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SGP TECHNICAL SERIES

GENERAL PARK MANAGEMENT:

Strategies for encouraging community stewardship in managing parks

Soe Myint of Indawgyi Lake Wildlife Sanctuary is always on the watch for threats and other issues at the park

The ASEAN Heritage Parks (AHPs)

Known as protected areas of high conservation importance, preserving in total a complete spectrum of representative ecosystems of the ASEAN region, the ASEAN Heritage Parks (AHPs) were established to generate greater awareness, pride, appreciation, enjoyment, and conservation of ASEAN's rich natural heritage.

The ASEAN Centre for Biodiversity (ACB) serves as the Secretariat of the AHP Programme and the AHP Committee, and together with representatives from the 10 ASEAN Member States, they carry out activities to develop and strengthen the management of AHPs in the region. The ACB also facilitates the implementation of the Regional Action Plan for AHPs.

This technical brief specifically covers the best practices and lessons learned from the strategies employed by grantees and their partners to encourage local communities to embrace collaborative park management and their roles as stewards of biodiversity.

Introduction

Low community participation in park management, along with low levels of conservation awareness, limited alternative livelihood options, and weak law enforcement, have been identified during park management planning in Myanmar's ASEAN Heritage Parks as among the underlying factors for a variety of pressures on protected areas.

Traditionally, park officials follow a top-to-bottom approach, where the national and local governments solely handle the managerial role and assign the execution part to park managers, park rangers, and other protected area workers. The past few decades, however, have witnessed the increasing recognition of the crucial role of locals and indigenous peoples living within and near protected areas as co-managers whose experiences, views, and recommendations are considered in management planning.

This shift in the protected area management paradigm is embedded in the Convention on Biological Diversity's (CBD) Programme of Work on Protected Areas (PoWPA), which calls on parties "to enhance and secure involvement of indigenous and local communities and relevant stakeholders." Goal 2.2 of the PoWPA targets the "full and effective participation by 2008, of indigenous and local communities, in full respect of their rights and recognition of their responsibilities, consistent with national law and applicable international obligations, and the participation of relevant stakeholders, in the management of existing, and the establishment and management of new, protected areas."

The draft Regional Action Plan for ASEAN Heritage Parks 2023–2030* also recognises the significance of local community participation in park management, particularly in countering illegal wildlife poaching and trade, through the establishment of informant networks. The plan also emphasises the local communities' importance in implementing climate change mitigation measures, particularly reducing the threat of forest encroachment.

Efforts to shift from treating local communities, including those in buffer zones, as passive observers and beneficiaries to engaging them as active collaborators have been documented in the ASEAN region and other parts of the world. However, sustaining and replicating these initiatives require putting in place appropriate regulations, mechanisms, tools, and support systems to ensure the effective and continued participation of local communities.

*The draft Regional Action Plan for ASEAN Heritage Parks (2023–2030) was developed to provide guidance in the development of well-governed, well-designed, and well-managed AHPs to ensure integration into the global network and contribution to globally agreed goals.

The Small Grants Programme by the ASEAN Centre for Biodiversity (SGP)

In support of the AHPs, the Federal Government of Germany through the KfW Development Bank (KfW), aided the implementation of the Small Grants Programme by the ASEAN Centre for Biodiversity (SGP). The SGP is an initiative aimed at sustaining biodiversity in the AHPs in line with the interests of local communities who directly depend on the selected parks, providing alternative livelihood opportunities to the locals, and strengthening the ACB's role in promoting biodiversity conservation in the ASEAN region.

SGP I commenced in 2014 to support the implementation of the national component in Indonesia and Myanmar, and the regional components of the programme, with an overall grant amount of EUR 10 million. A range of interventions were implemented, including those that focused on general park management, such as law enforcement.

Under SGP I, dozens of community-based organisations (CBOs) and civil society organisations (CSOs) received economic and technical assistance through micro- to small-scale grants.

In Myanmar, SGP I awarded EUR 400,000 in grants for collaborative management planning and another EUR 400,000 for law enforcement. These funds were distributed to Alaungdaw Kathapa National Park (AKNP), Indawgyi Lake Wildlife Sanctuary (ILWS), Meinmahla Kyun Wildlife Sanctuary (MKWS), and Nat Ma Taung National Park (NMTNP).

In Indonesia's Gunung Leuser National Park (GLNP), EUR 225,136.33 or 18.4 per cent of the EUR 1,223,567 total budget allocation from SGP went to general park management. In Way Kambas National Park (WKNP), EUR 119,112.12 or 13.5 per cent of the EUR 882,312 total budget allocation was used for such interventions (Penabulu Foundation, 2023).

Biodiversity survey at Karo-Langkat in Gunung Leuser National Park

The SGP supported the prevention of human-elephant conflict at Way Kambas National Park

MYANMAR

4 parks covered

EUR 400,000

for collaborative management planning

EUR 400,000

for law enforcement

INDONESIA

Gunung Leuser National Park

EUR 225,136

for general park management interventions

Way Kambas National Park

EUR 119,112

for general park management interventions

Best Practices

Reconciling the management of protected areas with the social and economic needs of local communities is an enormous task that necessitates all-hands-on-deck interventions. Thus, securing the engagement of local communities to become active participants from planning to implementation is instrumental to the success of conservation interventions in protected areas.

In the SGP I pilot sites in Indonesia and Myanmar, the participatory approach to park management was initiated by opening opportunities for co-management, collaborative law enforcement, and the crafting of conservation partnership agreements. Grantees have reported notable wins in fostering stewardship among people who live within and near the pilot sites.

