The Capacity Building of the Environmental Conservation Department Project (ECD-CAB), Sabah, Malaysia

Small grant environmental projects - Sabah

December 2001

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Introduction

The paper presents a catalogue of small environmental projects Danced could support in Sabah. The note shall be seen as a follow up of to the Capacity Building of the Environmental Conservation Department, Sabah, Project's (ECD-CAB) study tour to Denmark, September 2001.

The study tour included 16 Ministers, Directors, Assistant Directors and Senior Officers from Sabah:



The study tour group comprised of (from left): Mr Eric Usip Juin, Director, State Environmental Conservation Dept. (ECD); Mr Alvin Wong, Ass. Director, Fisheries Dept.; Pg. Hassanel Pg. Mohd Tahir, Director, State Economic Planning Unit (EPU); Steven Laison Sondoh, Sinior Officer, Min. of Finance, Mr Carsten Hollander Laugesen, CTA, COWI; Mr Shumardijaya Marsudi, Deputy Secretary, Natural Resource Office (CM Dept.), Datuk Muhamad bin Jafry, Director, Land & Survey Dept.; Mr Ho Jin Wah, Director, Drainage & Irrigation Dept. (DID); Datuk Abdul Rahim Ismail, Assistant Minister, Chief Ministers Dept.; Datin Hajjah Dayangku Ainun Pg. Bagul; Datuk Karim Hj. Bujang, Assistant Minister, Min. of Tourism, Environment, Science and Technology (MTEST); Ms Teresa Chong, Deputy Director-Reg. Town & Country

Planning Dept.; Mr Sayuti Sapei, Director, Federal Dept of Environment (DOE); Mr Patrick Mahidi Andau, Director, Wildlife Dept.; Mr Deratil Hj. Boklan, Ass. Director, Dept. of Agriculture; Mr. Ag. Tajuddin Ag. Bahar, Senior Officer, Min. of Tourism, Environment, Science & Technology (MTEST); Mr Pilis Malim, Ass. Director, Forestry Dept.

Following the study tour, the group has meet at the residence of Datuk Karim Hj. Bujang, Assistant Minister, Ministry of Tourism, Environment, Science and Technology (MTEST). Furthermore has the Environmental Conservation Department (ECD) undertaken individual meetings with several of the participating Ministers and Directors.

Based on the tour (that comprised nearly all key environmental stakeholders in the State of Sabah), the positive feedback from the participants, and the opportunity for the ECD to play an integrative role and build important networks with its key stakeholders, this proposal presents a number of small-scale projects for continued support to environmental improvement projects in Sabah, project undertaken by ECD and other study group participants/environmental stakeholders.

If granted, the projects could either be administered by the on-going ECD-CAB project or could be allocated directly to the relevant stakeholders. Most of the projects will be undertaken by ECD in cooperation with one or more key stakeholders. The first proposal, - environmental monitoring of large scale projects – has earlier been submitted to State EPU.

All project ideas presented and described in brief below, have been discussed with the relevant stakeholders and will, if granted, be implemented with commitment and interest.

Best regards

Carsten Hollænder Laugesen & Eric Juin

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1 Environmental monitoring of large scale development projects

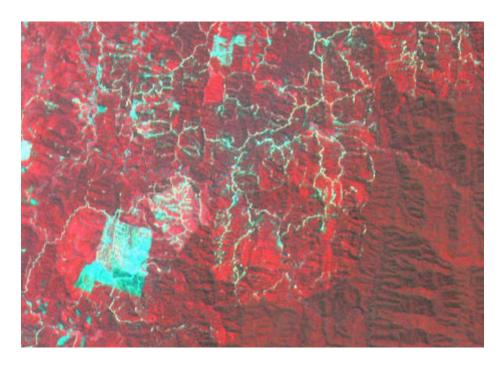
Additional support to expand the existing environmental monitoring capacity of the Environmental Conservation Department, Sabah.

Background

In light of the positive action taken by the Danish Minister for the Environment and Energy in expressing his interest in facilitating good environmental management in relation to ongoing forestry projects in Malaysia, the Environmental Conservation Department (ECD) propose a further capacity development activity linked to this statement.

