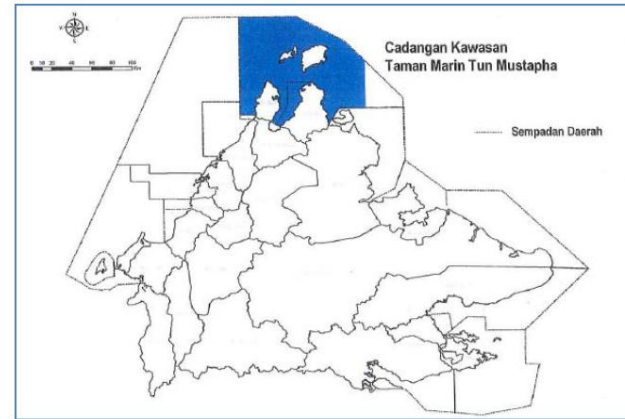




Valuation Study of the Proposed Tun Mustapha Park

A Report Summary

Sustainable development is an attainable goal for the proposed Tun Mustapha Park!



Source: Laporan Akhir Kajian Pelan Pengurusan Terintegratif Taman Marin Tun Mustapha

Tun Mustapha Park: a Marine Protected Area in the Making

Located in northern Sabah, the proposed Tun Mustapha Park (TMP) is an area of rich biodiversity, culture and natural resources. The Sabah cabinet approved gazettelement plan in 2003 and the TMP Interim Steering Committee was formalized in February 2011.

TMP has the second largest concentration of coral reefs in Malaysia. Over 80,000 residents rely heavily on its coastal and marine resources that are being threatened by over-exploitation and habitat degradation; both driven by poverty and above average population growth rates.

A balanced decision-making is necessary to harmonize the goals of poverty eradication, biodiversity conservation and socioeconomic development for a prosperous future of the area. An economic valuation study to illustrate and provide options for decision makers on the economic value of the proposed TMP was conducted and presented in this paper.

Methodology

This valuation study used the Total Economic Value (TEV) and Cost Benefit Analysis (CBA) approaches. TEV is a standard methodology that classifies the ecosystem goods and services according to how they are used. CBA is a method used to evaluate the economic feasibility of various projects in the study area (TMP).

Economic Value of TMP – Results at a Glance

With much of the area’s natural beauty and ecosystems still intact, there is a tremendous opportunity for choosing the best path of sustainable development for the proposed Park.

The total economic values for three scenarios were derived from the study:

A: TMP with no proposed extractive projects – RM 1.47 billion

B: TMP with proposed extractive projects – RM 1.56 billion

C: TMP with no proposed extractive projects but with ecotourism – RM 1.81 billion

Table 1: Comparison of the Total Present Value for the Proposed TMP

Total present value with “ecotourism”

RM 343.4 million

Total present value with “extractive industries”

RM 100.9 million

Table 2: Geographical features of the proposed TMP

Marine area (million Ha) 1.02

Land area 0.063

Number of islands >50

Table 3: Existing Environment of the Proposed Tun Mustapha Park

	Banggi	Balambangan	Kudat	Kota Marudu	Pitas	Sabah
Land area (km ²)	512	115	1,285	1,786	1,554	74,236
Marine area in (km ²)			9,803	129	591	54,360
Population ('000) (2009)	16	n/a	86.3	74.1	41.3	3,201.0
Population density (persons / km ²) (2009)	n/a	n/a	67	39	29	43
Households (2009)	4,499	557	n/a	n/a	n/a	n/a
Fish landing (mt)						
- 1998	n/a	n/a	30,139	463	541	
-2008			13,847	274	2,447	174,010
Wholesale value of marine fish (RM'000)						
-1998	n/a	n/a	130,901	2,298	1,727	
-2008			55,566	1,929	11,123	623,478
Number of fishermen						
-1998	n/a	n/a	2,915	713	650	n/a
-2008			2,133	989	626	
Number of fisheries licenses issued						
-1998	n/a	n/a	247	62	17	n/a
-2008			1,042	336	284	
Seaweed culture (t)						
-2007	21					90,270
-2008	37	n/a	n/a	n/a	n/a	111,130
Wholesale value of seaweed (RM)						
-2007	52,500	n/a	n/a	n/a	n/a	22,570,000
-2008	147,160					44,520,000

Existing Land Use on Banggi and Balambangan

Up to 76% of the land on Banggi Island (512 km²) was categorized under 'Others' and 'Forest Reserve' at about 23%. The 'Integrated Agricultural Scheme' accounts for only 1% of the total area. Balambangan Island (115 km²) is earmarked for extractive industries: silica sand mining (50.4%); and limestone quarrying (10.6%). An existing 0.4% is used for seaweed farming.

