



BCAMP



ASEAN CENTRE
FOR BIODIVERSITY



Biodiversity and Ecosystem Service Studies

May 2020

Linking Valuation to Innovative Financing of Malaysia's Protected Areas

Protected Areas in Malaysia

In order to safeguard nationally and globally significant biodiversity, Malaysia has established networks of both terrestrial and marine protected areas (PAs) with a total size of 5.87 million hectares (Table 1). PAs are governed by different laws with varying degrees of protection status, and gazetted and de-gazetted procedures. PAs are declared under Part V of the Wildlife Conservation Act, Act 716 of 2010, which covers wildlife reserves and wildlife sanctuaries in Peninsular Malaysia; under the National Parks and Nature Reserves Ordinance 1998 in Sarawak; and the Sabah Parks Enactment 1984, and Forest Enactment 1968 in Sabah. PAs are under the jurisdiction of, and are managed by, different agencies, including the Department of Wildlife and National Parks, Johor National Parks Corporation, Perak State Parks Corporation, State Forestry Departments, and the Division of Marine Parks Malaysia under the Fisheries Department in Peninsular Malaysia; by the

Forest Department Sarawak and Sarawak Forest Council in Sarawak; and by Sabah Parks, Sabah Wildlife Department, Sabah Forestry Department and Sabah Foundation in Sabah.

Review of Existing Studies

A review of the total of 285 identified publications on protected areas in Malaysia reveals that:

- 44.9 per cent were journal articles and 27.7 per cent were conference papers, either compiled or not, into proceedings. The rest comprised of books and book chapters, graduate and undergraduate theses, research reports, management and business plans, Government reports, and newspapers cuttings.
- 85 per cent of the studies focused on biodiversity and ecosystem services assessments, with 15 per cent focused on economic valuation of biodiversity and ecosystem services policy applications.

Table 1: Distribution of Terrestrial and Marine Protected Areas in Malaysia

State	Terrestrial (ha)	Marine (ha)	Total PA (ha)	Percent
Johor	235,407.8	61,859.8	297,267.6	5.1%
Kedah	31,221.0	10,720.1	41,941.1	0.7%
Kelantan	137,543.5	0.0	137,543.5	2.3%
Melaka	103.5	2,401.8	2,505.3	0.0%
Negeri Sembilan	59,703.8	1,893.8	61,597.6	1.1%
Pahang	807,601.8	55,800.8	863,402.6	14.7%
Perak	283,605.3	0.0	283,605.3	4.8%
Perlis	4,441.2	0.0	4,441.2	0.1%
Penang	1,396.7	1,339.3	2,736.0	0.0%
Selangor	106,557.4	0.0	106,557.4	1.8%
Terengganu	172,195.8	110,931.4	283,127.2	4.8%
Federal Territory	155.7	9,288.3	9,444.0	0.2%
Sabah	1,795,542.5	1,024,415.4	2,819,957.9	48.1%
Sarawak	710,773.4	240,665.0	951,438.4	16.2%
Total	4,346,249.4	1,519,315.7	5,865,565.1	100.0%
Percent	74.1%	25.9%	100.0%	

Source: Ministry of Energy and Natural Resources (KATS). 2019. Master List of Protected Areas, Malaysia.

Trade-offs analysis, and financing of PAs each appeared in less than 10 per cent of the studies.

- The majority of studies were on taxonomic investigations and issues on flora and fauna with a smaller number researching on ecosystem services diversity. Valuation studies focused on the benefits of the biodiversity and ecosystem services provided by PAs.
- A wide range of economic valuation methods were adopted that included in descending order of frequency – contingent valuation, market prices, residual method, travel cost, choice experiments, change in productivity, and benefit transfer techniques.
- Endau Rompin-Johor National Park, and Krau Wildlife Reserve received more BESA studies than other areas, but fewer studies on valuation and its applications on policy, trade-offs analysis, and on financing of PA management and activities.

Discussion

Most of the reviewed studies did not emphasise the financing needs of protected areas. Despite many of the studies producing value estimations of ecosystem services in PAs, not many led to the capture of rent nor of consumers' surplus from ecosystem service utilisation. For instance, despite higher willingness to pay bids by consumers, entrance fees to PAs did not increase. However, it is important to note that any changes to entrance fees to forest recreational areas are not decided for particular sites. The Forestry Department would have to consider other recreational forests in the state as well. Further, it requires several processes of preparing documents for approval by higher authorities at the State Government level.

