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Linking Valuation to Innovative Financing of Lao PDR's Protected Areas

Protected Areas in Lao PDR

Lao PDR has rich forest resources and biodiversity, with one of the highest proportions of forest cover in Southeast Asia. In 1940, there were 17 million hectares of forest covering 70 per cent of the land. By 1992, forests covered about 47 per cent of the total land area. By 2002, this has declined to 41.5 per cent, and by 2010 it had further declined to 40 per cent.

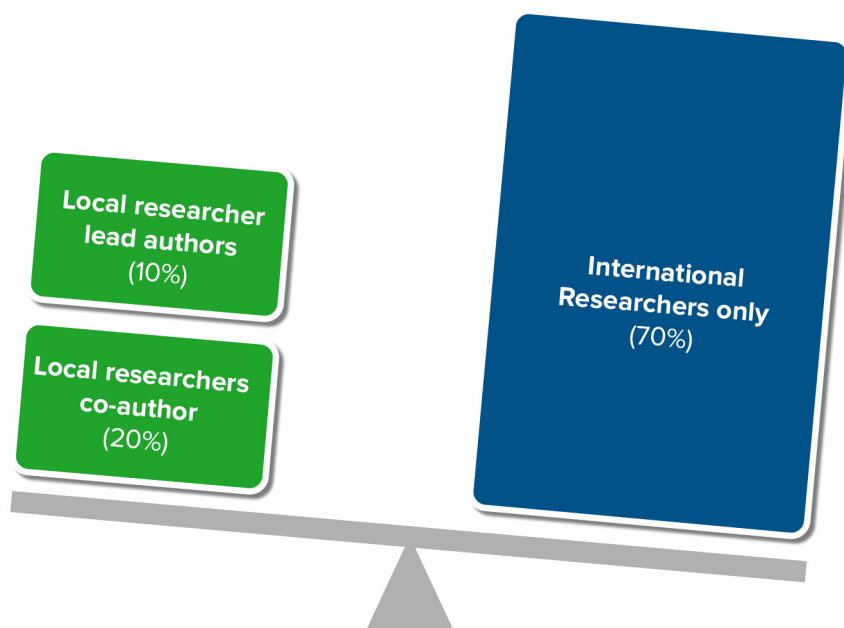
At the same time, the protected area estate has also been growing. In 1993, regulations were formulated to establish the National Biodiversity Conservation Areas (NBCAs), initially covering an area of 2.8 million hectares, or about 12

per cent of the total area of the country in 18 NBCAs. In 1995, the national protected areas (NPA) increased to 20, covering 3.3 million hectares (14 per cent of the country). Now, there are 24 NPAs covering 3.8 million hectares or 18 per cent of the land area. In addition, local authorities have established the following: 57 provincial conservation forests, 23 provincial protection forests, 144 district conservation forests, and 52 district protection forests. Together, these add up to approximately 1.5 million hectares. Overall, there are 5.34 million hectares of conservation and protection forests, representing 22.56 per cent of the total land area of the country.



Figure 1: Elephants in Nam Phoui National Protected Area (Source: Ministry of Agriculture and Forestry).

Figure 2:
Involvement of local researchers in BESA++ studies in protected areas in Lao PDR



Review of Existing Studies

This review collected 112 studies related to NPAs from the various sources.

- More than 80 per cent of the studies were conducted in NPAs.
- 40 per cent of the studies were published as journal articles and 60 per cent were unpublished reports, proceedings, and working papers.
- Studies on biodiversity and ecosystem assessment comprised the highest number, with 18 such studies included. This was followed by studies on wildlife consumption-hunting-trading, and then by studies focusing on shifting cultivation.
- 20 per cent of the studies had local researchers as co-authors, while only 10 per cent had local researchers as lead author. 70 per cent of the studies had no local researchers as authors. In addition, it was observed that the cooperation among local researchers, international universities, and think tanks to produce the research can be further strengthened.
- There were some examples of studies on payment for environmental services (PES), conducted by the National University of

Laos and the Australian National University, which were used for a pilot PES project in Lao PDR. However, most of the studies were not used as the basis for follow-up action and policy implementation.

Knowledge Gaps and Capacity Building

One of the most important factors accounting for the loss of forestry resources and biodiversity is the insufficient knowledge and skills of policymakers and central and local government officers on the economic values and significance of biodiversity and ecosystem services, and how to assess those values. As of now, an assessment is yet to be done on the existing body of knowledge and gaps in the biodiversity assessment in Lao PDR.

In order to collect information on the existing body of knowledge and gaps on Biodiversity and Ecosystem Services Assessment and Economic Analysis for Management, Policy and Innovative Financing Applications (BESA++), 35 completed questionnaires were analysed. Respondents included (1) government officers or local officers involved with the protected areas; (2) researchers studying natural resources and

environmental economics, and environmental management; and (3) non-governmental organisations working to support protected areas. The findings are as follows:

Knowledge of Biodiversity and Ecosystem Services Assessment

Most of the respondents do not have knowledge and skills on the following:

- (1) Baseline inventory
- (2) Species-specific assessment
- (3) Change assessment
- (4) Indicator Assessment
- (5) Resource Assessment.

Knowledge on measurement/accounting

Respondents have some knowledge on provisioning services, but they have very little knowledge on regulating services, cultural services, and habitat services.

Knowledge on biodiversity and ecosystem services valuation

The respondents have some skill or knowledge on conducting measurement and estimation of market prices for provisioning services, and

surveys of tourism/recreation in protected areas.

Knowledge on development of conservation financing

The respondents have some skill/knowledge on development of conservation financing, including fiscal funding instrument/mechanism, regulatory instrument, and market instrument grants. However, most did not have any actual experience on the development of financing in Lao PDR.

Knowledge on climate change impact on biodiversity and ecosystem services

Some of the respondents have knowledge on impact evaluation. However, very few are at the level of practitioner or expert. In addition, none of the respondents mentioned that they are a mentor or innovator.

As for the training needs, *Climate change impacts on ecosystem services* ranked the highest, followed by *Assessment of vulnerability of protected area to climate change risks and disaster*.



Figure 3: Cultural Values of Phou Xieng Thong National Protected Area

Source: Department of Forestry, Ministry of Agriculture and Forestry



Figure 4: Phou Xieng Thong National Protected Area

Source: Department of Forestry, Ministry of Agriculture and Forestry

Recommendations

- From the analysis of 112 existing studies, only 14 are valuation studies. More valuation studies should therefore be carried out. Of the 14 valuation studies, only 7 studies used market-based approaches, and only 5 studies used CVM-CM approach (non-market values). More capacity should be built specifically in use of these methods
- The studies on BESA and Economic Analysis initiated by local researchers are quite limited. Most of journal publications, and reports were led by international experts or scholars. This also reflects that the local capacity in research on BESA and economic analysis needs improvement; this calls for further capacity-building.
- Apart from focusing on developing practitioner competency amongst protected area management agencies and local or central government officers, it is also important to build human resources at the expert and mentor/innovator levels. Support from international agencies and donors for capacity building in Lao PDR is crucial.
- The link between research results, policy formulation, and decision-making at the implementation level needs to be strengthened.

A national consultation workshop was held on 11 September 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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