

Final Project Report

EWCL Cohort 9 - Pangolins Planet Indonesia Partner Team

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PROJECT SUMMARY

Since May 2023, Team Planet Indonesia from EWCL Class 9 has worked to develop tools to address community-driven hunting of the Sunda pangolin in West Kalimantan, Indonesia, using principles of community-based social marketing (CBSM).

The Sunda pangolin (*Manis javanica*) is one of eight species of pangolin, and the most widely distributed species in Southeast Asia. All eight species are recognized as the most trafficked mammals in the world, with the Sunda pangolin listed as critically endangered by the International Union for the Conservation of Nature (IUCN). The primary contributor to Sunda pangolin population declines is overexploitation from hunting and poaching, both targeted and untargeted, for local and international use. When threatened, pangolins roll into a ball, like armadillos do, protecting vulnerable body parts that are not covered by their tough scales. This defense mechanism makes them an easy target for hunters intentionally capturing them or opportunistically taking them out of the wild for their meat or scales. Additional challenges for conservation of the Sunda pangolin are lack of population and distribution data. While pangolins are relatively easy for poachers to acquire using snares and dogs, little is known about the actual population numbers, individual ranges, movements, or distributions on the landscape in protected areas of West Kalimantan.

For **phase one** of our project, we worked alongside our project partner, Planet Indonesia, to conduct an in-depth literature and existing data review to identify behaviors of concern for pangolin populations and an analysis of whether those behaviors could be effectively addressed with a behavior change program. The literature review also identified potential interventions at all stages of a poaching event, categorized them using common criminological theory, and evaluated possible relevance and usefulness in the pangolin context and more broadly.

In this initial phase, we also developed and recorded a 90-minute “Introduction to CBSM” training for Planet Indonesia staff to build internal capacity for behavior change work. The recording file was transferred to Planet Indonesia so the training could be translated and used as part of future staff training.

Phase two consisted of developing and conducting a survey with community members in four villages—Sungai Segak, Tembawang Bulai, Lubuk Tajau, and Meragun—to gain a better understanding of: (1) pangolin sightings/interactions, (2) perceptions of pangolins, (3) perceived benefits/challenges linked to pangolin conservation, and (4) moral and ethical beliefs tied to pangolin hunting. Survey results indicated that a strong knowledge and awareness foundation needed to be established before a full-scale behavior change pilot could be implemented, which led our team to develop a list of potential strategies that could be implemented given our project timeline and Planet Indonesia’s capacity for program implementation.

In the **third phase** of our initiative, we crafted a captivating storybook with the explicit intention of catalyzing a transformative shift in the perceptions surrounding the Sunda pangolin. This pivotal step is instrumental in cultivating a broader cultural appreciation for the significance of

pangolin conservation. Our designed storybook serves as a compelling narrative tool, intricately woven to underscore the intrinsic value of this unique species and to illuminate the indispensable role that the community plays in safeguarding their existence.

Through vivid storytelling, we artfully convey the pangolin's ecological importance and its contribution to the delicate balance of the ecosystem. The overarching goal is to instill a profound sense of stewardship, inspiring a collective commitment to the well-being of these remarkable creatures.

The storybook extends beyond storytelling, incorporating a diverse array of workbook-style activities carefully organized to engage both children and adults. These interactive elements serve as transformative tools, empowering individuals to embody the role of "pangolin protectors." By actively participating in these activities, readers not only absorb the importance of conservation but also internalize actionable steps they can take to contribute meaningfully to the cause of Sunda pangolin conservation.

Phase four took the portions of the literature review that would be most helpful to either our local partners or the general pangolin conservation community, and revised and prepared them for publication on the internet. This included having them professionally edited and formatted. We identified, sought out, and received interest and commitments from two entities: our project partner, Planet Indonesia, and the organization Save Pangolins. Sections about the status of the Sunda pangolin in West Kalimantan, Indonesia, and Situational Crime Prevention Theory as applied in the context of West Kalimantan were provided to project partner Planet Indonesia, which has committed to placing them on their website in their resources and education section. A section on pangolins (generally) and zoonotic diseases and the Pangolin Poaching Intervention Explorer were provided to the organization Save Pangolins, which also committed to putting them in its online resources section.

