planning authorities and local authorities, evidence

of replication in areas not targeted for demonstration, improved cooperation between planning agencies within the demonstration area, greater information and access to examples of improved application of environmental procedures and techniques, capacity developed within Malaysian agencies to continue and extend the process of improvement.

4.7.2 Environmental Education and Awareness

Main Issues

The Government of Malaysia acknowledges that conservation and protection of the environment are closely linked to the attitudes and practices of society at large. As a result there has been an increasing level of environmental education and awareness activities undertaken by a variety of governmental and non-governmental agencies. However a significant gap has been noted between raising awareness and understanding of environmental issues and the required changes in attitude and behaviour to address the underlying problems. Thus an important issue in the future is to develop a more holistic strategy linking together education, awareness, and introduction of options and incentives for improved environmental management.

Further, the media in Malaysia is taking progressively greater interest in environmental affairs and reporting it more frequently and in greater depth than before. This reflects a growing public interest especially by the urban middle classes and those threatened by a reduced quality of life due to environmental deterioration.

Lead Partners

Ministry of Education together with awareness generating units of line agencies (e.g. Department of the Environment, Department of Irrigation and Drainage, Forest Department, Fishery Department, Water Supply Department, Local Government Department) and environmental NGOs and CBOs. The media is also expected to play an important role.

Policies, Plans and Financing

During the 7th Malaysia Plan significantly more emphasis was put on environmental education and awareness raising than previously in recognition of the importance of informing the public on the environment and bringing about changes in social attitudes and practices. NGOs and the private sector have contributed extensively and positively in promoting environmental awareness.

This emphasis will continue and be further strengthened during the 8th Malaysia Plan, which specifically indicates that *“the government will continue efforts to enhance the level of environmental awareness and civic consciousness among the people. Environmental education courses and environment-based co-curricular activities under the Ministry of Education will be strengthened. The private sector, NGOs and the media will also be encouraged to continue their active role in the protection and maintenance of the environment especially through the promotion of a community-based approach”*. The government would also like to see its agencies placing higher priority to promoting environmental awareness in a coordinated manner.

Rationale and Nature of the Malaysian-Danish Cooperation

Awareness building and environmental education are the keys to ensuring that the principles of sustainable development, conservation and environmental management gradually assume a higher profile and become stronger factors in decision making within the public and private sectors as well as at individual and community levels.

All projects in the cooperation programme should contribute to building up environmental awareness and education. However environmental education and awareness is so important and prioritised so highly by Malaysia and Denmark that it should also be a stand-alone component in the programme.

Some of the key areas that would strengthen the environmental education programme include the review of the school curriculum, school co-curricular programmes, teacher training programmes and development of environmental educational material. Denmark has extensive experience in environmental education and sharing of the experience would benefit the Malaysian programme. Denmark will provide technical assistance for the implementation processes and for capacity building.

Current environmental awareness activities are often of a short term or ad-hoc basis and are not well coordinated between different sectoral agencies, the NGOs and the media. One priority identified is to develop a national strategy and action plan to support a more effective approach to raising environmental awareness.

Since the media are playing an increasing role in monitoring and disseminating information on environmental issues, it will be strategic to develop elements of the programme, which will link to and support the media in this role.

Objectives and Indicators

The proposed objective for this activity is: *“Support integrated education, awareness and behavioural change programmes, which can mobilise community effort to protect and improve the natural environment”*.

Anticipated environmental impacts include:

- Improved awareness and knowledge on environmentally sound behaviour in schools, public and other target groups.
- Successful demonstration projects of community mobilisation through awareness programmes to tackle urgent environmental problems.
- Enhanced coordination between governmental and non-governmental organisations involved in environmental education and awareness.

Indicators of success include: environmental education activities integrated into curricular and co-curricular activities in schools; increased number of activities involving schoolchildren, general public and other target groups in environmental protection and rehabilitation; increased resources allocation by different stakeholders for environmental awareness and clean-up activities; increased level of public involvement and debate in environmental issues.

4.7.3 International Environmental Conventions and Agreements

Main Issues

Malaysia is a party to a range of international environmental conventions and agreements and is in the process of considering approval of additional agreements. It is important that Malaysia, at both federal and state level, has the resources and the institutional, organisational and human capacity to effectively implement the obligations under these conventions and to collaborate actively with other parties in the region and internationally.

Lead Partners

The Conservation and Environment Management Division (CEMD) of MOSTE is the focal point for most of the environmental conventions and agreements. The DOE and DWNP are operational focal points for some of the conventions such as the Montreal protocol and CITES, while MPI is responsible for the negotiations through the Intergovernmental Forum on Forests (IFF). A broad range of government, private sector and non-government stakeholders need to be involved in implementing the conventions and associated policies and legislation.

Policies, Plans and Financing

The 8th Malaysia Plan specifically states that “*Malaysia will take steps to fulfil its convention obligations and to ensure that its programmes and projects are in line with its commitments*”. In response to becoming a party to the Conventions, Malaysia is in the process of developing a range of national policies and strategies, which will guide the implementation of the convention in Malaysia such as the National Policy on Biological Diversity (1998). Policy frameworks or strategies need to be developed for other conventions and followed through with implementation plans, which give clear agency responsibilities and resource allocations.

Rationale and Nature of the Malaysian-Danish Cooperation

International assistance is needed to assist Malaysia in meeting these obligations. In addition for the conventions which are new or still developing, Malaysia needs assistance in strengthening the capacity for negotiating the conventions or assessing their potential impacts. Since Denmark is a party to the same environmental conventions as Malaysia, there are significant synergies to be gained by working together and sharing experience in their implementation. Linkages can also be made to other countries in the region which are supported by Danced and Danida also in the area of convention implementation.