Implementing conservation financing for PAs and biodiversity requires several actions, including changing the State enactments. Primarily, this

involves getting the State Attorney General to endorse changes to the enactment concerned, and then getting the State Executive Council and State Legislative Assembly to discuss and rectify the amended enactment. Consequently, on many occasions, recommendations from research publications did not move forward unless they gained support from various stakeholders – policymakers, the private sector, civil society, and the general public.

Moreover, valuation studies have been used to help support establishment of new State parks, such as the case of the establishment of the Selangor State Park, which is the third largest in Peninsular Malaysia, covering 108,000 hectares. Gazetted as a State park in 2007 under the National Forestry Act Enactment

2005 of Selangor, and managed by the Forestry Department of Selangor, this natural forested area protects some of Selangor’s most vital resources. During the establishment process, various uses of the forest areas were valued, and a trade-off analysis between protective forest reserve, particularly as water catchment functions versus production forest reserve options were undertaken.

Krau Wildlife Reserve and the Johor National Park have unique biodiversity and ecosystem services that are protected and conserved. This has attracted greater BESA research interests. Other PAs may be perceived to be more threatened and in need for more investigations on their valuation, trade-off analyses and financing of their conservation activities.

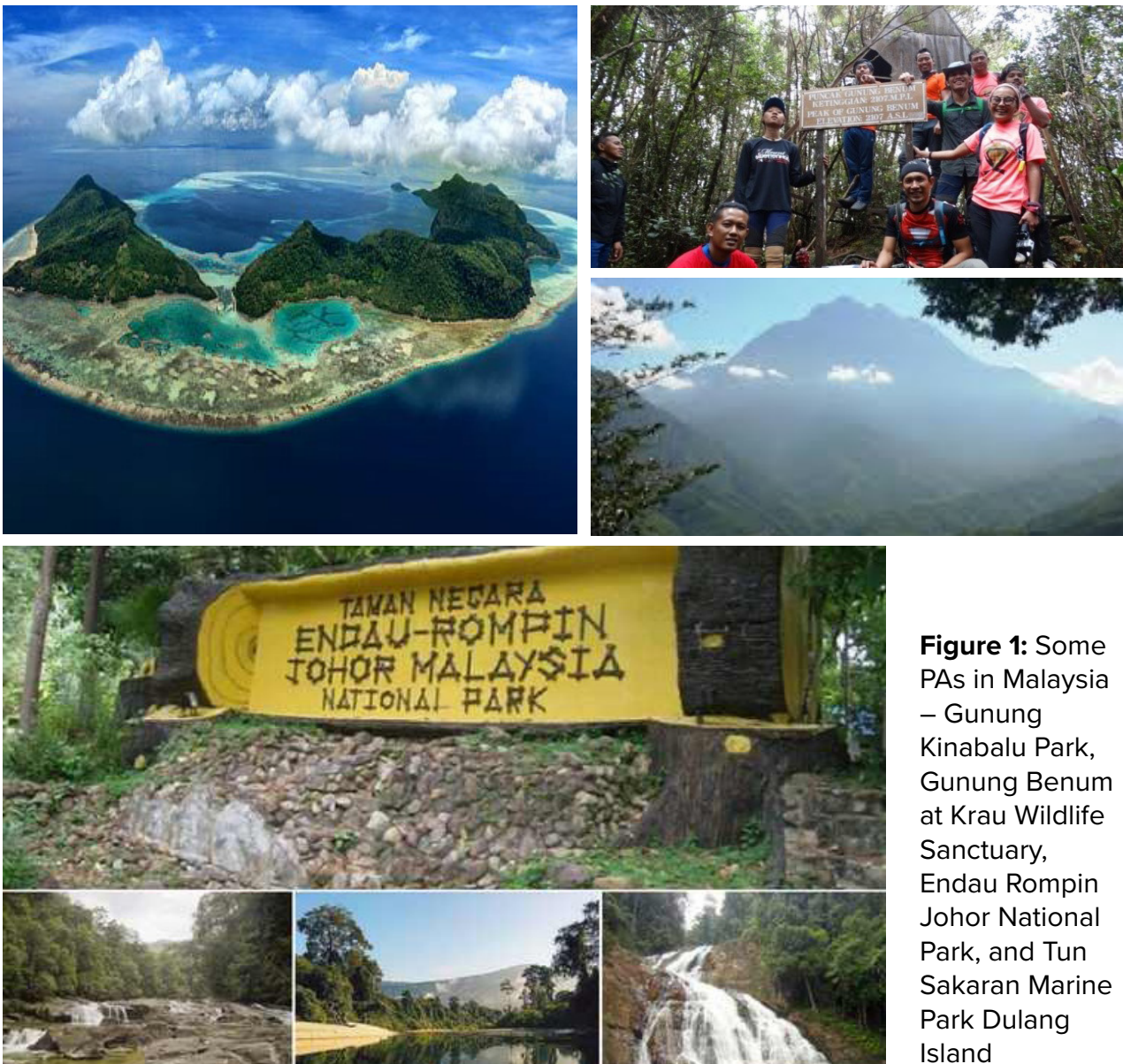


Figure 1: Some PAs in Malaysia – Gunung Kinabalu Park, Gunung Benum at Krau Wildlife Sanctuary, Endau Rompin Johor National Park, and Tun Sakaran Marine Park Dulang Island

Knowledge Gaps and Capacity Building

In identifying knowledge gaps and training needs to enhance PA financing, a survey using a questionnaire was conducted among 43 respondents comprised of protected area managers, natural resources policymakers and managers, researchers from institutes of higher learning and research institutes, and environmental NGOs. The level of knowledge on Ecosystem Services Valuation was found to be low, especially regarding market prices and economic rents of provisioning goods and services from forest and marine resources; non-market valuation of the regulating ecosystem