OUTCOMES

Grant funding secured and spent

Our group applied for and received two grants. SeaWorld Busch Gardens Conservation Fund provided \$6,500 and the Mohammed bin Zayed Species Conservation Fund provided \$9,000. We also generated approximately \$10,000 in in-kind contributions from the work of group members' time and expertise (a more detailed discussion of funds earned or contributed is presented below).

Our original budget included funding for a literature review for background use and potential publication (including editing assistance; a targeted survey of selected communities in Gunung Naning, West Kalimantan, Indonesia, to identify current levels of knowledge about pangolins, community attitudes, practices, perceptions, and values; the development of a pilot

Community Based Social Marketing intervention program; the deployment of the pilot including travel to Indonesia by a team member; and a follow up survey in the targeted communities).

Because we determined after the community survey results were analyzed that there was insufficient background knowledge and support to drive a successful CBSM pilot project, the scope of the project and the nature of the deliverables were narrowed substantially and a large amount of the grant funding was not spent and returned.

Literature review, white papers, and Pangolin Poaching Intervention Explorer

Group members conducted a substantial review of current literature on the Sunda pangolin status and ecology, relevant wildlife law in Indonesia, pangolin poaching theoretical frameworks, pangolins and zoonosis, community intervention techniques, anti-poaching methods and technologies, and criminological research and theory about poaching and poaching interventions. The final report was 34 pages and contained a supplementary spreadsheet with key findings from the literature. The results of this literature review were combined with additional community information provided by Planet Indonesia, and were used as the basis for developing the community survey, the focus of which was to identify current attitudes, perceptions, and knowledge about pangolins, hunting customs, and law enforcement in four selected communities.

Three sections of the literature review, Sunda Pangolin Species Status and Ecology; Pangolins and Zoonotic Disease; and Situational Crime Prevention Research in West Kalimantan, Indonesia, were determined to have relevance and use for a wider audience and were broken out and developed as free-standing mini-white papers. We hired a contract editor to help with formatting and citations and a graphic designer to make the publications more professional. We then identified, contacted, and received commitments from two partners to host these resources. We provided Planet Indonesia with two (Species Assessment and Situational Crime Prevention) on their own platform because they were closely tied to their work and geographic area. We provided the third (Zoonotic Disease) to Planet Indonesia and to Save Pangolins for use by a wider audience.

The literature review also resulted in a detailed table of possible poaching interventions used world-wide to protect a variety of species in many different situations. Planet Indonesia additionally provided information on existing community preferences and approaches to interventions and information about what had worked locally with other species. These were used to develop a set of potential interventions that were then vetted for potential effectiveness, efficiency, community acceptability, and capacity to implement.

A Pangolin Poaching Intervention Explorer tool was developed, consisting of a summary table of interventions. This resource compiles and consolidates the major categories of interventions, with brief synopses of most pertinent information including criminology theory alignment, an assessment of effectiveness for poaching generally and for pangolins, level of evidentiary support, potential unintended consequences, potential barriers to implementation, potential community co-benefits, and relevant citations. The table was formatted to make it sortable and filterable based on types of interventions and the poaching criteria targeted according to Situational Crime Prevention Theory. A second table tab contains key highlights from the literature reviewed. The tool was provided to Planet Indonesia and Save Pangolins for hosting on their platforms for use by other conservation professionals.

Community survey

The community survey was developed with the goal of supplementing existing survey information about attitudes and practices related to wildlife hunting, generally, in West Kalimantan, and was designed to get more detailed information about specific community practices, values, knowledge, and perceptions of pangolins, hunters, law enforcement, and local customary law. The results were used to identify possible CBSM interventions that could have a long-term and lasting impact on pangolin populations, especially by reducing poaching behavior.

Based on the survey findings, one potential intervention that seemed to have significant potential to create lasting change relates to community motivations to make changes to customary law, in order to provide protections for pangolins. This has occurred in communities that Planet Indonesia works with, however mechanisms to foster this change are not well understood. A proposal was made to complete additional survey work to better understand customary law in the target communities in West Kalimantan, but due to the timeline of the project it was not feasible to undertake this work. In the survey results it was also identified that there is an overall lack of awareness of pangolin life history.

Ultimately, the survey results revealed that there may be opportunities to push for changes in customary law using a CBSM model, but that more outreach and education is required first to build a baseline of local support and knowledge before such a change can be implemented. We produced an informational graphic displaying some of the key findings of the survey work.

