

Thinking outside the box

The experiences gained in Sarawak's Lanjak-Entimau Wildlife Sanctuary will inform management across the border and elsewhere in Borneo, the region and globally

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Watershed: the linking of the Lanjak-Entimau Wildlife Sanctuary and the Betung Kerihun National Park in a transboundary conservation reserve provided a model for later ITTO projects. Nevertheless, transborder cooperation in managing the two reserves needs further strengthening. *Photo: P. Chai*

THE Lanjak-Entimau Wildlife Sanctuary in Sarawak, Malaysia and Betung Kerihun National Park in West Kalimantan, Indonesia, which comprise the region's first tropical forest transboundary biodiversity conservation area (TBCA), share many common values in landscapes, watersheds, ethnographic history, culture, and plant and animal resources. Lanjak-Entimau occupies 187 000 hectares and Betung Kerihun about 800 000 hectares; recently the Batang Ai National Park, which abuts Lanjak-Entimau on the Sarawak side, was added to the TBCA after approval by the Sarawak government, boosting the total area to 1.1 million hectares.

The TBCA constitutes the most important sanctuary in Borneo for orang-utan—perhaps up to 10% of the remaining wild population—and other rare and threatened plant and animal species. Such biota don't recognise political boundaries and are therefore best managed through parallel and cooperative conservation efforts.

Two ITTO projects are helping to raise management standards on both sides of the border. In Sarawak, the Forestry Department is implementing ITTO PROJECT PD 16/99 REV.2 (F) with the aims of improving management inside Lanjak-Entimau, supporting sustainable livelihoods among residents living on its periphery, and developing a cooperative transboundary management arrangement with Betung Kerihun; this project began in 1993 and is now in its third phase. On the Indonesian side, the World Wide Fund for Nature (Indonesia) and the Directorate General of Forest Protection and Nature Conservation are collaborating in the

implementation of ITTO PROJECT PD 44/00 REV.3 (F), the first phase of which commenced in 1995 with similar aims.

Increasing cooperation

The sharing of and benefiting from the natural resources of a TBCA requires a common, transborder vision. The ITTO Borneo Biodiversity Expedition to the TBCA in 1997 (Kuswanda et al. 1999) marked the first collaborative effort between scientists in the two host countries. It made many useful suggestions and recommendations for further cooperation, including bilateral research. Implementing the recommendations will help to sustain the cooperative effort.

Orang-utan conservation is one of the most important objectives for sustaining the TBCA and could provide a unifying force for action. The species could be adopted as a common logo and used as a visible symbol of cooperation. Another unifying force could come from a recent agreement between Malaysia and Indonesia to nominate Betung Kerihun, Lanjak-Entimau and Batang Ai as a Clustered World Heritage Site and to establish a second TBCA encompassing Pulong Tau National Park in northeastern Sarawak and Kayan Mentarang National Park in North Kalimantan (the latter already benefiting from an ITTO project—PD 38/00 REV.1 (F)).

Landscape approach needed

Mechanisms to promote common values in the TBCA must involve stakeholders from all levels: governments (national, regional and district), private sector and local communities. Through the ITTO expedition, Lanjak-Entimau has been shown to constitute an extremely rich pool of biodiversity

and is the largest totally protected area in Sarawak. However, its function as a water catchment in the protection of soils and water is often overlooked or taken for granted. Lanjak-Entimau is located within the headwaters of the Batang Lupar and Rajang rivers. It occupies two main watersheds comprising three major and four minor drainage blocks, covering about 35% of the area in the southwestern region of Sarawak and serving a population of several hundred thousand people. Across the border, the watershed of the Kapuas River occupied by the Betung Kerihun National Park in West Kalimantan is even more extensive. Protecting the TBCA as a single catchment complex is another shared goal that is important to a wide range of stakeholders and can be used to benefit people on both sides of the border.