Objectives

The ECD is responsible for assessing and monitoring the impacts of development projects, which may impact the environment within the state of Sabah. As many of these projects are related to land-use conversion or timber resource development, they are large scale in nature and often remotely located. Site investigations are therefore often limited due to the logistical difficulties in accessing and monitoring large areas of land in such remote locations. The ongoing DANCED funded capacity strengthening programme within the ECD is already experimenting with available Geographical Information System (GIS) and remote sensing technology so as to be better equipped to meet the environmental management demands of the future.



A remotely sensed image of the west coast of Sabah showing vegetation (red), and disturbed areas such as logging roads and newly cleared plantation sites (pale colours).

While it is not intended to substitute the valuable activity of site visits, if ECD could take full advantage of the existing environmental monitoring tools and the rapidly developing remote sensing and geographical information technologies, this would further assist in enhancing the Department's professional capacity to carry out monitoring and assessment activities. Therefore an increased capacity to acquire and process remote sensing information and the systematic integration of results into the ECD environmental database will provide timely assistance, particularly given this critical stage of the State's development, which is currently experiencing mounting development pressures and the subsequent threats to the environment and remaining resource base.

Therefore the aim of the project is to expand the capacity of the existing Environmental monitoring and planning sections of the Environmental Conservation Department, Sabah, to process, analyse, evaluate and use spatial regional data for environmental decision making including regional EIA assessments. Acquired data will also provide support for the environmental status/indicator information required by the State

Further strengthening of the ECD capacity in this region is something that has already been identified as a long-term requirement of the Department.

Given the current pressures upon the environment within the Sate there is some urgency in being able to meet these requirements. The ECD-CAB therefore request additional assistance to supplement and expand the current GIS/remote sensing section within the Department.

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Output and activities

The following outputs and activities are envisaged:

- Contracting of consultants
- Procurement of hardware, which include PC/data server, plotter, data storage medium, additional software license
- Purchase of images
- Training opportunities implemented
- Yearly monitoring reports 2002-2004.

Duration and reporting

The activities are to be implemented over the remaining months of the ECD-CAB project period. A status and lesson learned report will be prepared.

Inputs

The Project will need assistance in the form of international and national consultancy services (respectively approx. 2 and 12 mm), budgets for hardware and a minor reimbursable budget (accommodation, travel, etc.). A working budget for the above would approximate 250.000 Malaysian Ringgit.

Implementing agency(ies)

Environmental Conservation Department in cooperation with Lands & Survey Department.

Contact persons:

Eric Juin, Director, Environmental Conservation Department Mrs. Doriah Tai Yun Tyng, Head of Division, Land Information System, Land & Survey Department.

2 Environmental assessment for centralised pig farming areas

A preliminary EIA and feasibility study for a proposed centralised pig farm area in Sandakan, Sabah.

Background

The Department of Veterinary Services and Animal Industry is currently undergoing the process of locating suitable sites for centralised pig farm areas. The Department of Veterinary Services and Animal Industry and the Environmental Conservation Department has furthermore prepared a draft Livestock Rules and a draft Control of Pig Farming Pollution Regulations, which hopefully will be endorsed early 2002. The centralised pig farming area (CPA) will be implementing the requirements laid out in these rules and regulations.



As considerable investment in infrastructure is required to meet the demands of a centralised pig farming area, careful attention must be paid to the site selection and planning

It is by making the impact of these policies and legislation effective that sustainable environmental management of pig farms in Sabah is most likely to be achieved.

Objectives

The objective is to provide an environmental, technical and financial assessment of the proposed centralised pig farm in Sandakan. The assessments will provide the background for the actual design and implementation of the CPA, the first of its kind in Sabah.

It is hoped that the Danced Private Sector Programme can be utilised for the design and implementation of the CPA, whether undertaken as a turnkey project or as project where the individual farmers implements their pig farm following the requirements set forth in the EIA and technical feasibility studies.

Outputs and activities

The scope of work could include, but are not necessarily limited to the following outputs and tasks:

- Contracting of international and local consultants
- Draft preliminary EIA, technical and financial feasibility study
- Inter-departmental and pig farm industry workshop
- Final preliminary EIA, technical and financial feasibility study
- Draft proposal for a Private Sector Project.

