Biodiversity and Ecosystem Service Studies

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Linking Valuation to Innovative Financing of Thailand's Protected Areas

Protected Areas in Thailand

There are six types of protected areas in Thailand, with different levels of protection and public access: national parks, wildlife sanctuaries, non-hunting areas, forest parks, botanical gardens, and arboreta. In 2017, the land area under these six types of protected areas combined was 107,290.35 square kilometres, equivalent to 21 per cent of the total land area of the country. National parks account for the largest proportion, covering 59 per cent of the total area under protection. Wildlife sanctuaries come next, accounting for about 35 per cent.

"In my opinion, we don't need to argue about how we would utilise the forest. There is so little of the forests left and so we should preserve what's left for the indirect benefits that the forests provide. We need to develop the right understanding that in both conservation and utilisation, there are both direct and indirect benefits. Forests that are protected as wildlife sanctuaries and national parks provide indirect benefits."

- Seub Nakhasathien
July 1990

Source: www.seub.or.th

Review of Existing Studies

Altogether, 2,151 studies on biodiversity and ecosystem service assessments (BESA), as well as valuation, economic analysis, and financial instruments (collectively referred to as BESA++), relating to Thailand's protected areas were identified, covering the period from 1978 to 2019. Based on the compilation and review of the studies for both national parks and wildlife sanctuaries, the key observations are:

• There is an imbalance of studies between national parks (73 per cent) and wildlife sanctuaries (27 per cent)
• There is a clear shortage of studies on the economic dimensions of protected area management and fewer still economic valuation studies, together accounting for only 7 per cent of all studies
• Only 2.9 per cent of the studies were in the English language.
• The studies provide a vast amount of concrete data available for future robust economic analysis on the link between the natural ecosystems and the economy. These include e.g. studies on genetic resources, focused on specific plants or species suspected to have vast pharmaceutical potential, if the technology can be incubated and developed for wider use.
• With the exception of research being undertaken within a framework of high-profile national-level projects, the research findings seldom end up being used to support decision-making.
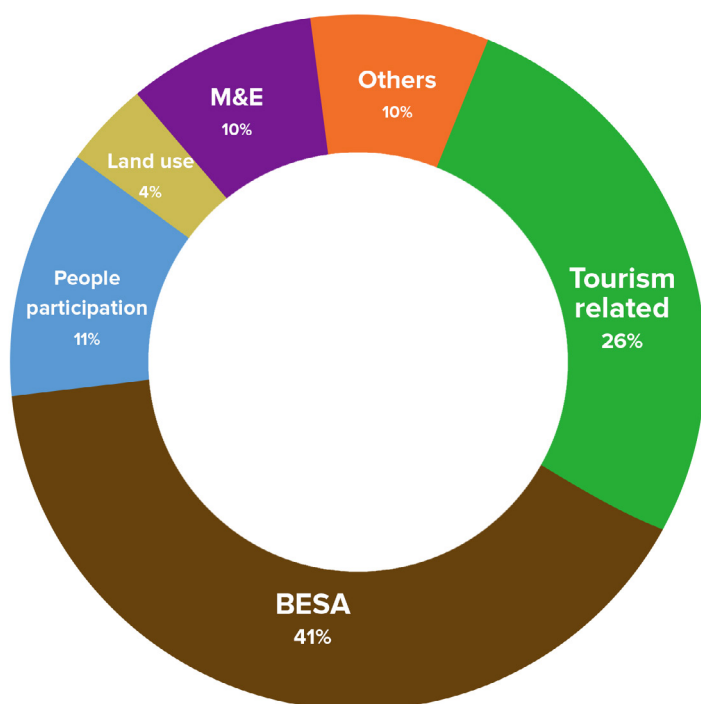

Table 1: Studies in national parks classified by type

Types of study	Number of studies	% of total
BESA	637	40.73
Tourism related	410	26.21
People participation	175	11.19
M&E	153	9.78
Land use	65	4.16
Economic issues	41	2.62
Financing instruments	2	2
TCM	23	1.47
Multiple valuation methods	23	1.47
Waste management	13	0.83
CVM	11	0.7
Legal issues	6	0.38
CBA	2	0.13
Other	3	0.19

Figure 1: Thailand's protected areas (Source: DNP)

Discussion

Research results can potentially contribute to making plans and setting targets more realistic. However, decision-makers are hardly aware of the research undertaken and the available data. When issues arise, new research is often commissioned. Oftentimes, line agencies are requested to provide some information within a very short period of time. Ironically, it is the media that make use of data, albeit selectively; they communicate with the general public and manage to stimulate periodic interest, however short-lived.