Priority should be placed on the main Rio conventions, the Convention on Biological Diversity (CBD) and UN Framework Convention on Climate Change (UNFCCC) as well as some of the emerging conventions and agreements such as POPs, the Biosafety Protocol and the IFF. In addition support should be given for Malaysia to share its good experience in convention implementation such as with Ramsar convention, Montreal Protocol and Basel Convention with other developing countries. In this context linkage with or support for international frameworks such as the ASEAN Working group on multilateral environmental agreements or the CHM or River Basin Initiative under the CBD would be appropriate.

Objectives and Indicators

The objective would be *“Malaysia establishes an active process to implement environmental conventions and protocols and support national and regional implementation activities”*.

Environmental impacts would include:

- Successful implementation of key environmental conventions.
- Experience and lessons learned shared with other countries.

Indicators of success would be: level of progress in convention implementation, level of resources allocated under 9th Malaysia plan for convention implementation, number of exchange and collaboration activities ongoing with other countries related to conventions; level of activity of Malaysian delegations in future negotiations.

4.7.4 Economic Instruments

Main Issues

It is generally agreed that there are currently an inadequate allocation of resources for sound environmental protection and management in Malaysia. This is partly because of an overall shortage of funding due to Malaysia’s developing nation status especially following the regional economic crisis, but also is due to poor awareness and incentive systems to encourage greater resource allocation. At the moment the government is the main source of environment related funding but options need to be examined for the establishment of funding mechanisms supported directly by the private and public sector on the basis of the “User/beneficiary pays” and “polluter pays” principles.

Lead Partners

The lead partner in this activity would be the EPU together with the Ministry of Finance and appropriate sections in line agencies (e.g. DOE, WSD, DID, Federal Forestry Department) or associated ministries (eg MOSTE, Ministry of Public Works, Ministry of Agriculture, and Ministry of Primary Industries).who could introduce such economic instruments into their programmes.

Policies, Plans and Financing

The 8th Malaysia Plan specifically states the objective *“to increase the use of fiscal policy in pursuit of environmental objectives and promoting the use of appropriate market-based instruments and self-regulatory measures among industries”*.

Rationale and Nature of the Malaysian-Danish Cooperation

Economic instruments and incentive/disincentive measures can play an important role in stimulating civil society and the private sector to be more active in environmental management. Such incentives may include policy/legislative or economic incentives frameworks. Economic incentives may include product or effluent taxes and charges; grants or subsidies and user fees. In the second Country Programme, assistance was provided by Danced for the development and testing of some options for incentive measures. This is an area where Danish experience over the last 10 years provides a valuable basis for partnership with Malaysia. This focus would also build on experience from the activities in the present cooperation programme. Activities in third Country Programme are likely to focus on incorporating economic instruments

and other incentive/disincentive measures into a range of government and Danish supported projects rather than having a specific free-standing projects on economic incentives.

Objectives and Indicators

The proposed objective is that *“Economic instruments will increasingly be used by governmental agencies to stimulate improved environmental management and sustainable use of natural resources”*.

Potential environmental impacts will include

- Economic and other instruments used to facilitate effective environmental management and rehabilitation by key stakeholders.
- Improved self –sustaining resource generation for multiple use management of natural resources.

Possible indicators could be: number of projects and activities using new approaches for economic instruments, rate of replication of demonstrated techniques and increase in resources generated for environmental management through economic instruments.

4.7.5 Environmental Knowledge Building and Information Management

Main Issues

Accurate information on the status and value of the Malaysian natural resources and the environment are crucial to support effective decision making and environmental management. At present much of the information may not be of the best quality, may be out of date or hard to access. Some agencies do have good information but this may not be easily accessible by the decision-makers or managers who need it. Such problems are common to many countries and need concerted interagency coordination and also adequate resource allocation to deal with them.

Lead Partners

The EPU, the Department of Statistics and the Ministry of Science Technology and the Environment is the appropriate lead partner in this area. Other agencies with significant data holdings are the Malaysian Remote Sensing Centre (MACRES), Forest Department and Fisheries Department as well as the Department of the Environment. Additional data holdings are with the universities and various NGOs.

Policies, Plans and Financing

One of the priority areas identified in the framework of the 7th and 8th Malaysia plan relates to the collection and management of information or data related to environmental or natural resource management. Such information is critical for the sustainable management of natural resources and for integration of environmental issues into development planning.

Rationale and Nature of the Malaysian-Danish Cooperation

Priorities in this area include collecting and making available information on the spatial distribution of natural ecosystems such as wetlands or forests, hotspots for biodiversity conservation, areas of importance for the livelihood of local communities or potential for ecotourism. Such information is of value for land-use and development planning and for the preparation of natural resource management

activities or EIAs. At present this information is often scattered between a wide range of agencies and or hard to access.

A second thrust in this area is in the development of Sustainable Development Indicators (SDIs) which are supposed to provide at a glance whether the development undertaken by any country is sustainable or not. SDIs will provide a sign whether existing policies are achieving their development focus or additional intervention may be needed. A reliable and accepted system of SDIs will signal to policy makers the impact of current environmental initiatives as well as indicate the need for greater focus on environmental protection and conservation.

A third area relates to the provision of access to required information or data for environmental management purposes. In line with Malaysia's priority to develop an information-based society and knowledge economy, it will be important to examine ways in which the growing use of information and communication technology can be used to support better environmental decision making. This is an area in which Denmark has significant experience.

Objectives and Indicators

The proposed objective in this area is *“the quality and quantity of information needed for environmental management should be improved and made more accessible”*.

The environmental impact would be:

- Improved quality of environmental management and decision making based on improved access to information.
- Improved monitoring and reporting of environmental quality.