Duration and reporting

The proposed project idea will cover a one-year period. A status and lesson learned report will be prepared.

Inputs

The Project will need assistance in the form of international and national consultancy services (respectively approx. 4 and 6 mm), and a minor reimbursable budget (accommodation, travel, etc.). It is foreseen that the total amount for the project will amount to not more than 350.000 RM.

Implementing agencies

The Environmental Conservation Dept. in close cooperation with the Dept. of Veterinary Services and Animal Industry and State Economic Planning Unit.

Contact persons:

Datuk Ibrahim, Director, Dept. of Veterinary Services and Animal Industry Eric Juin, Director, Environmental Conservation Department Pg. Hassanel Pg. Mohd Tahir, Director, State Economic Planning Unit (S-EPU) Mr. Khong, Head of Div., Dept. of Veterinary Services and Animal Industry.

3 Incorporation of environmental protection clauses into Land Title Terms and Conditions and the enforcement thereof

A study into international trends and enforcement issues for land title terms and conditions to be sensitive to Environmental Preservation while permitting development of land.

Background

Agenda 21 of the Declaration of United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, 1992 sets out measures for, among other things to protect the atmosphere, combat deforestation, prevent pollution, halting the depletion of fish stocks, and safely managing toxic wastes. Agenda 21 of Rio Conference acknowledged that the economic development and social and environmental well-being are heavily dependent upon the use of land and water resources. All economic development such as mining, farming, forestry, transport, tourism, coastal zone management are dependent on both land and water resources. Aspirations of nations to achieve sustainable development can only be realised if land and water resources are being managed properly.

Land is a scare commodity that will not grow. It is the fixed asset of a nation and the key to all developments. With the appreciating value of land and growth of urbanization through increased population, the pressure to develop is mounting even on swampy, mangrove areas or hilly slopes. In Malaysia, the pressure to seek out for land to convert and develop into residential / commercial / industrial land is rising as the nation seeks to achieve development by 2020.

The Lands and Surveys Department of Sabah is given the mandate to issue land titles on behalf of the state government of Sabah to all landowners. The land tenure system practised here is the Torren System. All land titles are prescribed with specific terms and conditions, which can be used by the State to achieve good governance of Natural Resources management and maintain balance between development and environment protection. At the completion of lease period, the government may review the terms and conditions prescribed on the land.

With a good enforcement legal framework and support personnel, the government can control development activities to be sustainable and environmental-friendly. Hence, the enforcement of land titles terms and conditions is an important part of the sustainable development.

Objectives

The overall objective is to establish a legal framework that introduces terms and conditions that allows environmental protection as well as maintain sustainable development for the land in Sabah. It is envisaged that Sabah will benefit from the study of trends and enforcement methods of other developed nations in issues pertaining to control of development via land title terms and conditions.

Output and activities

The main output of the project is to derive a set of legal frameworks that may be enforceable on land titles. The main outputs and activities includes:

- Assessment of the need for better environmental protection clauses in land titles
- Collection of baseline data from land title information system on the terms and conditions prescribed
- Study tour to Denmark to review the Land Registry system and enforcement of environmental protection clauses and the computerisation efforts for land matters at ministry, counties and municipalities
- Identification of critical issues pertaining to environmental protection clauses in land titles and the enforcement thereof
- Mapping of existing land ownership tenure terms and conditions in the environment sensitive areas
- Contracting of consultants
- Training opportunities
- Workshop among stakeholders on enforcement of environmental protection clauses in land titles
- Yearly monitoring reports 2002-2004.

Where and when necessary, the project will provide opportunities to develop the capacity of participating departments in the field of Information Communication Technology (ICT) and Geomatics to approach land alienation, land administration and land registration. With this knowledge, it will be useful to address issues such as backlog and plan to improve the service of land matters in Sabah.

Duration and reporting

The activities are to be implemented over a two-year period. A status and lesson leaned report will be prepared.

Inputs

The Project will need assistance in the form of international and national consultancy services (respectively approx 2 and 12 mm) and minor reimbursement budget (accommodation, travel, etc). A working budget for the above would approximate 400,000 Malaysian Ringgit.