Case study: Empowering communities through the co-management of ASEAN Heritage Parks

The management of protected areas, including AHPs, forms a significant part of national strategies to conserve biological resources. In the past, governments and their partner organisations largely utilised a top-down management approach wherein plans are developed at the higher levels of government and then passed down to environmental agencies and parks for implementation. This approach has been criticised for not reflecting the views and needs of various stakeholders whose lives are impacted by the management plans.

In Myanmar, the AKNP, ILWS, MKWS, and NMTNP have not employed a long-term management planning cycle until recently. Protected area management was only guided by annual action plans that focused on major components like law enforcement, biodiversity research, community awareness, and operational support. Activities in the annual plans were often reactive in nature and did not change significantly over time. The annual plans also lacked a strong monitoring and assessment procedure, were not borne out of extensive multi-stakeholder engagements, and failed to assess management effectiveness over time.

Participatory mapping meeting at Nat Ma Taung National Park

In an attempt to reconcile the management of protected areas with the economic and social needs of communities, the SGP supported the development and updating of park management plans.

The plans were recognised by grantees and stakeholders as a necessary first step in identifying the AHPs' conservation needs and the most feasible livelihood opportunities for the deployment of future small grants.

In a shift from an exclusionary to a participatory framework, the AHPs worked on their collaborative management plans (CMPs). Taking the co-management route is considered one of the most impactful outcomes of the SGP in Myanmar as it involves strategic plans borne out of a participatory planning approach which saw stakeholders sharing common goals, responsibilities, and outcomes in a transparent process.

In 2014, the four AHPs drafted their first five-year management plans — a product of a series of consultations at the township levels that involved representatives from key government agencies, park management and staff, CBOs, CSOs, and private sector partners. The CMPs were approved and adopted by the Ministry of Natural Resources and Environmental Conservation (MONREC) in 2018 and served as the basis for succeeding interventions in the four parks.

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The CMPs also guided park management in Indonesia's GLNP and WKNP (Penabulu, 2023).

The CMP approach has been lauded as "a breakthrough from the past practice of top-to-bottom planning to a consultative and inclusive process that is more responsive to threats that need longer-term solutions" (Naw May Lay Thant, 2017).

The plans reflect alternative strategies that demonstrate close collaboration and joint decision-making and action between park authorities and local communities.

Institutionalising co-management structures at AKNP and NMTNP

Myanmar's AKNP straddles the Mingin and Kani Townships of Sagaing Division. It was established as a wildlife sanctuary in 1981, opened as a national park in 1984, and declared an AHP in 2003.

The protected area is a refuge for a wealth of wildlife including the endangered Asian elephant *(Elephas maximus)*, banteng *(Bos javanicus)*, and tiger *(Panthera tigris)*. It is also home to the largest tracts of Myanmar's remaining teak forest *(Tectona grandis).*

An estimated 65 local communities, including a small group of monks who care for Maha Kathapa's shrine, rely on the park for livelihood and other ecological services.

These resources, however, are under serious threat of illegal logging, encroachment for farming, illegal hunting, weak law enforcement, and lack of awareness of the benefits and value of wildlife, among many other issues.

Like AKNP, the 722,600-hectare NMTNP is a refuge for rich flora and fauna. The "plant hunter's paradise" is home to a diverse range of flower species and is a sanctuary to 35 species of mammals including the critically endangered Chinese Pangolin *(Manis pentadactyla)* and the endangered Western hoolock gibbon *(Hoolock hoolock) (ASEAN-CHM, n.d.).*

An estimated 68 villages rely on livelihood and other ecological services from the park. NMTNP also has significant scenic and spiritual value for the Chin ethnic people.

The population's heavy dependence on shifting cultivation, the complex customary land tenure system, uncontrolled grazing, illegal selective logging, wildlife hunting, and unsustainable collection of non-timber forest products (NTFPs) are exerting increasingly greater pressure on biodiversity in the park.

Recognising the difference that locals' participation in management, conservation and livelihood interventions can make, SGP grantees, park management, and partners from the local communities pushed for the institutionalisation of local people's representation in management units.

Stakeholders work together to protect wildlife at Alaungdaw Kathapa National Park

The Nat Ma Taung National Park in Myanmar *© Kyaw San Linn*

- **The Township Protected Area Management Committee** – At AKNP and NMTNP, the CMP led to the institutionalisation of co-management through the creation of the Township Protected Area Management Committee (TPAMC).

  The committee serves as a platform for co-management in the AHPs, uniting a broad range of stakeholders including government agencies, park management, and staff, law enforcement agencies, as well as representatives from CSOs, and local communities. Under the AHPs' co-management models, the TPAMC listens to the issues and concerns of locals. It ensures community representation in township environment and conservation meetings and involves communities in decision-making for the AHP.

  As of mid-2024, TPAMCs have been established in four NMTNP townships and three AKNP townships. The CMP has laid the foundation for the creation of similar committees in more townships.

- **Protected Area Management Supporting Unit** – Closely connected to the TPAMC is the protected area management supporting unit (PAMSU), a multi-stakeholder group formed to support the implementation of the CMP. Members' responsibilities are clearly articulated in terms of reference that will assist in the effective implementation of the CMP.

  The PAMSU is lauded as a good example of how communities can have meaningful participation in protected area management by working with other stakeholders in monitoring the progress of management plans, providing support to communities, conducting joint law enforcement activities, making collective decisions for co-management activities, and encouraging local communities to participate in such activities.