Indicators of success would include: increased availability to environmental information on the internet and other forms, regular production of reports on the status of Malaysian environment; operating system of sustainable development indicators; increased coordination and exchange between both governmental and non-governmental agencies on environmental information.

4.8 Participation of the Private Sector, Universities and NGOs

The four main channels of the present Malaysian – Danish cooperation: Government to Government; Support to NGOs; Support to Universities and the Private Sector Partnership Facility have been relatively independent so far but there is a desire to bring them closer in order to achieve a more coherent impact and improve synergy. This will be achieved by adjusting the arrangements for each of the support mechanisms, enhancing cooperation and exchange between the channels and also including representatives from all channels on the PSC.

Considerable support has been given to the federal and state levels during the first and second programme of cooperation and there is a need now to follow this up with a closer cooperation at local level. The programme should thus, in many areas, start to focus more at the local government and community levels.

During the third phase of cooperation, greater focus will be put on reaching out to the private sector and to the community. It is at these levels that self-interest is greatest

and where economic approaches can increase the incentives for the private sector and the community at large to be agents of conservation and environmental protection

Participation of the Private sector

There is a desire from Malaysia to accelerate and deepen cooperation with Denmark in areas such as environmental technology transfer and the creation of an enabling environment for the private sector within the provision of environmental services and for active partnership between Malaysian and Danish industries. Danish firms and industry are amongst the world's leaders in the provision of environmental services. Although this has been a focus also in the second Country Programme the desired results have yet to be achieved.

A business development component should be developed building on the present Private Sector Partnership Facility, which is designed to support the private environmental sector in Malaysia by establishing partnerships or joint ventures with the Danish environmental sector.

Some of the key areas to be addressed in the third Country Programme include:

- Simplifying the Private Sector Partnership Facility rules.
- Improving the distribution of information on the possibilities of the private sector partnership.
- Encouraging exchanges between the private sector in both countries.
- Transfer of marketable products and services to the Malaysian market through local partners.
- Utilisation of market opportunities for environmental services through the main government to government Malaysia – Danish cooperation programme.
- Establishment of demonstration project for technology adjusted to the Malaysian market.
- Support for local partners to develop capacity to provide services and equipment targeting the Malaysian and regional environmental market.
- Involving the private sector in the administration of the facility.

Participation of Universities

Universities are important agents of environmental change. Students who represent the next generation have a special role, responsibility and interest in contributing to safeguarding the environment. It has long been recognised that environmental education and human resources development are two of the most important factors in the longer-term adoption of sustainable approaches to development.

Presently Danced supports two consortia of Danish Universities (Duced - Danish University Consortium for Environment and Development) in their collaboration with a Malaysia consortium of universities (Muced – Malaysian University Consortium for Environment and Development). This collaboration assists Malaysian universities to upgrade their environmental-related courses using insights and techniques developed in Denmark especially on the application of problem orientated and inter-disciplinary approaches. Support is also given to a research programme within environment and sustainable development.

The future university cooperation should be based on long-term cooperation between the Danish and Malaysian universities. The university consortium should contribute to the education of graduates to participate in the sustainable development in Malaysia. The university component under the Malaysia - Danish programme should only be an interim component to facilitate the inclusion of sustainable development into the overall Malaysian University curriculum. Long-term cooperation between Danish and Malaysian universities should be based on partnership and agreements.

Participation of NGOs and CBOs

The working relationship between Malaysian NGOs and the various government ministries has strengthened over the past 10 years. There is now widespread cooperation between government agencies and various NGOs especially in relation to environmental education and awareness, and biodiversity conservation and recycling. NGOs and CBOs are seen as valuable agents that can offer new and fresh insights into the environmental debate and facilitate community/public involvement.

When fully developed the present NGO programme will comprise a central component providing support, networking and capacity building for NGOs and then a range of projects to support specific NGOs to undertake targeted awareness raising, community mobilisation and other activities.

Support has been indicated by government agencies for increased involvement of NGOs and CBOs in future phases of cooperation – in line with the proposal for increased focus in the programme on involving the general public and communities and in facilitating long term behaviour changes in areas such as waste reduction and recycling, energy and water conservation, reduction of littering, ensuring cleanliness of streams and rivers, community monitoring and self enforcement. NGOs have also indicated an increasing willingness to work with the government on these common objectives, subject to the availability of resources.

The future programme should focus on increased environmental awareness within society at large. The future aim of the third Country Programme will also be to support the development of an effective NGO community in Malaysia.

Danced assistance can be useful in building up capacity within the NGOs/CBOs to undertake such actions at a project specific level. The comparative advantages of the NGOs and CBOs in mobilising community resources, responding to and understanding grass root levels and empowering communities should be used on projects where these type of activities are relevant to achieving objectives.

It is proposed where possible that an integrated approach is used so that Government and NGO activities are more coordinated at the programme and project level to build a smart partnership.

It is also recognised that various modalities of NGO engagement would be appropriate including direct support – but directly supported activities should complement other elements in the programme

Danced assistance can be useful in building up capacity within the NGOs at project specific level and also to develop a holistic programme to empower NGOs as a proactive agent dealing with community and environmental based issues.

There are initiatives underway to strengthen and link Malaysian environmental NGOs that will facilitate more effective cooperation with the government and also with external assistance agencies such as Danced. A strategy is being developed for cooperation between the environmental NGOs within the framework of the third Country Programme and if approved by all concerned will probably involve activities:

- Within specific environmental themes and focus areas.
- Within Integrated and Cross Sectorial initiatives.
- Which will maximise policy dialogue and impact.
- Which involve Danish NGO partners.