Implementing Agencies

Lands and Surveys Department in close cooperation with the Environmental Conservation Department.

Contact Persons:

Datuk Mohamad Jafry, Director of Lands and Surveys Mr Eric Juin, Director, Environmental Conservation Department Ms Doria Tai Yun Tyng, Superintendent, Land Information System Section, Lands and Surveys Department.

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4 Wetland land-use and development plan

Background

Wetlands are a rich ecological, economic and social resource, providing benefits for many sectors of society such as fisheries, tourism, forestry, coastal protection and conservation. Furthermore, wetlands worldwide are increasingly being considered and used as natural wastewater treatment plants where the wetlands support the final treatment of wastewater, thus providing an invaluable infrastructure support role to local government. The potential for such use of wetlands in Sabah is presently unknown. If areas of wetlands can be reserved for such purposes, large savings can be made in the cost of wastewater treatment as well as providing other utility in the role of the forests.



Because of the dynamic flows of water and suitable habitat for plant growth, wetlands can often absorb and process large amounts of nutrients that would normally end up being a pollutant

However, wetland areas in Sabah are currently undergoing rapid change with development pressure emerging from many different sectors of society. An environmental management plan that focuses on assessing the optimal utility of any given wetland is therefore urgently required to guide the orderly and balanced

development, alongside identifying the appropriate use of Sabah's remaining wetlands.

Objectives

The overall objective is to establish the remaining potential for utilising wetlands in and around the urban centres of Kota Kinabalu, Turaran and Penampang and Papar as a multiple utility resource. There is also a need to develop a long-term strategy for the utilisation of wetland resources in Sabah.

Outputs and activities

The main output of is to produce a Wetlands Development Plan for the remaining areas nearby the urban centres of Kota Kinabalu, Tuaran, Penampang and Papar. Foremost this plan will identify the remaining areas available for use by the State i.e. land area which are not already under title or applied for. This plan will also outline guidelines and policies for the management of these wetlands, with an aim to balance the conflicting issues involved in the utilisation of the wetland resources. The main outputs and activities include:

- Identification of critical issues and preparation of final work plan
- Collection of baseline data, comparisons with other Plans and regulations
- Study tour to Denmark to review the mapping and cadastral system used in Danish ministries, counties and municipalities
- Mapping of ownership of existing wetland areas, including land status, involving the integration of remotely sensed images and cadastral maps
- Ground truthing for quality and status of remotely sensed wetlands
- Draft wetlands utility plan
- Workshops on guidelines, policies and development options
- Final Wetland Plan.

Where and when necessary the project will provide opportunities for developing the capacity of participating departments in the field of geomatics i.e. an integrated approach to the acquisition, analysis, management and application of spatially-referenced data. Geomatics embraces the traditional area of surveying and mapping, as well as remote sensing and geographical information systems. Development in this area will be essential when matching titled land and suitable available wetlands in the field and will require the integration of Cadastral data into a GIS.

These skills will also be useful in addressing other issues currently related to the monitoring of natural resource use in Sabah at the moment. Mobile GIS technology allows for more easy and efficient data collection in the field. Global positioning system (GPS) receivers can be added facilitating direct data capture. Data is therefore immediately available and validated in the context of an actual map. Desktop GIS data is ready to use on handheld mobile device.

Duration and reporting

The proposed project idea will cover a 1 ½ year period. The Plan and a status and lesson learned report will be prepared.

Inputs

The Project will need assistance in the form of international and national consultancy services (respectively approx. 2 and 10 mm), budgets for plan preparation, study tour and dissemination and a minor reimbursable budget (accommodation, travel, etc.). The total amount for the project will amount to not more than 300.000 RM.

Implementing agency(ies)

Environmental Conservation Department in close cooperation with Lands and Surveys Department Town and Regional Planning Department, Fisheries Department and Forest Department.

Contact persons:

Eric Juin, Director, Environmental Conservation Department Mohamed Jafry, Director, Lands & Survey Department Rayner Stued Galid, Director, Fisheries Department Malim Pilis, Assistant Director, Forestry Department Adrian Chong, Director, Department of Town and Regional Planning.