Educational resource book

The primary community deliverable was an educational workbook in English and Indonesian that can be used by Planet Indonesia in its existing education and outreach program to increase knowledge about pangolins through the local school system. This workbook presents information about the pangolin's role in the local ecosystem in an accessible way that also aligns with some of the community values identified by the survey. The use of a youth education resource also was identified as a pathway likely to have a high impact based on the importance of children, family, and future generations identified in the survey results.

Team engagement

All members of the team remained actively engaged and contributed meaningfully throughout the eighteen month program. The group regularly held weekly calls from the beginning, with formal agendas, objectives, and next step identification. Tasks were identified and assigned and a Gantt chart maintained for as long as it was relevant to the project schedule. Once the pivot was made to the educational book and literature review, the team broke into smaller working groups, which continued meeting regularly, with a monthly all-team meeting to give updates and coordinate if either group needed help. In preparation for the final presentation and report, both teams recombined and all members contributed extensively to writing, editing, formatting, and putting together visuals.

PRODUCTS

- Reports
 - [Review of Sunda Pangolin \(*Manis javanica*\) Species Status and Ecology](#) (to be hosted by Planet Indonesia)
 - [Situational Crime Prevention and Pangolin Poaching in West Kalimantan, Indonesia](#) (to be hosted by Planet Indonesia)
 - [Review of Literature on Pangolins and Zoonotic Disease, Including Coronaviruses](#) (to be hosted by Save Pangolins and Planet Indonesia)
- [Pangolin Poaching Intervention Explorer tool](#) (to be hosted by Save Pangolins and Planet Indonesia)
- [Community survey questions](#)
- [Survey data summary graphic](#) (to be hosted by Planet Indonesia)
- Book (The Pangolin Protectors: A Tale of Harmony in the Forest) (to be hosted by Save Pangolins and Planet Indonesia, provided to Planet Indonesia for in-country printing)
 - [English](#)
 - [Bahasa Indonesia](#)

PROJECT PARTNERS

- Planet Indonesia
 - Planet Indonesia's mission is to conserve at-risk ecosystems through integrated community-led governance to address socio-economic challenges and drive conservation. Planet Indonesia believes conservation is the most effective when local resource-users are defining the rules of engagement and stewardship. They support communities to build a vision for a better future and provide the tools, services, and technical support that allow communities to make this vision a reality. Planet Indonesia works to address underlying drivers of biodiversity and cultural loss while simultaneously removing barriers to catalyze cross-sector environmental, social, and economic outcomes.
- Mohamed bin Zayed Species Conservation Fund - Project Funder

- The Mohamed bin Zayed Species Conservation Fund is an innovative philanthropy providing small grants to boots-on-the-ground, get-your-hands-dirty, in-the-field species conservation projects for the world's most threatened species. Through innovative micro-financing, the MBZ Fund empowers conservationists to fight the extinction crisis instead of bureaucracy and red-tape. To date the Fund has awarded thousands of grants to a diverse range of species across the world.
- Busch Gardens Conservation Fund - Project Funder
 - The Busch Gardens Conservation Fund was established in 2003 - created to raise support for grassroots conservation projects that are truly making a difference. It supports a wide range of programs. Since its creation, the Busch Gardens Conservation Fund has awarded well over \$18 million in conservation grants to over 1200 organizations. Currently, the Fund provides over \$1 million each year to conservation programs aligned with key focus areas (rescue & rehabilitation, conservation education, habitat protection, species research).
- World Pangolin Day
 - World Pangolin Day is an opportunity for pangolin enthusiasts to join together in raising awareness about these unique mammals — and their plight. Pangolins are unfortunately one of the most frequently encountered mammals in the illegal wildlife trade. Everyone is invited and encouraged to participate in World Pangolin Day! The aim of World Pangolin Day is to draw as much attention to pangolins as possible, since they are still relatively unknown outside of Africa and Asia.
- Julie Scardina - Mission Wildlife (Project Advisor)
- Beth Allgood - OneNature Institute (Project Advisor)
- Dehara Weeraman (Independent Editing Services)
- Riley Thompson (Independent Graphic Design and Layout Services)
- Save Pangolins (hosting deliverables)