The projects will include:

- Free standing NGO projects which complement activities by the government – NGO initiated and need driven at a local level.
- Small Grant projects – CBO initiated and at the grassroots level.
- Co-operation projects – mutually initiated by government and NGOs and focusing on policy issues.

4.9 Cooperation Programme Modalities

Local Ownership and Participation

The core of the programme will take its departure point from ongoing Malaysian plans and be reflected in local resource allocation. Most of the money will therefore shadow the Malaysian funding allocation rather than fill large gaps in funding. Gap filling may take place in cross-sectoral or integrated areas where it is difficult for sectoral agencies to allocate resources at least in the beginning of such processes. The challenge will be to find areas of cooperation where external support can extend, improve or in some way add value by providing a unique aspect that cannot just be achieved by the application of more Malaysian resources. The scope for assistance is thus narrow since it must be directed at areas where external assistance is necessary but also where there are ongoing and professionally prepared plans and programmes.

Where projects are intended to interact with the public sector they should be closely linked to federal and state budgeting, planning and expenditure routines. Where staff resources are to be activated this should be within already defined duties and work schedules. This will go some way towards avoiding the common problem of projects being without counterpart financing or counterparts being unable to attend to project duties because of the need to also attend to their core routine duties.

Support can, if wrongly channelled, harm more than it helps by temporarily substituting the need to get cost recovery working. Too much support or too thorough an approach may be impossible for other organisations to replicate if they do not have Danced support as well. If something is started that is not linked to ongoing programmes and initiatives, it might die out when the project stops. Projects that draw

on scarce public sector resources may not be helping in the long run. These are common failings in cooperation programmes. This cooperation programme should be designed to work with local processes and be compatible with the scale of locally available resources. These measures should improve the quality of the results and the chances of replication.

It is often noted that the projects are isolated and sporadic and are less effective since they do not support each other. A counter viewpoint and one that is closer to the Malaysian-Danish cooperation perspective is that what binds effective assistance is not internal cohesion between projects but the degree to which projects are linked to an appropriate national sector framework. It is the close link to a coherent Malaysia national framework (policies, institutions, priorities and plans) that makes projects effective. Internal cohesion between Danced supported projects could even be counter productive if it replaces rather than supports an existing framework or if it masks the presence of an inherently inappropriate national framework. The coherence of the projects has to come from the fact they all serve the same objectives for Danced environmental support to Malaysia.

It is a strong priority of this programme of cooperation that the projects are located at state and local levels as well as at federal levels. This will increase the visibility of the projects and build on the previous cooperation at more central levels. It will help the process of consolidation by completing the chain of support and demonstration from the central to the local level.

Many of the priority areas of cooperation involve initiatives that are multi-agency in nature such as integration of environment in urban planning or integrated river basin management. Danced supported project have a potentially catalytic impact when they assist in inter-departmental cooperation if as a result of such assistance the cooperation in the future improves. It is important that the cooperation programme is able to find and work with a lead partner from the Malaysian side rather than assume the coordinating “hub” role itself.

Since many of the environmental problems being tackled have a time horizon that is well beyond the time horizon of the environmental cooperation it is important that the follow up activities are well anchored locally in institutions that can carry out the tasks.

A minor part of the programme will be reserved for emerging priorities and for new aspects that show promise but which lie at the periphery of ongoing plans and resource allocations. In many cases this could reflect new opportunities for environmental improvement or test approaches which would otherwise not be tried. These projects are intended to be highly experimental or catalytic in nature. The outcomes do not therefore have to necessarily be sustained by Malaysian institutes. For this reason, unlike projects within the core support programme, it will not always be necessary that a local budget or plan be already in place.

Facilitation of Environmental Investments

Funding for environment and sustainable development is increasing in Malaysia as these areas assume greater importance for policy makers. There is recognition that new funding methods, which involve harnessing the private sector and adoption of

market driven approaches, are needed. The Third Agricultural Plan mentions a number of radical changes in funding the government support to the sector.

Denmark has been able through adoption of economic instruments, green taxes and the mobilisation of the private sector and civil society to substantially increase the funding available for environmental projects and activities. Some of these experiences will be transferable and useful for Malaysia and will be brought to bear and integrated into projects where relevant. It may during the later part of the Country Programme be found relevant to focus on this aspect more as part of the evolution of the cooperation programme into one that focuses more on mutual cooperation rather than support.

Demonstration, Implementation and Visibility

Most of the support in the previous phases has concentrated on technical assistance and on processes at the policy and planning level. The next programme of cooperation should, in some areas, support processes that are closer to the implementation phase and that will lead to physical results.

The Malaysia-Danish cooperation so far has built on a model where Danced assists with pilot or demonstration projects at federal or state level that then can be replicated elsewhere in Malaysia. The rationale is that Danced assistance is needed to test new concepts and support them through initial start up difficulties but that thereafter Malaysian resources will be sufficient to replicate the approaches developed. In line with this strategy the third Country Programme should support replication of results rather than finance the duplication of projects in other states.

Demonstration that is replicated is a highly relevant and potentially a very efficient form of support but the amount of replication so far in the cooperation programme has been limited. Some of the areas that could be explored in order to improve replication are: the need to verify that resources are available in other states for the concepts that should be replicated, closer linkage between local funding channels and Danced financing, greater and earlier attention given to dissemination and attention given to inter-state cooperation.

Modalities of Capacity Building

The modalities of capacity building should be broadened out to include not only on-the-job training by consultant teams but also to include twinning type secondments, short courses and the building up of Malaysian institutes of training. Post project completion follow up support including evaluation of training given so far should be offered where appropriate thus strengthening the consolidation of previous support.

Funding channels for capacity building need to be considered on a case-by-case basis. Funding through consultancy contracts has proven to be a flexible and practical arrangement. However, there may be instances with the development of a closer partnership where co-financing becomes more common and other more direct funding channels can be considered.