In fact, promoting biodiversity conservation at the landscape level has many benefits, particularly in Sarawak in view of the relatively small size of its totally protected areas, which are widely scattered and mostly surrounded by timber concessions and oil palm plantations. The concept of management at the landscape scale is in line with the intention of the government to designate suitable sites in each timber concession area within the permanent forest estate for biodiversity conservation and gene banks. These reserves, together with Native Customary Rights' forests adjacent to the totally protected areas, where available, can be linked and managed to ensure the maintenance of biodiversity, water quality and other values.

Local people

The involvement in and acceptance of a TBCA by local people is essential for success. Since becoming associated with the ITTO project, local communities in the buffer zone of Lanjak-Entimau have begun to realise the many benefits that conservation can bring to their lives. The sanctuary continues to provide them with a fresh and healthy environment—clean air, clean water and an abundance of plant and animal life—that many of their relatives and friends living elsewhere in highly disturbed and deforested landscapes have not been able to enjoy. Some residents have made a conscious effort to protect the environment and their assets by requesting Parks and Wildlife authorities to include their customary forest land (located in the buffer zone) in future extensions of the Batang Ai/Lanjak-Entimau protected area complex. Those involved in ecotourism in Batang Ai National Park have also become aware of the need to protect the orang-utan as a tourist attraction.

In the past year or so, however, there has been increasing evidence in Lanjak-Entimau and Batang Ai of encroachment by people living outside the buffer zone. Many of these people have no privileges to hunt or fish in the sanctuary but have ventured there because game animals in their traditional hunting areas have become scarce and the rivers are heavily laden with sediment. This suggests an urgent need not only for stronger enforcement but also for awareness campaigns targeting schools and special interest groups throughout the state—because this has become an issue that affects all Sarawakians.

The traditional users who have been granted privileges in Lanjak-Entimau will continue to hunt, fish and collect jungle produce for subsistence needs. However, they have also been encouraged to develop and undertake their own farming and fish-culturing activities to supplement their income. In time this should reduce their dependence on the forest.

Local communities are also playing an increasing role in conservation management. For example, representatives of local communities have been appointed honorary rangers and members of a Special Wildlife Committee for Lanjak-Entimau and a Special Park Committee for Batang

Ai. They contribute knowledge and ideas and participate in the planning and co-management of the two reserves. Through direct involvement in the committees, they can continue to receive appropriate training and guidance to upgrade their management capabilities. The project should create more opportunities for employing school-leavers in the communities.

From the lessons learnt during the last ten years, it seems that promoting conservation through active community participation in management and socioeconomic activities is feasible and can be successful, but co-management efforts between the relevant authorities and the local people must be sustained. The local people still require assistance and training in indigenous crop cultivation, entrepreneurship and financial management. Initially, wildlife rangers should be actively involved in the development of community-based economic activities by providing leadership and guidance.

Existing mechanisms to enhance active participation and co-management through the Special Wildlife Committee for Lanjak-Entimau and Special Park Committee for Batang Ai must be developed to full advantage, as they involve stakeholders from government, local communities and the private sector, including the timber industry. These committees form a vital link between the authorities and other stakeholders in the vicinity of the Batang Ai/Lanjak-Entimau protected area complex.

Putting 'transboundary' into management

One of the benefits of a functioning TBCA is the increased opportunity for the transfer of knowledge and experiences across political borders that have not always been very permeable to ideas. This process is at an early stage in the Lanjak-Entimau/Betung Kerihun TBCA, but the potential is huge. Lanjak-Entimau already has a network of field facilities that can be put to fuller use. It has been suggested that the new headquarters complex in Ulu Katibas could be turned into a rainforest research centre to promote research, conservation education and the training of young scientists. The centre, if established, would greatly enhance the image of Lanjak-Entimau and Sarawak as a pioneer in biodiversity conservation and transboundary management at the national and global levels and would have the potential to make a significant contribution to improving TBCA management.