The few cases where research studies were used to contribute to decision-making are:
i) Studies conducted to demonstrate the ecological importance of sites to gain recognition or maintain status as a World Natural Heritage Site, RAMSAR site, or ASEAN Heritage Park,
ii) Baseline data used for national reports required by international agreements where Thailand is a signatory; and
iii) Baseline data used for annual reports such as the State of Environment Report, the State of the Coastal and Marine Resources Report, etc.

Combining BESA datasets with socio-economic databases could potentially generate solid analyses of how changes in the natural capital base influence changes in the socio-economic condition and vice versa. One of the areas least researched is financing instruments. Maximum protected area budget increases are capped at not more than four per cent higher than budget allocation of the preceding year. Attempting even anything slightly more than routine work will require two things: i) using allocated budgets more efficiently to minimise duplication, waste, and leakage; and ii) identifying additional sources of revenue. Introducing new financing mechanisms requires looking into the legal and institutional framework that could be both enabling and disabling. Even an instrument as obvious as Payment for Ecosystem Services needs to pass through several obstacles. There are legal obstacles to the property rights over access and utilisation of natural resources of the potential service providers, and there are financial regulations which will require understanding of agencies such as the Ministry of Finance. However, these agencies may not perceive the importance and urgency of conservation financing, and may also not be willing to provide that small margin of flexibility needed to adopt something new. Lastly, if new financing mechanisms are to be adopted, the most important partner will be the private sector businesses, who would now be expected to pay for ecosystem services.

Knowledge Gaps and Capacity Building

On a positive note, agencies with mandates directly related to management of natural resources, namely the Department of National Park, Wildlife and Plants (DNP) and the Department of Marine and Coastal Resources (DMCR), have shown interest in both the theory, the methodology and the practical uses of ecosystem service values generated. Over the years, they have undergone some training on the basics of natural resources and environmental economics, as well as on valuation tools. These training sessions have stimulated interest among resource managers but fall short of developing the needed critical number of personnel who can conduct research in-house. Moreover, based on some of the research outputs conducted by in-house staff of the line agencies, it has to be acknowledged that close supervision of research from the design to the implementation, and to the analysis and write-up, is essential to meet standards and ensure the quality of research outputs. After all, the credibility of the results as a basis for decision-making is contingent upon this. Agencies such as DNP and DMCR have adopted the practice of involving academics as members of working groups, ad-hoc committees, and sub-committees in their key programmes. In the short and immediate timeframe, it is recommended to continue and build on this approach. In the medium to long term, there should be in-house staff capable of undertaking valuation studies following standard procedures with minimum outside assistance.

Recommendations

- There is a wealth of data and information from basic research on a number of protected areas that can be used to support studies addressing specific policy issues, but researchers, the DNP, and the DMCR need to collaborate more closely to ensure this happens. These agencies could consider establishing a mechanism to facilitate this.
- Research results can be used to inform more realistic conservation and development planning and target setting, but researchers and the institutions employing them need to better communicate the research results to appropriate users of the information so that the full value of the research is maximised. Research proposals should clearly articulate the intended policy/decision-maker target audience for the research results, and provide a description of the communication channels that will be used to ensure the findings reach the attention of these audiences.
- More valuation studies should be supported. These valuation studies must follow standard research protocols if they are to generate credible research results. The top five to six universities in Thailand, from which the vast majority of the studies are conducted, should establish a roundtable/working group to develop and update appropriate research protocols to enhance credibility of research findings.
- Intensive training of staff working for agencies with mandates directly related to management of natural resources is needed for both valuation and financing instruments. External resources to undertake valuation studies should only be brought in for the short term, with the aim of building an adequate number of capable in-house staff to undertake the research in the medium and long term.

A national consultation workshop was held on 10 July 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.

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