Modalities of Communication

Public participation improves effectiveness of governmental performance. Experience has indicated that decisions made through a process that includes public and institutional discussion result in better implementation of environmental goals, as well

as strengthened public support for governmental action. It builds partnerships between citizens, their communities, and regional and national agencies, both private and public. Public participation promotes environmental improvements and by supporting community awareness, helps to avoid costly mistakes. The process also promotes stakeholder accountability. When both private citizens and large corporations have a stake in the outcome of these activities, environmental stewardship is greatly improved.

Gender

A gender-sensitive approach will be used in the further development of the programme. Although both genders are well represented in decision-making positions in many of the relevant governmental and non-governmental agencies, there is more separation in roles at the local or community level. Thus it will be appropriate that social studies undertaken as part of the further programme design and targeting be undertaken in such a way as to allow gender-dis-aggregated assessment where appropriate. This is in line with strategies for advancing the role of women in Malaysian society as laid out in Chapter 20 of the 8th Malaysian Plan on Women and Development.

Evolution of the Cooperation and Longer-Term Regional Cooperation

During the third Country Programme, the cooperation will likely evolve to give a greater focus on assisting Malaysia in establishing itself as a leading figure in the global and regional environmental and sustainable development debate and coordination of environmental improvement.

The 8th Malaysia Plan indicates that *“efforts will be made to further strengthen cooperation with developing countries to promote a common stand on international issues. South South cooperation has been identified as an effective mechanism for optimising the potential of developing countries through mobilising and sharing of expertise as well as complementing programmes with donor countries”*.

In addition *“Malaysia will continue third country training programmes to assist other developing countries in areas where Malaysia has the expertise. Efforts will also be intensified to expand the scope and coverage of the Malaysian Technical Cooperation Programme (MTCP). Malaysia has also identified the modality of trilateral technical assistance to be encouraged with the cooperation of developed countries. This modality would encourage the replication of successful projects in other developing countries, utilising inputs from both Malaysia and the cooperating developed country”*.

This strategy of Malaysia to become increasingly more active in supporting other developing countries could open up opportunities for collaboration with Danced and other partners in regional or third country projects. Malaysia would also benefit from experienced from the Danced programme in Thailand and other countries and would also like to promote positive experiences from Malaysia.

Similarly, Danced support for more active involvement in development and implementation of global environmental conventions will allow Malaysia to engage in the international debate from a more well-informed and experienced basis and also draw on the experience of others in implementing conventions.

Options and modalities for regional or third country collaboration with Danced should be developed and tested through the third Country programme period. With regard to the South East Asian region, activities can build on the framework of the Danish Strategy for Regional Environmental Assistance.

5 Programme Management

5.1 Programme Steering Committee

The Programme Steering Committee (PSC) is responsible for the overall development and implementation of the Danish environmental assistance programme. The PSC was established on August 12, 1995 soon after the signing of the MOU formalising the bilateral arrangement between the Danish and Malaysian Governments. The PSC's mandate is to:

- Ensure the contribution of the programme to environmentally sustainable development within the thematic areas as identified in the Country Programme.
- Promote the Country Programme and its objectives, in relation to relevant public authorities, institutions, NGOs and the private sector.
- Promote the transfer, adoption, development and utilisation of appropriate Danish technology and know-how for environmental protection and sustainable natural resource management.
- Encourage effective cooperation between Malaysian and Danish Government agencies, NGOs, educational institutions, and private enterprises.
- Promote regional cooperation in environmentally sustainable development, particularly in those countries in the region with a Danced or Danida programme.
- Monitor and evaluate programme activities and ensure the fulfilment of responsibilities on specific Project Agreements.

The PSC's composition reflects a cross-section of key government agencies with responsibilities covering various aspects of environmental and natural resource management. High level commitment and interdepartmental decision-making has been enabled through representation of government agencies at ministerial level. The East Malaysian States of Sabah and Sarawak are also represented by their respective development planning agencies on the PSC. In order to integrate the four different channels of Danced cooperation, representatives from the private sector, universities and NGOs have been invited to be members of the PSC for the third Country Programme. The representatives of these groups will inform and provide input to the discussion of the PSC related to the activities within their channel of support. They will have observer status for areas of the agenda that do not pertain to their particular sub programme.

The membership of the PSC is given below:

- Deputy Director General (Sectorial), EPU (Co-Chair).
- Danced (Co-Chair).
- Ministry of Science, Technology and the Environment.

- Ministry of Primary Industries.
- Ministry of International Trade and Industry.
- Ministry of Agriculture.
- Ministry of Housing and Local Government.
- Ministry of Energy, Telecommunication and Multimedia.
- Ministry of Education.
- Sabah State Economic Planning Unit,
- Sarawak State Economic Planning Unit.
- Invited representative of the Private Sector and
- Invited representative of the environmental NGOs.

5.2 Programme Management

While the PSC has the overall responsibility for directing the programme in Malaysia the programme should be mainly managed at project level as this is where accountability and responsibility is attached for reaching project specific outputs and immediate objectives. However, an overall programme management will be necessary in order to:

- Plan and identify the future projects within the country framework.
- Extend and deepen the dialogue between Danced and key lead cooperation agencies.
- Monitor and report on the progress of the programme as a whole making use of project based progress reports.
- Make recommendations for adjusting and updating the Country Programme.

Programme management will require resources that will need to be mobilized and designed in detail.

5.3 Programme Implementation Plan

Activities to be funded should be developed together with the lead agencies and should be embedded and form part of the annual and five year plans and budgets. At the start of the programme a series of potential areas of cooperation should be identified based on the existing and already partially financed plans but where external assistance is required to improve the impact or to add value in some significant way. Co-financing between the cooperating institution and Danced outside of the cost of Danish technical assistance should in general be 50% each (including consideration of contributions in kind) unless exceptional circumstances prevail.

