



DESCRIBE YOUR GOOD PRACTICE STORY

Address each aspect of your good practice story in the different sections being specific including relevant quantitative and qualitative information.

Title of the Story: Tingo María National Park, conserving its biodiversity and ecosystem services for the benefit of the population.

Destination Name: Parque Nacional Tingo María, Tingo María – Leoncio Prado, Huánuco

Country: Perú

Submitter name: Karla Ibette Tito Ramos

Email address: ktito@sernanp.gob.pe

Position: Especialista en Turismo - PNTM

Submission category: (Please check one of the boxes that indicates the focus of your story)

Please find detailed information for the categories below in the Top 100 training module 'Good Practice Story'.

- Governance, Resilience & Recovery
- Nature & Scenery
- Environment & Climate
- Culture & Tradition
- Thriving Communities
- Business & Marketing

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Issues faced

What was the problem/issue solved with the good practice?

Tingo María National Park (PNTM) is the second oldest protected natural area (PNA) in Peru and plays a fundamental role in the conservation of biological diversity in this region of the country. Its dense forests, tenaciously conserved for half a century, preserve a great diversity of flora and fauna species





(76 species of mammals, 62 species of herpetofauna, 291 species of birds, 320 species of butterflies, 30 species of fish, 417 species of plants), some of which are globally threatened, others are endemic to Peru and the department of Huánuco, and others are visitors from southern and boreal latitudes.

Tingo María National Park is located entirely within the Selva Alta ecoregion with 4,777 hectares, It protects important montane forest ecosystems that are highly biodiverse, produce water, store carbon, and provide livelihoods for many people. According to MINAM's ecosystem information, the park is classified into five ecosystems, of which the basimontane yunga forest is the largest, with a high biodiversity of flora and fauna that must be protected, including butterflies, monkeys, peccaries, peccaries, ferns, orchids, and medicinal plants.

Even though the ecosystem services offered by this NPA are important, the surrounding populations did not recognize and use them in a sustainable manner. The populations settled in the surrounding areas demanded economic income for their families, so, excused by their lack of knowledge, they generated pressure and impacts on their resources, putting their maintenance at risk.

Within the protected natural area, 320 species of butterflies were identified, 09 of which belong to the genus *Morpho*, considered one of the most important conservation targets because of their role as pollinators of the forest, which ensures the continuity of the plant communities. Of the species recorded, the Helena butterfly (*Morpho* sp) stands out because it is easily found flying over the roads and near bodies of water.

Some years ago, the need of the local population led them to implement unsustainable actions that were detrimental to the biodiversity of the Tingo María National Park, such as the informal hunting of butterflies. When they saw the abundance and unique beauty of the butterflies, they saw an opportunity to obtain economic income and began to hunt them informally, using handmade entomological nets, thus disrupting the butterfly reproduction and migration chain.

In addition to this informal extraction of butterflies, there was a lack of knowledge of the potential of products that can be extracted from the forest without impacting the environment and of the transformation of agricultural products that can be linked to the tourism sector. These conditions put the NPA at a very high risk of deterioration of its conservation status, so the population's demand for economic resources had to be urgently addressed to provide favorable conditions for their families, which in turn could become allies for the conservation of the PNTM.

Methods, steps and tools applied

How was the good practice implemented?

Law N°26834 - Law of Natural Areas Protected by the State and its Regulation Supreme Decree N°038-2001-AG, regulate the aspects related to the management of Natural Protected Areas and their





conservation in accordance with Article 68 of the Political Constitution of Peru. This Law and its regulations promote the development of strategic alliances with local populations, particularly with peasant and native communities, based on respect for their legitimate rights, as well as their systems of social and economic organization, which must be exercised in accordance with the objectives and purposes of the NPAs.

One of Tingo María National Park's objectives was to "Contribute to the sustainable development of its surroundings, particularly its buffer zone" and its special use zone. Tingo María National Park carries out activities such as field visits, patrols, and monitoring to identify informal and illegal activities within the park and to identify the needs of its populations. With this information, the NPA managers formulate actions and develop research to improve the quality of life of the local inhabitants while maintaining the park's conservation objectives.

One of the actions implemented to identify informal activities and their direct causes is the surveillance and control activity, which through patrols carried out by the chief, specialists, park rangers and local population has the direct purpose of reducing the threats that affect the conservation elements and contribute to the reduction of illegal activities in the Buffer Zone.

Once the sources of pressure and their causes were identified, basic research was conducted on the specific richness and relative abundance of butterflies (Lepidoptera), and monitoring protocols were implemented to follow up on their populations.