- **Community Guardians and Volunteers** – To address the challenge of having limited park staff on the ground, the CMP also institutionalised the selection of community guardians from the townships in AKNP

and NMTNP to assist in the implementation of co-management activities including conducting community-based biodiversity monitoring in the buffer zone, leading community awareness initiatives, conducting joint law enforcement activities, and serving as focal points for livelihood interventions. The community guardian model allows the community to present their issues and concerns to the PAMSU by reporting their activities, accomplishments, and issues encountered. Gradually, active community guardians will be selected to represent their communities in the TPAMC.

As of mid-2024, seven community guardians have been recruited and trained at AKNP. Some are in the lineup for permanent positions in the park. One of the goals of the CMP is the recruitment of guardians across 63 townships in the park.

ILWS' CMP as model for collaborative wetland management for biosphere reserves in Southeast Asia

The 77,525-hectare ILWS was established to protect local waterfowl and their habitats. It cradles the 12,000-hectare Indawgyi Lake which is the largest inland lake in Southeast Asia and the third largest in the world.

It is a sanctuary for a diverse range of plant and animal species, including the critically endangered Baer's Pochard *(Aythya baeri)* and the endangered teak *(Tectona grandis).* ILWS is also known as a birdwatcher's paradise — a globally important habitat to thousands of migratory and resident waterbirds.

An AHP, an East Asian-Australasian Flyway Partnership (EAAFP) and Ramsar site, and a Biosphere Reserve, the wetland plays a crucial role in providing livelihood and other ecological services to local communities, as well as a critical mechanism for disaster risk reduction. ILWS, however, is threatened by local mining, over-exploitation of wildlife, traditional agriculture, water pollution, and boundary conflicts, among many other issues.

Under SGP I, the development of a five-year CMP brought together park management, government agencies, village conservation groups, CSOs, CBOs, the private sector, and other stakeholders to work on an inclusive strategy that seeks to serve as a model for collaborative wetland management for other biosphere reserves in Southeast Asia.

The stakeholders recommended a range of interventions, focused on effectively integrating sustainable development actions with wetland conservation, establishing a revolving fund system for locals, providing alternative livelihood opportunities like livestock breeding, and establishing of community nurseries to reduce pressures on biodiversity.

AHP staff at Alaungdaw Kathapa National Park worked with their partners in crafting the park's CMP

Empowering the park staff in AHPs

In a shift away from traditional management processes, park staff in the four SGP I pilot sites in Myanmar were actively involved in building the conceptual model for the CMPs from collecting baseline data, engaging stakeholders, defining conservation targets, and identifying direct and indirect threats to refining conservation interventions. Capacity development activities were also implemented to boost park staff's knowledge and skills in crafting and implementing plans, as well as in engaging local communities.

Since park staff members were involved in all levels of planning, the strategy enhanced their sense of ownership of the plan, according to the Wildlife Conservation Society (WCS), an SGP grantee in both AKNP and NMTNP. This sense of ownership is expected to translate into a long-term commitment towards effective protected area management and enhanced efforts to engage local communities.

Case study: Promoting collaborative law enforcement in AHPs

An assessment of conservation needs in Myanmar's AHPs pointed to law enforcement as the most urgent conservation action needed to reduce the existing major threats to biodiversity and habitats in the AHPs.

The limited number of park staff, capacity, and funding for law enforcement operation, and training, as well as the lack of an informant network, intelligence-based patrolling, and collaboration among law enforcement agencies, have been identified as the key factors for ineffective law enforcement in ILWS (MONREC, 2017).

Conflicts of interest have often been at the centre of interactions between park authorities and communities as park staff are often viewed by communities as enforcers who carry out park regulations without regard for the views, well-being, and traditions of communities

The park management of Indawgyi Lake Wildlife Sanctuary has formed meaningful relationships with Fauna & Flora International (FFI), the ACB, and other stakeholders to address conservation challenges in the park

(WCS, 2021). People living within and around protected areas, on the other hand, are seen as threats to biodiversity owing to small-scale agriculture, overlogging, unsustainable fishing practices, and their pursuit of other livelihood activities to survive. This natural animosity inevitably makes it challenging to initiate any meaningful efforts to collaborate.

In MKWS, the significant incidents of encroachment in the wildlife sanctuary and the low rate of successful prosecutions recorded by the management authorities are reported as the main indicators of ineffective law enforcement. Management authorities point to their limited budget, the lack of cooperation with judicial bodies, and the low skill level and motivation of forest rangers as the main factors hampering impactful law enforcement.

These scenarios are all too familiar to park management not only in Myanmar but in many other protected areas globally, often impacting countries' abilities to halt illegal actions that exacerbate biodiversity loss.

Village-based informant networks at ILWS and MKWS

The idea of involving locals as volunteer informants or guardians, while not a new concept, is still relatively in its infancy stages in Myanmar and many other AHPs as efforts have largely been unsustainable and have not been institutionalised.

With support from SGP I, FFI brought forth the idea in ILWS and MKWS and has seen some notable impact.

The village-based informant network was established in ILWS in January 2018 to support the law enforcement initiative by promoting collaborative protected area management and gathering intelligence on illegal logging activities.

The village-based informant network led to an improvement in patrol coverage of forests as it enhanced the information base for locations where park rangers can patrol safely. This kind of information was difficult to gather in the past.The network was also instrumental in detecting logging camps inside ILWS.