The knowledge and experience gained in Lanjak-Entimau could be applied to initiate similar social and economic activities to benefit the local communities across the border in Indonesia, where this has not been done already. For example, the programs to promote community participation and sustainable livelihoods pioneered at Lanjak-Entimau could be used to train farmers in West Kalimantan. If necessary, wildlife rangers and trained local participants in Sarawak could be seconded to management partners in West Kalimantan to help initiate livelihood activities such as the cultivation of local fruits and the farming of local species of fish, both of which are being done successfully in the buffer zone of Lanjak-Entimau. Committees for co-management between the relevant authorities and the local people similar to those established in Lanjak-Entimau and Batang Ai could also be established in Betung Kerihun. Its park rangers can help to enhance the knowledge and awareness of the local people on the need for joint protected area management, biodiversity conservation and sustainable use.

Apart from activities such as fruit-growing and fish culture, it is also possible to develop potentially useful herbs as supplements for the food and health industries. For a long time, Indonesia has been well known as a producer and exporter of traditional herbs called *jamu*. This is an area where the local

communities of Lanjak-Entimau could benefit from the knowledge of their Indonesian counterparts.

Shared benefits could also be derived from joint ecotourism activities to promote culture, adventure and nature between Betung Kerihun and Batang Ai (Lanjak-Entimau is more remote and, given its special status as a wildlife sanctuary, less accessible to tourists). Tour agencies from both countries could be invited to participate.

Instituting cooperation

At a meeting in Jakarta on 7 August 2001 a joint task force between Sarawak and Indonesia was formed to collaborate, plan and implement short- and medium-term activities in the TBCA. Its terms of reference are:

- to formulate guidelines for collaborative management;
- to advise the respective governments on issues pertaining to the management of the TBCA;
- to exchange and share information and data on research findings;
- to assist each other in the protection of the TBCA's resources;
- to promote appreciation and support for measures to protect and manage the TBCA;
- to execute any other matters as requested by the respective governments consistent with the objectives of the TBCA; and
- to meet at least twice a year.

The task force has not yet had a strong influence on transboundary management. It could increase its effectiveness by employing its members on a full-time basis, enabling them to concentrate more fully on transboundary management issues. This would help provide continuity in the collaborative process. The necessary resources, both financial and human, should be made available for on-the-ground implementation.

It has been suggested that, for long-term cooperation, it would be useful to consider the establishment of a more permanent coordinating committee to draw up cooperative agreements for planning and development. The importance of such an agreement is stated in the IUCN good-practice guidelines for transboundary protected areas (Sandwith et al. 2001):

Both formal and informal agreements can be used to declare common interests, agree on objectives, state guiding principles, and plan and implement management programmes. They are essential to sustain co-operation in the trans-boundary context. They are needed to secure the endorsement of relevant authorities and accountability among the stakeholders.

These agreements can be extended to include the proposed TBCA between Kayan Mentarang National Park and the Pulong Tau National Park and the clustered World Heritage sites in due course. One joint permanent committee could be established to coordinate and co-manage all three projects as long as it had the full support of the relevant authorities and policy-makers, financially and institutionally. Implementation at the TBCA level requires the dedicated service of a team of permanent and full-time managers, scientific personnel, social workers, field assistants and rangers who are committed to biodiversity conservation and are willing to be posted to work in rural areas; for this, among other things, political commitment is essential.

ITTO's role

ITTO is a valuable supporter of transboundary conservation in the tropical world—its tropical forest transboundary conservation program is by far the



Hooked: a buffer-zone resident holds native fish bred in a nearby fish-pond. These fish are highly prized in Kuching, where they are marketed, offering a promising economic alternative to hunting and gathering in the wildlife sanctuary.

Photo: P. Chai

largest of its kind. ITTO should continue to act as a catalyst to seek high-level support for TBCAs and to fund their management. The benefits of a transboundary approach are many, not only from a conservation perspective but for political, economic and cultural reasons. Once the second TBCA between Sarawak and North Kalimantan is established, Borneo will have a total transboundary conservation area of over 2.3 million hectares, a globally significant contribution to the protection of biodiversity. More needs to be done. At the international level, governments must continue to seek the advice and support of active organisations such as ITTO in their effort to continue to pursue transboundary conservation issues.

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