Based on the information generated by these investigations, an Annual Butterfly Harvesting Plan was prepared, establishing the technical aspects for the annual harvesting of the "butterfly" resource.

On the other hand, it was possible to identify the presence of an important population of melipona bees, which are natural pollinators of the forest and produce honey, which if managed in a sustainable manner are an important alternative of economic income for local populations. As with the butterflies, the ANP's management prepared a Practical Guide for the identification of stingless bees for the ANP, where monitoring protocols for native bees were established to provide information on their ecology. Similarly, there is an Annual Plan for harvesting bees of the Melipona subtribe in Tingo María National Park, which establishes the technical aspects for the annual harvesting of the bee resource of the "Meliponina" subtribe.

With the same objective, the PNTM identified the transformation of products from local crops into ice cream as another great potential for the generation of economic resources. Within the PNTM, there is an area established in its zoning as a Special Use Zone, in which agricultural crops are allowed by pre-existing rights prior to its creation. Products such as coffee, cacao, banana, passion fruit, camu camu, lemon, and others are grown in this area, which, when promoted as inputs for artisanal ice cream, are another important economic alternative in the PNA. Once the resources were identified and the





conditions for their use were established, the activities of the local inhabitants were formalized by granting rights through minor activity agreements and use contracts.

In this context, one (01) formal harvesting contract has been signed, with the following denomination: CONTRACT N°003-2020-SERNANP-DGANP-UOFMR - CONTRACT FOR SUSTAINABLE HARVESTING OF NATURAL RENEWABLE RESOURCES IN THE TINGO MARÍA NATIONAL PARK, where the right of sustainable harvesting of the butterfly renewable natural resource for commercial purposes is granted inside the Tingo María National Park. In the case of native bees, there are ten (10) Minor Activity Agreements for the sustainable use of the bee resource of the Meliponina Subtribe.

There is also one (01) conservation agreement within the Tingo Maria National Park, whose main objective is to sell handmade ice cream made from coffee, cacao, banana, passion fruit, camu camu, lemon and other products from the Special Use Zone (Z.U.E.).

Once the natural resource extraction and exploitation activities were formalized, the ANP's management promoted the articulation of these activities with the tourism market. These three products are offered to locals and visitors in different parts of the city of Tingo María and the country; In particular, at the entrance of the PNTM, there is an eco-shop selling handmade ice cream, and honey, pollen, handicrafts, and souvenirs made with butterflies are offered inside the PNTM by the local people themselves, who have also formalized their commitments with the ANP through 05 agreements for minor activities, a modality for granting rights linked to tourism activities.

Key success factors

What helped you tackle the issues?

One success factor was the governance exercised by SERNANP based on its responsibilities and functions to promote the sustainable development of the populations surrounding the NPAs. In this sense, SERNANP's functions include approving regulations and establishing technical and administrative criteria, as well as procedures for the establishment and management of Natural Protected Areas; the head of the PNTM established mechanisms for surveillance, control and sanctions for infractions, and was able to exercise its authority to enforce the law within the ANP.

Another important factor was the use of scientific information for decision making. Research related to species identification, specific richness and relative abundance of species was carried out to generate basic information for the preparation of management plans for native butterflies and bees.

Another key factor was the permanent technical support to the local population through technical assistance and training offered by the technical staff of institutions such as the Peruvian Amazon Research Institute - IIAP and SERNANP, the main strategic allies that promoted these activities.





Similarly, the formalization of natural resource and landscape use activities marked an important milestone to protect the natural values of the ANP and establish commitments with ANP users.

Lessons learned

While implementing the Good Practice what challenges were faced, and how were they overcome?

In the first instance, the local population was reluctant to the new proposals presented, as a result of the social conflicts that had arisen in the area, the lack of economic resources and the lack of knowledge of the benefits that could be obtained.

Therefore, a thorough field work was carried out, attending meetings to socialize the objectives, holding talks, workshops and gaining their trust in order to convert them into conservation allies.

After overcoming the main obstacles through ongoing training, the activities were formalized through the granting of rights for the sustainable use of renewable natural resources such as butterflies and melipona bees, and the Conservation Agreement was signed.