One strategy to gather information was to go to restaurants and tea shops to conduct informal dialogues with locals. The other route was a more targeted approach that included getting in touch with community forestry groups to entice people to step up and become informants who shared information on forest activities. The informants came from diverse backgrounds. There were community leaders, farmers, hunters, journalists, religious leaders, and teachers. Project implementers kept the informants' identities confidential to ensure their safety.

In 2020, the informant network expanded to support threat identification and biodiversity conservation efforts in the AHP. Some members of the expanded network were former participants of the *Indawgyi Conservation Awareness Program for Conservation and Sustainable Development* who have since maintained contact with the park team. Farmers from the buffer zones, one of the main resource users around ILWS, were engaged in identifying

Zaw Min Oo of FFI's Myanmar Programme has worked with the local community in implementing SGP interventions including those related to park management and law enforcement

biodiversity hotspots, where habitats of species such as the hog deer and breeding sites of various wetland birds were located. They observed the various threats to biodiversity, and realised the immense value of the Indawgyi Lake ecosystem, making them understand the necessity and urgency of conserving these habitats. The network members also acted as village facilitators that helped in keeping the smooth flow of conservation activities.

Between 2018 and 2020, 50 informants reported forest crimes in ILWS, with nearly half of them contacting the FFI agent monthly to share the updates. Information gathered from the network were compiled and summarised by FFI and then submitted to ILWS' park warden on a monthly basis.

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The network was also instrumental in detecting logging camps inside ILWS. In 2018, 22 of the 26 large logging camps detected in ILWS were discovered by informants. In addition to revealing the logging camps, the network also helped identify a total of 18 logging businessmen and the locations of their camps. Information provided led to four arrests related to illegal logging in 2018.

The network also helped reduce corruption in the park after revealing the web of corruption related to illegal logging. Armed with the voice recording of their interviews with illegal loggers, informants revealed information about givers and receivers of bribes, including the systems they used to subvert the law.

Other efforts of the network were the construction of concrete barriers to block logging truckways and discussions with 86 elephant owners from 16 villages that led to the decline in the number of elephants used to support commercial logging activities.

To further expand monitoring initiatives, the village-based informants supported the creation of community-based forest monitoring units that assisted in regular patrol activities.

As the network further grew in 2020, informants also started reporting on major hunting hotspots inside ILWS, including information on hunting threats faced by wetland birds and threatened species like the hog deer.

Beyond gathering and reporting intelligence, the village-based informant network bridged the gap between government authorities and local communities whose relationship had

been marred with tension and lack of trust. The collaborative law enforcement initiative led to a change in local communities' perceptions of government authorities following their realisation that not all park staff were involved in bribery.

Like ILWS, a village-based informant network was also formed in MKWS, an AHP in the Bogale Township of Ayeyarwady that was established to protect the remaining mangrove forests and serve as a refuge for freshwater turtles and dolphins, estuarine crocodiles, and resident and migratory water and shore birds.

An EAAFP and Ramsar site, MKWS is regarded as "the last vestige of green space in the Ayeyarwady Delta" along what used to be the largest tract of mangroves in the Delta Area (Ramsar, 2017). It protects the largest population of the critically endangered *Sonneratia griffithii* mangrove species and serves as a sanctuary for several globally endangered species such as the Irrawaddy dolphin *(Orcaella brevirostris)* and long-tailed macaque *(Macaca fascicularis)*.

The wetland plays a crucial role in providing livelihood and other ecological services to local communities, as well as a critical mechanism for disaster risk reduction.

Illegal hunting, small-scale logging for fuelwood, unregulated fishing, traditional agriculture, pollution, and lack of awareness of the benefits and value of wildlife, and many other issues, however, are threatening the park.

The village-based informant system was implemented to address these threats, particularly the alarming scale of illegal logging and hunting. It enhanced the collaboration among the police, the fishery department, local CSOs, and communities for the protection of the wildlife sanctuary. With their joint forces, patrol coverage increased substantially in MKWS.

A Standard Operating Procedure for patrolling and law enforcement was also developed to make processes more efficient.

The initial successes of the village-based informant networks in ILWS and MKWS demonstrate that with the appropriate systems, benefits, and safeguards in place, members of the community will step up and work with authorities to protect the wildlife and habitats in the protected areas where they live.

Mangrove forest at Meinmahla Kyun Wildlife Sanctuary

Community Participatory Patrol Team in Way Kambas National Park and Gunung Leuser National Park

The WKNP in South Sumatra cradles the most extensive protected area of pristine lowland, evergreen rainforest in Indonesia.

The AHP is an important habitat for the critically endangered sumatran elephant *(Elephas maximus* ssp. *Sumatranus), Sumatran tiger (Panthera tigris sumatrae)* and Sumatran rhinoceros *(Dicerorhinus sumatrensis),* as well as the endangered Malay tapir *(Tapirus indicus)* and white-handed gibbon or lar gibbon *(Hylobates lar).*

The protected area plays a crucial role in providing livelihood and other ecological services to locals in surrounding villages. The WKNP, however, is gravely threatened by forest clearing due to poaching, illegal logging, unsustainable fishing, and the increasing population's heavy reliance on agriculture.

An outstanding issue in the AHP is the increasing negative interactions between elephants and the local communities. As deforestation drives elephants further away from their homes, they increasingly venture into villages to look for food. Encounters between the creatures and people do not bode well for both as someone inevitably gets hurt.

To prevent conflict and protect both wildlife and people, the Community Participatory Patrol Team (CPPT) was established in Rajabasa Lama I, one of the buffer villages directly adjacent to WKNP.