5 Identification of river reserves in land use planning and development

Background

One of the more desirable mitigation measures that can be applied to land development projects requiring the conversion on one type of land use to a nother is the retention of a river reserve to maintain the integrity of the river bank and to provide some continuity in riparian habitat. Currently there are several guidelines providing recommendations for the identification of rivers that require reserves i.e. width of river and width of river reserve. For example, the Forest Department require reserves of varying width in proportion to the width of the stream/river, and is largely applicable to rivers in Forest Reserves. The Department of Irrigation and Drainage require a 20m reserve on either side of any river having a width of 3m or more. In practice, however, there are major constraints and for a number of good reasons, not least of which is the actual identification of rivers that require a reserve and thereafter the actual field implementation. Furthermore much riverbank land has already been developed and/or is privately owned.

Therefore the complex nature of riverbanks alongside land ownership issues will often preclude identification of reserve areas and the right to request the land to be reserved. The current situation is paradoxical for the implementing agencies concerned.



If successfully implemented, the provision of vegetation reserves along stream channels can contribute significantly towards mitigating stream water pollution from soil erosion, as well as maintaining important riverside habitat

Objectives

The overall objective is to develop a set of practical criteria and thereafter landuse options, for use by government agencies and others involved in land development. The criteria and options will ultimately assist and provide guidance as to land-use planning adjacent to any watercourse.

- Outline how to identify rivers of certain sizes that require a reserve
- On a pilot study basis i.e. a selected catchment, map riparian land-use and ownership
- Lessons learnt workshop (Denmark) and examination of issues and options
- Mapping of areas that potentially require reserves or special land-use
- Trial implementation of reserve/zoning establishment i.e. surveying, demarcation
- Draft river reserve guidelines
- Workshops on guidelines, policies and development options
- Final river reserve Plan.

Where and when necessary the project will provide opportunities for developing the capacity of participating departments, particularly with regard to 'lessons learnt' from the Danish Protection Agency experience with watercourse management. Opportunities will also be provided to strengthen skills in the field of geomatics i.e. an integrated approach to the acquisition, analysis, management and application of spatial-referenced data.

Duration and reporting

The proposed project idea will cover a 1 ½ year period.

Inputs

The Project will need assistance in the form of international and national consultancy services (respectively approx. 4 and 6 mm), budgets for plan preparation and dissemination and a minor reimbursable budget (accommodation, travel, etc.). It is foreseen that the total amount for the project will amount to not more than 250,000 RM.

Implementation Agency

Environmental Conservation Department in close cooperation with Lands and Surveys Department and Department of Irrigation and Drainage.

Contact persons:

Eric Juin, Director, Environmental Conservation Department
Mohamed Jafry, Director, Lands & Survey Department
Mrs. Doriah Tai Yun Tyng, Head of Division, Land Information System, Land
& Survey Department
Mr Ho Jin Wah, Director, Drainage & Irrigation Dept.
Yap Siew Fah, Drainage & Irrigation Department.

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6 Support to community based river committees

A demo-project of the provisions in the new Fisheries Enactment.

Background

The Fisheries Department is in the process of amending its present Enactment. It is by making the impact of this legislation effective that sustainable environmental management of rivers and its resources in Sabah is most likely to be achieved.



The active participation of local communities and relevant stakeholders is required to move towards sustainable management of aquatic resources in rural areas.

One of the envisaged changes in the new Enactment will be a provision to enable the formal creation of River Committees with the authority to locally take responsibility for the protection and development of the river resources.

Objectives

The objective is to give substance/test/demonstrate/pilot test the new provisions given in the Enactment in relation to the River committees The experience gained will be used for the formulation of specific Rules linked to the Enactment. This could greatly enhance local responsibility and involvement in the protection, development and susatainable use of the river resources.