Another difficulty was the lack of personnel specialized in butterflies for the elaboration of instruments for the planning and use of the species, such as the Management Plan, in which, among other topics, the life cycle, general morphology, host plants, phenology, among others, could be included: In the case of native bees (meliponines), the difficulty was the lack of trained personnel, lack of materials, field equipment, and lack of knowledge about the species, the correct way to carry out the blinding and installation in rational boxes, which would allow the good management and care of native bees to ensure the permanence and reproduction of the hive, the good production of honey and the final consumption by the interested parties; For this reason, the management of Tingo Maria National Park decided to hire specialists and with them to issue the necessary instruments for the management of these resources.

Unlike the conservation agreement for the Artisanal Ice Cream, the difficulty was basically in locating the appropriate place for the sale of the products and the delay for the documentation process, where it was possible to manage a suitable space for the sale and promotion of the products.

Results, achievements and recognitions

What were the qualitative and quantitative results of the good practice?

One of the results is to have one (01) contract for the sustainable use of renewable natural resources with the Association of Butterfly Farmers of the Huayruro sector in an area of 6.42 ha. Benefiting 04 families in the sector.





In this way, 23 species of butterflies belonging to four families (Nymphalidae, Papilionidae, Pieridae and Hesperidae) are harvested and the quota for harvesting the resource in the PNA is 2,000 individuals per year. This harvest is equivalent to 7% of the existing species.

There are also ten (10) minor activity agreements for the sustainable use of the bee resource of the Meliponina subtribe, as a sub product of honey and pollen, in the Rio Oro sector in a total area of 63.64 ha. Benefiting 10 families in the sector. Likewise, 10 species of bees were identified in Tingo Maria National Park (Melipona sp., Nannotrigona sp., Partamona sp., Ptilotrigona sp., Scaptotrigona sp., Scaura sp., Schwarzula sp, Tetragona sp. Tetragonisca sp. and Trigona sp.), which are distributed and found naturally in the ANP; which are managed by the local population in artificial hives (rational boxes) located in the Special Use Zone.

Regarding artisanal ice cream, there is a (01) conservation agreement with Innova Agroalimentaria, whose main activity is the production of other food products, and where it is detailed that artisanal ice cream will be sold to visitors with local inputs, generating economic benefits to local families. The company has a license agreement for the use of the trademark "SERNANP ALLY FOR CONSERVATION".

The formal use of these resources is directly linked to the tourism market, giving value to local inputs, boosting the local economy and making them available to visitors.

The PNTM's conservation work has allowed more than 93.55% of the ecosystems in the Natural Protected Area to be in an optimal state of conservation, benefiting the population of the district of Mariano Dámaso Beraún, province of Leoncio Prado, Huanuco Region.

In turn, Tingo Maria National Park has numerous recognitions that contribute in a considerable way to the conservation of wild flora and fauna, such as the recognition of the Latin American and Caribbean Network for the conservation of bats (RELCOM), the identification of 02 new orchids for science such as Andinia tingomariana and Andinia Barba-caprina, the recognition of the Top 100 - 2021 - Destination with Sustainable Stories and the Safe Travels seal that consolidates us as a safe destination to visit within the framework of COVID-19.

Additional references





Provide links to further information. Pictures and videos should be available for download either from YouTube, Vimeo or other Cloud-based (Google/ One Drive) download URL (not WeTransfer).

LINK DRIVE:

<http://foldersgd2.sernanp.gob.pe/index.php/s/lb3GLWc010GGjLw>

NOTA DE PRENSA - CRIANZA DE ABEJAS:

<https://www.gob.pe/institucion/minam/noticias/22790-el-iiap-y-sernanp-promueven-la-crianza-de-abejas-nativas-en-tingo-maria>

<https://andina.pe/agencia/noticia-dia-mundial-las-abejas-conoce-tecnologia-peruana-para-criar-a-variedad-sin-aguijon-815788.aspx>

<https://agronoticias.pe/ultimas-noticias/apicultura-desarrollan-tecnologia-para-criar-abejas-sin-aguijon/>

NOTA DE PRENSA - CRIANZA DE ABEJAS SIN AGUIJÓN:

<https://agronoticias.pe/ciencia-e-innovacion/crianza-de-abejas-sin-aguijon-en-la-amazonia/>

NUEVAS ESPECIES DE ORQUIDEAS:

https://www.nationalgeographic.com.es/naturaleza/actualidad/hallada-nueva-especie-orquidea-parque-nacional-tingo-maria-peru_13088

<https://www.relcomlatinoamerica.net/%C2%BFqu%C3%A9-hacemos/conservacion/aicoms-sicoms/aicoms-sicoms-buscador/ad/aicoms,1/tingo-maria,42.html#dj-classifieds>