SGP I grantee KTH Rabala One Jaya, a forest farmer group, worked with the WKNP authorities, private firm PT Great Giant Pineapple, and the local community in patrolling through the *Development of a Cross-Stakeholder Elephant-Human Negative Interaction Mitigation Information System Integrated with Honeybee Cultivation Systems and Freshwater Fisheries in Rajabasa Lama I Village* intervention. Under the initiative, 30 patrollers from the forest farmers group or Kelompok Tani Hutan (KTH) were trained on human-wildlife conflict mitigation and were provided a monitoring hut and equipment needed for the operations.

The team that helps reduce the negative interactions between the community and wildlife at Braja Harjosari in Way Kambas National Park

As an early warning system, they used a WhatsApp group chat to notify each other about the presence of elephants and set up procedures to effectively handle encounters. The group serves as a force multiplier in conflict mitigation in the AHP.

Their efforts contributed to the roadmap for resolving the human-elephant conflict dubbed *Interaction Disturbance* in WKNP, East Lampung (2022–2026) for 23 KTH in buffer villages.

In addition to reducing conflict between elephants and people, the participatory patrol activities also helped prevent massive forest fires and curbed over-logging and other illegal activities within the area.

The initiative involves a livelihood component that provides an alternative source of income for the community as they participate in conflict mitigation. Out of the profit gained from the cultivation of tilapia and trigona honey,

50 per cent serves as additional business capital, 10 per cent goes to the honey harvest team, and 20 per cent supports the patrol team and conflict mitigation activities. Twenty percent is allocated to Rawa Bunder Resort for its efforts to support the maintenance of conservation areas and wildlife protection.

This initiative clearly demonstrated that forest farmer groups and other members of the local community, while having no prior experience in managing grants, can learn project management and collaborate with other stakeholders while also serving as the main actor in conflict mitigation, conservation, and livelihood generation.

A similar community-led patrol team was set up in GLNP.Known as one of the components of the Tropical Rainforest Heritage of Sumatra, GLNP is an AHP and forms part of the World Network of Biosphere Reserves in Asia and the Pacific.

The national park is particularly significant for conservation because it is known as the last place where charismatic species like elephants, leopards, orangutans, rhinoceros, and tigers live together.

GLNP is threatened by forest clearing due to the increasing population's heavy reliance on small-scale agriculture, encroachment, illegal logging, and other challenges.

In response to these challenges, Yayasan Ekosistem Lestari (YEL) established three community patrol groups under the project *Managing human-elephant conflict mitigation around the Sikundur Orangutan Research and Monitoring Station.* Thirty participants from these groups were trained by human-wildlife conflict mitigation experts to handle mitigation processes safely. They also received proper equipment.

In addition to improving human-elephant conflict mitigation, the intervention also strengthened the partnership between the GLNP authorities and the local community.

Case study: Embracing technology to strengthen protected area management

Biodiversity monitoring is a critical facet of actions to conserve biodiversity, particularly in protected areas. In the past decade, technological advances have opened doors to new platforms and tools that aid data gathering, monitoring, impact assessment, and other activities.

Pak Suyuti and Pak Parmin assist in human-elephant conflict cases at Labuhan Ratu IX in Way Kambas National Park

Maung Win of Indawgyi Lake Wildlife Sanctuary park management

Employing various kinds of technologies in the AHPs, whether simple or sophisticated, has demonstrated promising results in terms of reducing the time and costs needed to gather data. As shown in several interventions under SGP I, the increase in the usage of new technologies is boosting the capacity of park managers and staff, local communities, and their conservation partners.