A first attempt at programming following these principles should take place in the first year of cooperation. This will involve the joint efforts of teams representing Danced and the relevant Malaysia lead agencies within the major areas of cooperation. The teams should develop an outline for a number of projects within the budget constraints of both Danced and the Malaysian institutions. A programme implementation plan should thus emerge and be updated every year during an annual review of the entire programme.

A minor part of the activities to be funded can be developed with one of the identified lead agencies outside of the scope of the annual or the five-year plans due to their catalytic or high experimental nature.

Activities to be funded under the NGO, Private Sector Facility and University elements of the cooperation will be guided by special considerations for each of these elements.

The proposed project management process would start with the submission to EPU by February each year of project proposals from the agencies, under the framework of the Country Programme and developed as part of the implementation plan. The PSC would meet in March to evaluate new project submissions for implementation in the following year as well as review and monitor existing projects and plans. By April approval would be given for the project to be implemented in the following year thus integrating it with the main government financial and approval cycles that will ensure that all Danced support activities within the core programme are co-financed.

Typical Project Cycle

- Project idea prioritised (from within framework of Country Programme and then documented as part of the later project implementation plan).
- First level screening occurs when the rolling programme implementation plan is approved in March by the PSC. This screening allows the mobilization process to start.
- Project design - Mobilisation - Planning of project preparation process. Initial stakeholder analysis and institutional screening to develop TOR Results in the Draft Project Document. The Project formulation should have measurable indicators, derived from the cooperation objectives, which in turn are derived from the thematic objectives. Sustainable development principles should also be in place. During this phase, formal comments are received from the lead agency, EPU, relevant stakeholders and Danced.
- Project appraisal –an independent quality control of the Project Document to obtain the final Project Document.
- Formal agreement, Tendering and Contracting.
- Start of Project implementation.

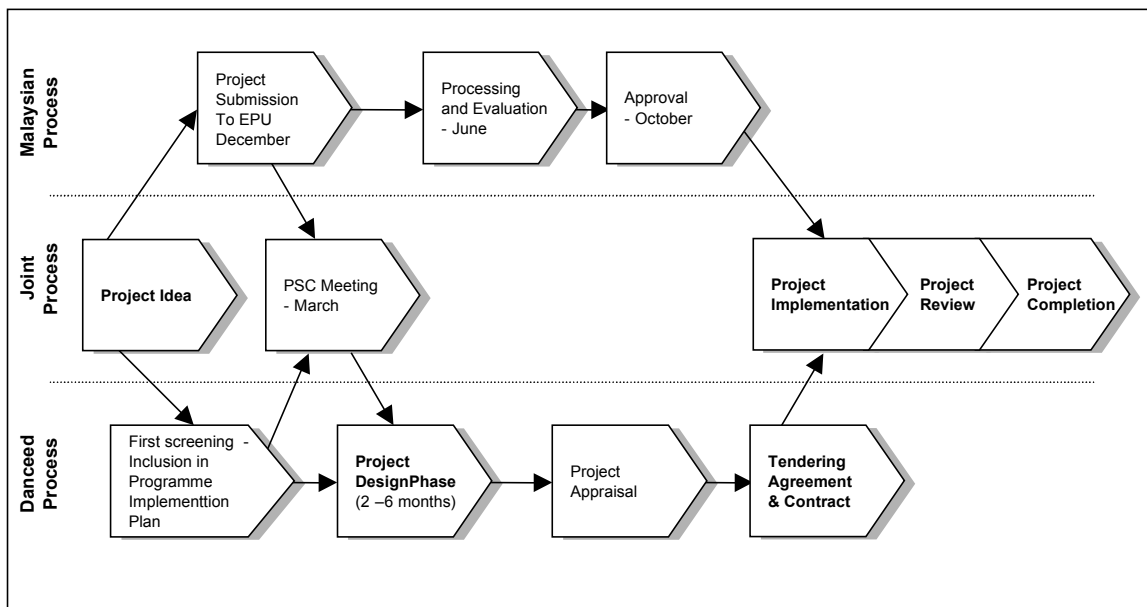


Figure 5.1 Typical Project Cycle

5.4 Summary of Criteria for Cooperation Projects

The main criteria for project selection are summarised below:

- Within the core rather than the periphery of one of the chosen focal areas.
- Part of the one-year and 5-year plan and budget (for government projects).
- Degree of co-financing by Malaysian institutes.
- Visible positive environmental impact.
- Assisting local and decentralised environmental initiatives.
- Contribution to implementation of environmental conventions.
- Contribution to awareness raising.
- Contribution to environmental information management or dissemination.
- Contribution to application of economic instruments.
- Demonstration value and likelihood of replication.
- Transfer of Danish technology and know how.
- Participation of stakeholders and civil society.
- Link to regional activities or exchange.

5.5 Evaluation and Monitoring

Measurement of the impact of support is important - not for its own sake but to increase accountability and allow adjustment of the programme so as to optimise the impact of the cooperation. In some core areas of cooperation it will be desirable to avoid parallel project indicator monitoring. Instead projects, which should be closely aligned to national priorities, should make use of national impact monitoring. Where this is insufficient it could, within key areas of focus, be relevant to add a component of support that assists in the measurement of environmental impact.

Every year EPU and Danced will carry out a brief annual review of the programme. This annual review will not replace the mid-term review but will benefit from any in-depth technical reviews made at the project level. The purpose of the review will be to present a report on the major progress achieved within the cooperation programme

and to make recommendations for improving the impact of the programme. The updated programme implementation plan will also be reviewed. The review report will be presented shortly before the PSC meeting so that the PSC can consider the findings.