Outputs and activities

The scope of work could include, but are not necessarily limited to the following outputs and tasks:

- Selection of a number of presently informal River Committees. The following three, presently in-formal committees, are envisaged: Babagon, Bota Belud and Kiulu
- Capacity building of the River Committees, which include training, formulation of action plans and rules, study tours, inter-change of experiences gained. The capacity building approach will build on the experiences gained from the Danced Community Development Project in Thailand
- Pilot implementation activities, e.g. restoration of river banks, improvement in fishing facilities, facilities for the comities
- Preparation of a draft Rules under the Fisheries Department Enactment
- An outline of the future for River Committees in Sabah, including possibilities for expansion and sustainability.

Duration and reporting

The proposed project will cover a one-year period. A status and lesson learned report will be prepared.

Inputs

The Project will need assistance in the form of international and national consultancy services (respectively approx. 2 and 6 mm), budgets for capacity building activities and pilot implementation activities and a minor reimbursable budget (accommodation, travel, etc.). It is foreseen that the total amount for the project will amount to not more than 200.000 RM.

Implementing agency

Fisheries Department in cooperation with the Environmental Conservation Department.

Contact persons:

Rayner Stued Galid, Dirctor, Fisheries Department Alvin Wong, Assistant Director Fisheries Department.

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7 Wastewater planning and regulation

A pilot project on the implementation of the proposed wastewater regulation issued by the Environmental Conservation Department.

Background

The Environmental Conservation Department is in the process of preparing a regulation for wastewater planning, operation and maintenance; Conservation of Environment (Control of waste water pollution) Rules, 2002. These Rules are based on similar Danish regulations and would result in the first coherent and comprehensive attempt to regulate wastewater in Sabah, which one of the main environmental problems facing Sabah today.

An initial screening survey undertaken by the Environmental Department has clearly indicated that wastewater disposal system in Sabah is in need of better planning and control of existing treatment facilities.



The present status of the overall system is either unknown or uncertain, and existing facilities are to a great extent either broken down or lacking operation and maintenance.

For new developments, the existing practice is that construction of a local decentralised wastewater treatment plant is required. In rapid growing cities such as Kota Kinabalu the result of this practice is uncoordinated implementation, inappropriate location of plants causing nuisance to the surroundings, and in general the implementation of an economical and environmental unviable system with little impacts. The practice has resulted in waste of funds and manpower.

Objectives

The objective is to give demonstrate and pilot test the proposed wastewater regulation in close cooperation with the Infrastructure Department (JKR) and 1-2 District Councils. This could enhance local districts capacity, responsibility and involvement in the planning, operation and maintenance of wastewater systems with in their district.

Outputs and activities

The project would consists of three elements:

- 1. Development of a Wastewater and Receiving Water Master Plan for 1-2 districts (e.g. Kota Kinabalu and Tawau) dealing with the following aspects:
- Registration of existing conditions as regards: (i) Legislation/guidelines/bylaws/regulations in force, present practice, and enforcement tools, (ii) Financial situation (Budget and Funds, Billing, etc.), (iii) Existing Plans, (iv) Demographic Data, (v) Receiving waters (self-purification capacity, water quality, river use, water intakes, construction sites, siltation and erosion), Impact of wastewater discharge on recipient quality, Sewerage Systems, Pumping Stations, Wastewater Treatment Plants, Storm Water System, Discharge Points to Receiving Waters, (location, ownership, capacity, performance, lifetime assessment)
- Preparation of Plans: (i) Receiving Water Quality Plan, (ii) Wastewater Plan, Storm Water Plan, (iii) Financial Plan
- 2. A pilot project on Operation and Maintenance, which could include:
- Conduct Training (operation, maintenance, log books and reporting, etc.)
- Prepare O&M Manuals for a Few Central WWTP's
- Prepare Manuals for a Main PS
- Equipment Supply
- Hour counters for miscellaneous equipment, e.g. Pumps.
- Electrical supply meters for certain energy demanding equipment
- Adjustable weirs for in- and outlet arrangements at Inanam WWTP
- Flow metering facilities (weirs, flumes, ultrasonic level transmitters, logging equipment, pulse control for sampling).

- 3. Review and strengthening of regulations, by-laws and other enforcement tools, which could include:
- Review and amendments of existing legislation
- Assessment and establishment of laboratory capacity, including possible certification
- Conduct training in laboratory and sampling procedures (planning, execution and reporting), including BOD5 and SS analyses
- Equipment Supply, including sampling facilities (Samplers), laboratory Equipment (BOD, SS), PC's, printers, software.