The SMART law enforcement strategy in AKNP and NMNTP

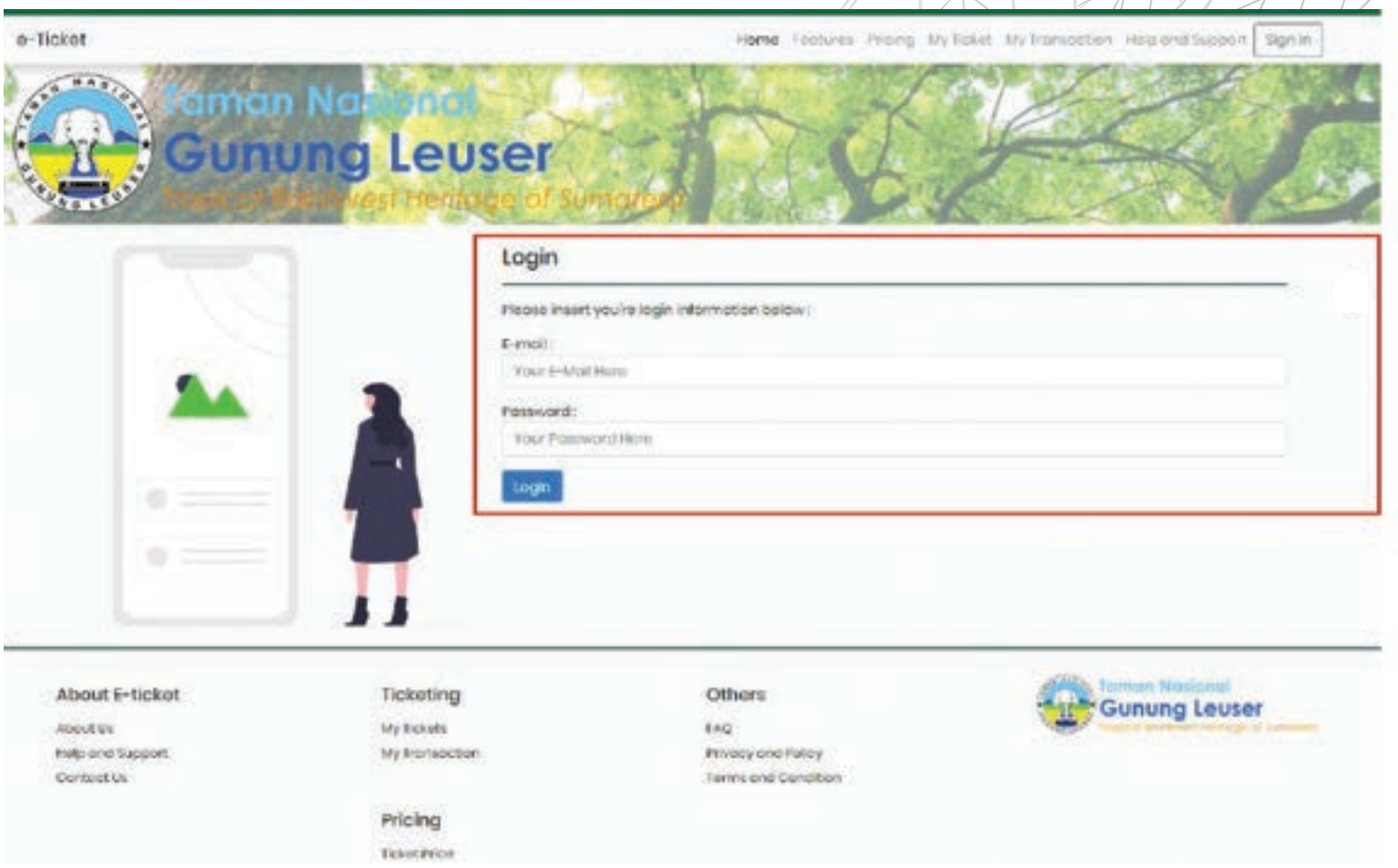
Initiated in 2011 by a partnership founded by CITES-MIKE, Frankfurt Zoological Society, North Carolina Zoo, WCS, World Wildlife Fund, and Zoological Society of London, the Spatial Monitoring and Reporting Tool (SMART) is "an innovative management tool designed to assist protected area and wildlife managers to better monitor, evaluate and adaptively manage patrolling activities." It is composed of a software application and analysis tools designed to be used by park managers, community rangers, conservationists, and agencies who work on the ground in support of wildlife patrols and law enforcement. The SMART platform is used to "standardise and streamline data collection, analysis, and reporting, making it easier for key information to get from the field to decision-makers" (The SMART Partnership, 2024).

A core component of the CMPs in Myanmar is the strengthening of existing SMART law enforcement systems in the AHPs and the development of a SMART law enforcement strategy.

In response to park staff's limited knowledge and skills related to using modern monitoring and reporting tools, the WCS and its partners prioritised capacity building for park rangers and other workers under their SGP I grant. A series of basic SMART tool training and refresher courses were provided to park rangers and community guardians in AKNP and NMTNP to arm them with knowledge and skills they can apply in their patrolling, data collection, and reporting duties. Park managers, on the other hand, were equipped with advanced SMART training.

To work hand in hand with their enhanced capacities, new patrol and law enforcement equipment were also purchased using the SGP I grant.

With the new knowledge gained, the ranger-based information collection system improved



GLNP management now uses an e-ticketing system across tourist sites

in terms of the number of patrol days and nights, patrol distance, patrol coverage, and number of staff participating per patrol. The frequency of law enforcement and patrol review meetings also improved, providing more insight on how to further enhance the patrolling system.

Employing the SMART platform also boosted rangers' and guardians' capacity to record wildlife species distribution and threats, as well as map the distribution of species and the threats they faced. Such information enables park authorities to make key decisions on patrolling and species monitoring strategies.

In AKNP and NMTNP, park staff and authorities gained practical knowledge that enabled them to clearly see the direct and indirect threats faced by the AHP, as well as the causal factors of these threats. In addition, conservation interventions were easily planned, assessed, monitored, and shared.

The training also strengthened the lines of communication and collaboration between park staff and the community guardians by ensuring a common understanding of the need to protect the AHP and the interventions that can help achieve that goal.

Embracing the use of technology and implementing the lessons learned from their SMART refresher training have enhanced the efficiency of park staff and community rangers. This change led to improvements in park management.

Strengthening data collection and management at GLNP

Access to reliable biodiversity data is essential for effective park management and conservation efforts. In a treasure trove of flora and fauna like GLNP, strengthening data collection and management is a must. Under SGP I, Yayasan Pesona Tropis Alam Indonesia (PETAI) developed a centre of conservation data under the intervention dubbed as *Strengthening Conservation of the Gunung Leuser National Park (GLNP) through Biodiversity Management in Area 3, Stabat.*

Embracing the use of technology and implementing the lessons learned from their SMART refresher training have enhanced the efficiency of park staff and community rangers. This change led to improvements in park staff and community rangers.

YEL used its SGP grant to strengthen GLNP's Conservation Data and Information Unit (UDIK) by procuring necessary equipment and providing training support for park staff

In coordination with GLNP management, PETAI developed web-based applications aimed at supporting efficient and integrated management at the AHP. Following a series of consultations and focused group discussions to determine the forms, user and application interfaces, and content needed for application development, the organisation created three applications that facilitate the management of data and information needed in planning, implementing, and monitoring the evaluation of GLNP management.