Proposed Development

Several extractive projects have been proposed for various parts of the TMP. These include:

- Limestone mining on Balambangan
- Silica sand mining on Balambangan
- Oil field development on the west coast of the proposed TMP

Existing Projects and Economic Activities

Aquaculture contributed up to 4.5% to Sabah's brackish water fish culture. The **Banggi Island Agropolitan Project** is a 4,500-hectare rubber cultivation endeavor set up to increase living standard of the hard core poor. It is a joint project between Sabah state government and FELCRA. About 1,000 participants will be given a "share" of 4 hectares of land. **Fisheries** resources are an important source of income for the local communities but the level of fishing pressure is unsustainable and other alternative livelihood options are needed. **Program Penempatan Masyarakat Setempat** (PPMS) is a new 23-hectare township located 10 km from Karakit, Banggi. Over 200 house lots and public amenities are being built. The project is also aimed at eradicating poverty and improving standards of living of the local community. The **seaweed** project takes place on a total area of 79 acres with 81 participating farmers in Banggi and Balambangan. Introduced by UMS, it is a joint project with the Federal Ministry of Rural and Regional Development and Sabah government to communities. **Tourism** infrastructure is still in its early stages of development and supports local economic activities such as government officers on field duties and recreational fishing; with much potential for expansion in the direction of ecotourism.

Table 4: Cost Benefit Analysis of Proposed Project Development

	Present Value Without Extractive Projects	Present Value With Extractive Projects
Direct Use Values (RM)		
Fisheries		
• The present value of the marine fish capture is valued at	561.1 million	561.1 million
Seaweed		
• The present value of the seaweed is estimated at	0.6 million	-
Plantation		
• The present value is valued at	718 million	718 million
Aquaculture (Brackish water)		
• The present value of brackish water aquaculture is estimated at	9.3 million	9.3 million
Tourism		
• Currently extremely limited in TMP	2.9 million	2.9 million
Limestone Mining		
• The present value of limestone is valued at	-	92.2 million
Sand Mining		
• The present value of sand is valued at	-	8.6 million
Oil Field Development		
	-	n/a
Indirect Use Values		
Carbon Sequestration		
• The present value for the forest and plantation in the proposed TMP is estimated at	28 million	23 million
• The present value for mangrove forest and estuaries is valued at	34 million	34 million
Coastal Protection		
• The present value of indirect benefit of coastal protection is estimated approximately at	112 million	110.9 million
Non-Use Values		
NGO funding (WWF-Malaysia)	International support for TMP (as part of SSME) estimated at 1.35 million – for 2011 only	International support for TMP (as part of SSME) could rise significantly if TMP were to be given proper protection
Total (RM)	1.47 billion	1.56 billion

Key terms:

Cost benefit analysis (CBA) -

An appraisal method to look into the economic feasibility of projects. CBA helps decision-making by comparing “With-without” project scenarios.

Ecological services – The resources and processes of natural ecosystems that benefit humans through: ‘provisioning’ (e.g. food and water production), ‘regulating’ (e.g. climate control), ‘supporting’ (e.g. crop pollination) and ‘cultural’ (e.g. recreational benefits) aspects.

Total Economic Valuation (TEV) – A tool used in ecological economics to classify ecosystem goods and services based on how they are used and includes both use and non-use (intrinsic) values.

Assumptions and Exclusions in the TMP Economic Valuation:

1. Present values over 25 years were estimated using a 5% discount rate.
2. Ecotourism estimates were derived by assuming similar visitor arrivals of Turtle Islands Park, Sandakan.
3. The indirect benefit of coastal protection was estimated by applying “transferred” benefits from a study done in Indonesia (Wakatobi National Park).
4. Environmental costs of projects were not included; hence the benefits of the projects may seem high.

Conclusion and Recommendations



Increasingly rare are places like the proposed TMP where relatively intact coastal and marine ecosystems such as coral reefs, mangroves and seagrass beds exist and function together perfectly to provide important fisheries resources, coastal protection and aesthetic enjoyment.

Table 5: Comparison of the Total Present Value for the Proposed TMP

Total present value with “ecotourism”	Total present value with “extractive industries”
RM 343.4 million	RM 100.9 million

Full details can be obtained from the study, ‘Valuation Study of the Proposed Tun Mustapha Park: Final Report. 17 March 2011” by PE Research. 44 pages.

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Without extractive projects, the proposed TMP is valued at RM 1.47 billion for a period of 25 years. With projects, there would be an increase of RM 0.09 billion; a mere 6% difference (see Table 4).

It has been estimated that the conservation of the area and expansion of ecotourism would bring a value of RM 343 million, far exceeding the extractive industries of limestone and silica sand mining at only RM 100 million. Economically, it makes sense to lean more towards the biodiversity conservation (see Table 5).

However, it is recognized that biodiversity conservation alone will not resolve issues of socioeconomic development. Hence, job creation and resettlement of island population to the districts of Kudat, Kota Marudu and Pitas where plans for agriculture are ongoing. This way, the smaller and ecologically sensitive islands could retain their pristine beauty for the benefit of ecotourism and biodiversity conservation while sustainable development on the larger islands fulfills goals in development and poverty eradication.

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This brochure was prepared by Lee Yoke Lee