A mid-term review of the programme will be taken to coincide with the mid term review of the 8th Malaysia Plan. Thus the review of the Malaysian – Danced cooperation within environment and sustainable development will both contribute to and benefit from the overall mid-term review of the 8th Malaysia Plan.

Once the Country Programme has ended and the impacts have matured an external evaluation may be undertaken.

5.6 Indicators

Potential indicators for the programme are discussed in chapter 4. As part of the ongoing programme management these will need to be developed and made part of the overall monitoring system. The indicators are a mixture of impact and output related indicators and in some cases it will be advantageous to use participatory monitoring approaches.

5.7 Assumptions and Management of Risks

The major assumptions are:

- Continuity in economic growth and political stability.
- Continuing and growing political willingness to emphasise environmental and sustainable development concerns.

There are risks that:

- Environment and sustainable development will be marginalized by more powerful economic and social forces.
- Institutional jealousy will prevail and projects dependent on cooperation will yield low results.
- Project design will be too complex to be implemented in reality.
- Programme management and adherence to programme design will be weaker than special interests to promote particular projects.

These risks can be minimised by: emphasising projects which lift the awareness and profile of environment, designing projects based on a realistic assessment of cooperation possibilities, simplifying project design where ever possible and reducing the level of ambition and, assigning sufficiently well qualified resources to programme management and project appraisal.

Annex 1 Programme Summary Table

Theme: Urban & Industry			Focus Area: Solid Waste Management	
International Obligations	National Plans/ Objectives	Lead Agency	Stakeholders	Priority areas for Danced support
Agenda 21/ Sustainable Development	SWM Bill, National Waste Management Plan (pending), Pilot Recycling Programme	Ministry of Housing and Local Government/ Department of Local Government	Local Authorities Private sector NGOs	<ul style="list-style-type: none"> ▪ Preventative approaches ▪ Effective privatisation ▪ Demand side regulation (recycle, reuse) ▪ Small and medium size towns ▪ Contribution to national master plan follow-up ▪ Cost recovery ▪ Awareness raising

Theme: Urban & Industry			Focus Area: Cleaner Production	
International Obligations	National Plans/ Objectives	Lead Agency	Stakeholders	Priority areas for Danced support
Agenda 21/ Sustainable Development Montreal Protocol ISO environmenta l standards	Draft Environmental Policy Reduced Pollution Industrial and scheduled waste minimisation ISO 14000 standards	Department of Environment/ SMIDEC/ SIRIM	Industries Consultants	<ul style="list-style-type: none"> ▪ Preventative approaches ▪ Demonstration projects ▪ SMI sector ▪ Cost recovery ▪ Awareness raising ▪ Information dissemination ▪ Capacity building

Theme: integrated and cross sectorial			Focus Area: Integration of Environment into Development Planning	
International Obligations	National Plans/ Objectives	Lead Agency	Stakeholders	Priority areas for Danced support
Agenda 21/ Sustainable Development	EIA approval conditions Strategic impact assessment	Town & Country Planning Department/ Department of Environment	State and local government Private sector Consultants	<ul style="list-style-type: none"> ▪ Planning systems ▪ State and local authorities strengthening ▪ Demonstration areas ▪ Capacity building ▪ Information on procedures and guidelines

Theme: Energy		Focus Area: Energy Efficiency and Renewable Energy		
International Obligations	National Plans/ Objectives	Lead Agency	Stakeholders	Priority areas for Danced support
UNFCCC	National Energy Policy 1979/ Fuel Diversification policy 1981/ Electricity supply act 1991/ 2001 budget incentives for energy efficiency and renewable energy/ Fifth fuel strategy/ Initiation of energy efficiency regulations and code of practice for energy efficiency and renewable energy in buildings	MECM/ Energy Commission	TNB ESCOs Private sector JBEG PTM	<ul style="list-style-type: none"> ▪ Private sector participation ▪ Danish-Malaysian companies collaboration in energy efficiency ▪ Planning support ▪ Demonstration projects for energy efficiency and renewable energy ▪ Guidance and advice on proposed energy efficiency regulations and code of practice for energy efficiency and renewable energy in buildings ▪ Capacity building ▪ Awareness raising

Theme: Water		Focus Area: Water Resources		
International Obligations	National Plans/ Objectives	Lead Agency	Stakeholders	Priority areas for Danced support
Agenda 21 Convention on Biodiversity/ Ramsar Convention	National Water Resources Policy (draft) Water demand management Integrated river basin management EQA 1974	DID/ MOA DOE/MOSTE Water Supply Dept./ Ministry of Public Works	CEMD/ MOSTE Fisheries dept. DOE State governments Forest Department NGOs Private sector Local authorities River management authorities Local communities Consumers	<ul style="list-style-type: none"> ▪ Preventative approaches ▪ Rehabilitation approaches ▪ Demonstration projects ▪ Support for integrated river basin management ▪ Incentives/economic instruments ▪ Capacity building ▪ Awareness raising ▪ Data gathering ▪ Information dissemination

Theme: Land and Water		Focus Area: Biodiversity		
International Obligations	National Plans/ Objectives	Lead Agency	Stakeholders	Priority areas for Danced support
Convention on Biodiversity/ Ramsar Convention/ CITES	National Policy on Biological Diversity.	MOSTE	EPU DOE State governments Dept. of Wildlife and National Parks Fisheries Department NGOs Local communities Local authorities	<ul style="list-style-type: none"> ▪ Capacity building ▪ Institutional strengthening ▪ Awareness raising ▪ Development of incentives ▪ Collection and management of information ▪ Community involvement ▪ Strengthening of protected area system ▪ Development of an integrated conservation strategy