Duration and reporting

The proposed project will cover a two-year period. A status and lesson learned report will be prepared.

Inputs

The Project will need assistance in the form of international and national consultancy services (respectively approx. 6 and 12 mm), budgets for activities as outlined above. It is foreseen that the total amount for the project will amount to not more than 500.000 RM.

Implementing agency

Environmental Conservation Department in close cooperation with JKR and District councils.

Contact persons:

Eric Juin, Director, Environmental Conservation Department Paul Thien, Head of Wastewater Division, Infrastructure Department (JKR) 1-2 District councils (not selected yet).

8 Sabah East Coast Environmental Assessment

An assessment of and plan for the environmental and planning issues related to the East Coast of Sabah.

Background

The coastal area of Sabah is recognized as an area with a rich and unique variety of natural resources. A variety of environmental issues and problems are occurring, resulting in negative impacts on the area. An environmental Management Plan along the shoreline is important, because the coastal zone, as the center of attraction for people and development, is where most main towns are located and furthermore because the area is rich with various economic, social and ecological resources, such as fisheries, tourism, forestry, and coastal preservation/conservation.

Objectives

The main objective of the proposed project is to prepare a Shoreline Environmental Management Plan for the East of Sabah from Kudat district to Tawau district. The East Coast SEMP will complete the Shoreline Management Plan for the coastal area of Sabah. The West Coast SMP, which was approved by the State Cabinet in September 1998 is presently used as a guideline for coastal development projects. The Shoreline Management Plan (West Coast Sabah) has assisted the State Government in planning the development and management activities within the coastal area in an organized and environmentally sensitive way.

Outputs and activities

The main output of the project is to produce a Shoreline Management Plan for the East Coast of Sabah. This plan will outline a working plan containing clear guidelines and policies for the management of the State shoreline balancing the often conflicting issues of environmental conservation, coastal erosion, coastal flooding, tourism, population growth, agriculture, fisheries and other related industries. The main outputs and activities include:

- Identification of critical issues and preparation of work plan
- Collection of baseline data
- Existing environmental baseline

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- Preparation of management objectives in order to identify a limited number of consistent basic management strategies suitable for zoning, establish working guidelines and legal procedures for implementation, identify opportunities and strategies for sustainable development
- Development of management strategies. In developing the management strategies, particular attention shall be paid to resolving potential conflicts between industrial development and tourism, environmental degradation and tourism, coral reef preservation, public access to shoreline and near shore fisheries
- Coastal Management Plan. Once the overall management objectives and strategies are set, the shoreline shall be divided into management units with management strategies for each unit
- Specific management plans shall be drawn up for each management unit and each plan should consist of five components: a map of the unit at approximate scale 1:50,000 with all pertinent features highlighted, a thematic layer showing management requirements i.e. setback lines and foreshore reserve, a thematic layer indicating erosion threat and proposed coastal defense where appropriate, a text description of the management strategy for the unit strengths, weaknesses, opportunities and threats, and a link to adjacent units highlighting potential trans-border issues
- A Policy Paper shall be prepared and presented to the State Cabinet for approval and implementation
- Web Site. The consultant shall post the relevant reports and data developed during the course of the SMP study on the ECD web site.

Duration and reporting

The proposed project idea will cover a 1 ½ year period. The types of reports includes Inception Report, data report, draft and final Plan, draft Policy Paper.

Inputs

The Project will need assistance in the form of international and national consultancy services (respectively approx. 3 and 15 mm), and a reimbursable budget (accommodation, travel, etc.). It is foreseen that the total amount for the project will amount to not more than 350.000 RM.

Implementing agency(ies)

Environmental Conservation Department in close cooperation with Regional Town and Country Planning Department and Lands & Survey Department.

Contact persons:

Eric Juin, Director, Environmental Conservation Department Adrian Chong, Director, Reg. Town & Country Planning Dept. Ms Teresa Chong, Deputy Director, Reg. Town & Country Planning Dept. Mohamed Jafry, Director, Lands & Survey Department.

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