E-Pustaka was designed to collect and digitise management plan documents, reports, research and survey results, books, and other documents so they can be easily found. E-JaSa is a platform that can be used for registration of potential partners who wish to collaborate with GLNP and those who are already GLNP partners. E-Ticketing was designed to document the process of selling tickets for visits to tourist sites in GLNP without having to physically issue valuable documents or paper tickets. All information related to electronic ticketing is stored digitally on the AHP's computer system. Apart from designing the applications, SGP I also supported the purchase of necessary equipment including camera traps, GPS, compass, binoculars, and densiometers.

Related capacity building activities were also conducted. GLNP database operators were trained on how to use the new website applications. Park management and staff also underwent training on how to prepare inventory and biodiversity monitoring strategy, focusing on surveying and monitoring key species, as well as their habitats.

The local communities also benefited from capacity building as resort officials and community representatives from four resorts underwent training on identification, inventory, and biodiversity monitoring. In addition to studying biodiversity inventory, they also learned about human-wildlife conflict mitigation and disaster risk analysis.

The intervention produced three manuals on standards and methodologies for biodiversity survey and monitoring.

An initial survey confirmed the presence of elephants in large pockets of the population. Data on species is considered in crafting

management strategies related to the elephant population and their habitat. Overall, initial surveys led to updated data on species and habitats in GLNP that will be considered in improving the restoration of the ecosystem in the conservation partnership area.

Over the long term, the grantee and park management believe that the intervention will "accelerate the realisation of GLNP as a source of knowledge for Sumatran tropical rainforests" (PETAI, 2021).

Case study: Forging conservation partnerships

Community stewardship of AHPs is critical in the battle for biodiversity conservation. Cultivating partnerships with local communities and building synergies between traditional knowledge and values, and scientific knowledge and expertise can create a positive impact on protected areas.

In GLNP and WKNP, the conservation partnership model between AHP management and conservation forest farmers groups was instrumental in encouraging local communities to step up and work with park management and conservation organisations to protect biodiversity within the AHPs.

Forging conservation partnerships with local communities was highlighted in several initiatives in WKNP. Through SGP-supported interventions, the park's management strengthened their existing collaboration with seven KTHs related to protecting Way Kambas. One of their main goals is to reduce the negative interactions between elephants and humans (Penabulu Foundation, 2023).

The elephant response unit in Tegal Yoso in Way Kambas National Park received training and equipment to support their patrolling operations

In the case of Yayasan Konservasi Way Seputih (YKWS), members encouraged locals to play an active role in the conservation of the national park and its biodiversity under the project *Optimization of Natural Resource Potential in the Buffer Zone of the Way Kambas National Park.* In addition to collecting baseline data on land cover, land use, and home range conditions of wild elephants that intersect with the agricultural and settlement areas of Tegal Yoso Village, the initiative also increased community awareness of collaborative park management.

In GLNP, Yayasan SIMPUL Indonesia's grant focused on the study and preparation of a conservation partnership plan in the context of ecosystem restoration to support the protection of plant and wildlife habitats in the area. The foundation gathered preliminary data on rehabilitation zones and distribution of conservation partnership area locations through a series of focused group discussions with stakeholders.

A community meeting on AHPs at Nat Ma Taung National Park

Lessons Learned

SGP I supported several interventions that opened doors for local communities to actively participate in the management of AHPs. The case studies shared in this technical series prove that involving local communities, including those that live in buffer zones, can lead to positive outcomes for people and the parks.

A recurring theme in grantees' completion reports is the realisation that the **collaborative management approach elicits better community participation** in managing AHPs.

The SGP experience in Myanmar and Indonesia have shown that the **co-management mechanism strengthened the relationship among various stakeholders**, including local communities, national government agencies, park management, township government, CBOs, CSOs, and the private sector. The grants provided an opportunity for locals to engage in constructive and meaningful dialogue with park staff and organisations working in the AHPs. In some cases, SGP interventions also helped reduce conflict between park staff and the locals.

In Indonesia, the role of the National Working Team was recognised as an effective means of connecting the grantees and local communities with national agencies and park authorities. In engaging a broad range of stakeholders, they enabled the development of a wide variety of solutions in response to jointly identified threats. A similar approach was observed in Myanmar through the TPAMC and PAMSU.

As the grantees and park management moved towards inclusion and some level of power-sharing, park staff, and the local communities have **observed an enhanced culture of transparency in management planning and developed a greater sense of ownership** of such plans.

Capacity building played an integral part in the wins documented across SGP pilot sites. Park staff benefited from training on community engagement, management planning, and the use of technology in biodiversity monitoring and law enforcement. To effectively engage communities and assist in the effective implementation of management plans, **the AHPs'**

Led by Khin Mar Kyi, the Green Land Group empowers women in Indawgyi Lake Wildlife Sanctuary

frontliners must be well-trained in various facets of AHP management. Competent and committed protected area professionals are integral to the success of co-management efforts.

Boosting capacities on the ground is another crucial component of involving communities and fostering stewardship. For them to become good conservation actors and park management collaborators, local communities must first understand the value of AHPs and the various flora, fauna, and habitats around them, as well as their responsibilities as beneficiaries of nature's bounty. The SGP experience has demonstrated that training on livelihood opportunities, law enforcement, habitat restoration, and awareness raising can lead to changes in attitudes and mindsets, as well as actions supportive of management goals. Such transformations are key to the long-term sustainability of co-management efforts.

Involving local people as community guardians and members of the village-based informant systems was lauded by stakeholders as an effective approach to uncovering and reducing illegal activities in the AHPs. Some grantees highlighted that since the guardians and informants live within the park, they are invested in enforcement activities. Some of them are also expecting to be full-time park staff when an opportunity opens.