Theme: Land				Focus Area: Multiple use Management of Forests
International Obligations	National Plans/ Objectives	Lead Agency	Stakeholders	Priority areas for Danced support
International policy Process on Forests/ ITTO Convention on Biological Diversity UNFCCC	National Forestry policy Multiple use of forest Sustainable forest management	Forestry Department/ Ministry of Primary Industries MOSTE	FRIM MOSTE DWNP Water resource agencies Tourism sector State governments Private sector Local communities Local authorities	<ul style="list-style-type: none"> ▪ Support on multiple use of forest ▪ Support for sustainable forest management ▪ Demonstration projects and models ▪ Incentives and cost recovery ▪ Testing for new revenue forest sources ▪ Community involvement ▪ Capacity building ▪ Awareness raising ▪ Monitoring and data gathering ▪ Information dissemination

Annex 2 References

Official policy documents

- 1) Seventh Malaysia Plan 1996 – 2000
- 2) Mid-term Review of the Seventh Malaysia Plan 1996 – 2000
- 3) The Third Outline Perspective Plan 2001-2010.
- 4) The Eighth Malaysia Plan 2001-2005
- 5) Kuala Lumpur Declaration on Environment and Development (April 1992): Second Ministerial Conference of Developing Countries on Environment and Development.
- 6) The 2001 Budget
- 7) The National Land Council (November 2000): National Forestry Policy 1978 (revised 1992)
- 8) Ministry of Science, Technology and Environment, Malaysia (1998): National Policy on Biological Diversity
- 9) Ministry of Tourism and Environmental Development, Sabah (May 1994): A wildlife policy and action plan for Sabah
- 10) Economic Planning Unit, Prime Minister's Department (1993): Malaysia National Conservation Strategy – towards sustainable development
- 11) Laws of Malaysia; National Forestry Act 1984 and National Forestry (Amendment) Act 1993
- 12) Second Industrial Master Plan, 1996 – 2005 (IMP2)

Annex 3 Project Implementation Plan

Description	2001	2002	2003	2004	2005	2006
Projects continuing into the third Country Programme						
1. Capacity Building for the Environmental Conservation Department (ECD) Ministry of Tourism, Development, Environment, Science and Technology (MTDEST) Sabah (1 Sept 1999 – Aug 2002)		↓				
2. Sustainable Urban Development Sabah (1 April 1999 – Aug 2001)	↓					
3. Sustainable Urban Development Sarawak (1 June 1999 – Dec 2001)	↓					
4. Economic Approaches to Sustainable Development (EPU) (7 Aug 2000 – July 2003)			↓			
5. Capacity Building on Education, Training and Research in Industry and Urban Areas Malaysia (1 Aug 2000 – Dec 2001)	↓					
6. Cleaner Technology for Improved Efficiency and Productivity of the Malaysian Industry, SIRIM (2 nd Quarter 2000 – 2 nd Quarter 2002)		↓				
7. Capacity Building in Government and Related Agencies Malaysian Energy Centre (14 Aug 2000 – Feb 2003)			↓			
8. Centre for Education and Training for Renewable Energy and Energy Efficiency, USM (2 Oct. 2000 – April 2003)			↓			
9. Demand Side Management, Department of Electrical and Gas Supply (Early 2001 – early 2004)				↓		

Description	2001	2002	2003	2004	2005	2006
10. Nature Education and Research Centre, Endau Rompin National Park, Johore (1 Aug 1996 – July 2001)	▲					
11. Management of Krau Wildlife Reserve, Capacity Building and Human Resource development (10 Aug 1998 – July 2001, extension to Jan 2002)	↘	↘				
12. Management of Maliau Basin Conservation Area, Sabah (1 Oct 1999 – Sept 2001)	↘					
13. Integrated Conservation and Development, Perlis State Park (Feb 2000- Jan 2003)			↘			
14. Support to Wildlife Master Plan Implementation through Improved Management of Totally Protected Areas, Sarawak (Oct 2000 – Sept 2003)				↘		
15. Capacity Building for the Wildlife department MTDEST, Sabah (Mid 2000 – mid 2003)			↘			
16. Capacity Building in Research and Education on Sustainable Land Use and Natural Resources Management, UNIMAS (27 Mar 2000 – Mar 2003)			↘			
17. Capacity Building and Human Resources development for Integrated Catchment Planning in the Department of Irrigation and Drainage Sabah (Mid 2001 – mid 2003)			↘			
18. Collaboration in biodiversity between UMS (Sabah) and Danish Universities (June 1997 – June 2001, 6 month extension not yet approved)	↘					
19. Management for conservation and sustainable use of peat swamp forest and associated water regimes in Malaysia (Oct 2001 – Sept 2004)				↘		
20. Integrating Environmental Issues into Spatial Planning, Local Plans in Sabah (August 2001 – July 2004)				↘		

Description	2001	2002	2003	2004	2005	2006
21. Capacity Building on International Conventions for Conservation and Environmental Management Division, Ministry of Science, Technology and the Environment Dec 2001 – July 2004) Gov. Proj Agreement not yet signed	↔			↔		
22. Integrating Environmental Issues into Spatial Planning - Local Plans in Sabah (mid 2001 - mid 2004)	↔			↔		
23. Energy Efficient Design Building For MECM as Key Demonstration Building for Energy Use Performance and Environmental Qualities in Malaysia (15 Jan 2001 - Oct 2001)	↔					
24. Management for Conservation and Sustainable Use of Peat Swamp Forests and Associated Water Regimes in Malaysia (Mid 2001 - mid 2004)	↔			↔		
New Projects under the third Country Programme		↔				↔
Review of the third Country Programme			↔↔			