services; estimation of avoided damage from protective functions of ecosystems; and accounting for risk and uncertainties. In terms of PA conservation financing, the respondents from Malaysia are more familiar with regulatory instruments of fees, charges and taxes, and have gotten used to public government funding as the main source for conservation financing. Knowledge on the development of grants, market instruments and fiscal funding instruments is very low. Additionally, while all institutions acknowledged the importance of training in biodiversity, the points that they emphasised varied.

Recommendations

1. There is a need to bridge and narrow the gap between the rich research in BESA with the still limited investigations on economic valuation, policy and trade-off analysis, and PA and biodiversity conservation financing.
2. More efforts are needed to:
 - a. use economic valuation findings to raise rent capture from the utilisation of biodiversity and ecosystem services in PAs. This rent capture failure is unlike efforts in rent capture efforts in commodity provisions such as from stumpage and mineral exploitation in natural resource stocks outside of PAs;
 - b. use economic valuation findings in policy and trade-off analysis involving PAs; and
 - c. use non-conventional financial tools to raise funds for financing protected areas and biodiversity conservation areas, such as payments for ecosystem services.
3. For many topics, particularly on the valuation and development of financing instruments, the collaboration between trainers and researchers from various institutions, and other stakeholders is needed to build on the complementary core strengths of each partner.
4. For various specialised disciplines, collaboration with various professional associations, such as the Malaysian Ecology Association, Malaysian Environmental Economic Association, and Malaysian Social Impact Association, could enhance and promote research levels at the PAs.

A national consultation workshop was held on 20 August 2019 to gather inputs from stakeholders, both at the site and national levels. The outcomes of the national consultation were presented during the *Regional Training and Orientation Workshop on Biodiversity/Economic Analysis for Management, Policy and Innovative Financing Applications*, which was held from 16 to 18 September 2019 in Hanoi, Viet Nam.

Disclaimer: This publication was produced with the assistance of the Biodiversity Conservation and Management of Protected Areas in ASEAN (BCAMP) Project of the ASEAN Centre for Biodiversity (ACB), with the support of the European Union (EU). Its contents are the sole responsibility of the writer and do not necessarily reflect the views of either the ACB or the EU.

For more information please contact the author,
Dr. Mohd. Shahwahid, mohdshahwahid@gmail.com, or
Mr. Nheden Amiel D. Sarne,
BCAMP Project Coordinator, ACB
nadsarne@aseanbiodiversity.org