The SGP experience in Indonesia's GLNP and WKNP and Myanmar's ILWS and MKWS prove that **economic and conservation goals are intricately linked and, thus, can go hand in hand**. In WKNP, for example, the implementation of the CPPT has demonstrated that profits from the community's cultivation of tilapia and trigona honey can fund efforts of community patrollers to protect wildlife in the park.

With limited budgets and manpower, **developing and harnessing technology-driven solutions are critical to efficient and cost-effective data gathering, biodiversity monitoring, law enforcement, and impact assessment.** The experience of grantees shows that utilising technology, from messaging platforms like WhatsApp and drones to open-source spatial tools like the SMART platform and newly developed web-based applications, can generate timely and quality data critical to making evidence-based decisions in the AHPs.

Gaps and Challenges

While initial successes have been documented under SGP I, it is **too early to assess whether the collaborative management mechanisms built in the AHPs have resulted in better decision-making for the parks**. Several grantees have noted that the **project implementation** time was too short to be able to achieve the longer-term objectives.

Ensuring sustainability is another common challenge identified by grantees. In Myanmar's AKNP and NMTNP, for instance, the TPAMC and PAMSU have been established in only a few townships. These mechanisms must be established in the rest of the townships to ensure the application of participatory approaches across the entire AHPs and perceive a significant impact. Since the co-management approach relies on the engagement of local communities, establishing multi-stakeholder teams on the ground is crucial to keep the fire burning. With the completion of the grant, a heavy weight rests on the shoulders of park management to sustain the momentum created during project implementation.

In the project completion reports, another recurring theme underscored by grantees is the **need for sufficient funding to sustain the initiatives and partnerships over the long term**. Thus, securing financial support from various sources, including grants from development organisations, private sector investment, and other sources must be prioritised.

The success of the community participatory approach also relies on **sustaining the motivation of local communities in the long term**. This entails ensuring their continued benefits from conservation, as well as continued efforts to engage them through a combination of awareness raising and livelihood interventions.

In terms of implementing the CMPs, several grantees pointed the **need to explicitly articulate the departmental procedures for zoning of protected areas** to avoid issues.

Collaboration played a key role in promoting park stewardship in Meinmahla Kyun Wildlife Sanctuary

Recommendations

The following are some recommendations to involve local communities in park management.

Pursue collaborative management approaches

- Actively consult local communities in park management planning to ensure local ownership of plans — that way, they will be more enticed to participate in implementing management plans
- Establish effective communication channels and ensure that everyone's voice is heard to maintain a legitimate participatory approach
- Build relationships by establishing park management committees or working groups that involve park staff, representatives from local communities, and other partners, similar to the TPAMC and PAMSU in Myanmar
- Establish partnership and conservation agreements with local communities and indigenous groups to promote sustainable management of natural resources — study the models or examples from SGP projects
- Involve communities in law enforcement and patrolling activities — as shown in examples in the management plans for Myanmar's AHPs, where existing efforts involve people from local communities either as volunteer rangers, community guardians, or park staff
- Strengthen existing co-management initiatives and replicate best practices

Strengthen capacity of park managers and park staff on engaging local communities

- Provide much-needed training opportunities to help protected area staff develop techniques for building partnerships with local communities in park management (e.g. communication skills training, creating opportunities for collaboration)
- Connect park workers with fellow protected area staff who have significant experience in successfully collaborating with local communities

Implement outreach and awareness-raising activities aimed at creating a change of mindset that sees local communities as allies in biodiversity conservation instead of threats to biodiversity

- Select co-management champions among members of the TPAMC, PAMSU, and community guardians to share their experiences in implementing participatory approaches to protected area management
- Organise community seminars and share best practices that promote stewardship

Sustain the participation of local communities by establishing or strengthening targeted livelihood development programmes similar to those initiated under the SGP

- Establish livelihood development committees or groups within the AHPs, especially in buffer zones, which can serve as conduits for grants
- Use SGP livelihood success stories as models that can entice more donors to fund livelihood development programmes in AHPs

Strengthen conservation partnerships

- Strengthen and sustain existing conservation partnerships as these foster a greater sense of responsibility among the community and park management towards jointly conserving the park and recognising how essential the resources are as a source of livelihood, cultural heritage, and legacy that they have to continue sharing and passing on to their community's future generations and those who will eventually be in park management

Explore more sources of funds and resources to sustain the management planning momentum gained from the SGP

- Create investment packages that prioritise filling in the management gaps
- Identify other potential funding sources (e.g. collecting entrance fees)
- Explore long-term funding sources (REDD+, payment for ecosystem services and ecotourism)
- Explore more funding from local and international NGOs, as well as bilateral and multilateral organisations

Document and share the impact of the pilot co-management sites in AHPs

- Share the lessons learned and the challenges encountered in the SGP pilot sites
- Replicate best co-management practices

Monitoring activities were initiated by SGP grantee Yayasan Orangutan Sumatera Lestari - Orangutan Information Centre in the Karo-Langkat road in Gunung Leuser National Park

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D.M. Lantican Avenue, University of the Philippines
Los Baños, Laguna, Philippines 4031
Telephone: +6349 536 2865 Fax: +632 584 4210
Email: contact.us@aseanbiodiversity.org

ASEANBiodiversity
ASEANBiodiversity
aseanbiodiversity
TheASEANbiodiversity
ASEAN_Biodiversity
aseanbiodiversity.org