MEDIA

- A case study published on speciesconservation.org, the website for the Mohamed bin Zayed Species Conservation Fund, focused on this project's work to protect Sunda Pangolins in West Kalimantan, Indonesia. Additionally, this case study also promoted the overall Emerging Wildlife Conservation Leaders program and its comprehensive goal of building capacity within the international wildlife conservation community through skills training and networking. (see below)

Sunda Pangolin (*Manis javanica*)

Mohamed bin Zayed Species project number 222530616

Using Community Based Social Marketing (CBSM) to reduce pangolin poaching activity in West Kalimantan, Indonesia

Led by six Fellows of the Emerging Wildlife Conservation Leaders (EWCL) program, this project aims to contribute to saving the Critically Endangered Sunda pangolin (*Manis javanica*) in West Kalimantan, Indonesia, by supporting the ongoing efforts of Planet Indonesia, a non-profit organization with a mission to conserve at-risk ecosystems through community-led governance - putting communities back behind the wheel in determining their social-ecological future and driving conservation. The EWCL program is an initiative that brings together leaders in the wildlife conservation field from around the world for intensive training in program development and skills, as well as the implementation of a global wildlife conservation campaign. One of the main focuses of this work is to support the educational components of Planet Indonesia's SMART Patrols (Spatial Monitoring and Reporting Tool) program with a goal of linking student learning with pangolins. Informed by a multi-community survey focused on understanding the perspectives and values related to this species, we are developing a toolkit with educational materials and messaging that will foster long-term social commitments in the community to protect pangolins within the Gunung Naning Protected Forest. Additionally, a comprehensive literature review of the current status of pangolin conservation and threats in Indonesia, as well as a review of community-level interventions related to poaching mitigation globally has been completed and will be published as a public resource in partnership with Planet Indonesia and potentially other organizations working to conserve pangolins worldwide.



Project number: 222530616
Awarded amount: \$9,000
Awarded date: 03-02-2023
Continent: Asia
Country: Indonesia



The text and images for this case study are uploaded by the grant recipient to raise awareness of the conservation work being done. Through its website the Fund provides the platform, but is not responsible for text or image content of case studies.

Project document

📄 Infographic developed by our EWCL Class 9 Team for World Pangolin Day 2023

- An infographic that was shared for World Pangolin Day 2023, which included an update of the progress of work up to that point in time and promotional information for the overarching work of both our project partner Planet Indonesia as well as the Emerging Wildlife Conservation Leaders program. This infographic was shared through multiple channels, including speciesconservation.org, the website for the Mohamed bin Zayed Species Conservation Fund, the Emerging Wildlife Conservation Leaders Facebook page, the Save Pangolins Facebook page, and The Terrapin Institute Facebook page. (see following page)



Photo: EWCL

EMERGING WILDLIFE CONSERVATION LEADERS

The EWCL program trains and empowers young professionals in the wildlife conservation field, including through the implementation of group-led two year campaigns. All groups in the current cohort share the focus of one of the world's most trafficked mammal-the pangolins.

WORLD PANGOLIN DAY

Our EWCL group is excited to share a brief update on our work to date, on the occasion of World Pangolin Day! Today we recognize the importance of these unique mammals and the urgency of action needed to prevent their extinction. The theme of this year's World Pangolin Day is "Communities Leading Pangolin Conservation", which highlights the crucial role of the work of our project partner, Planet Indonesia, and the goals of our EWCL project.



Photo: Michael Pitts



Photo: Planet Indonesia

PLANET INDONESIA

A non-profit organization with the mission to conserve at risk ecosystems through community-led governance putting communities back behind the wheel in determining their social-ecological future and driving conservation. They achieve this by applying the four pillars of their core model: inclusive governance, participatory management, rights and access, and regenerative livelihoods.

OUR WORK

We are collaborating with Planet Indonesia to apply the Community-Based Social Marketing (CBSM) behaviour change approach to develop and pilot an intervention aimed at reducing poaching and promoting conservation of the Suunda pangolin (*Manis javanica*), in West Kalimantan, Indonesia.



Photo: Planet Indonesia

"Communities Leading Pangolin Conservation"

HOW TO HELP

Sunda pangolins are threatened primarily because of interactions with humans when they are trapped in snares, often set to catch other animals as a food source or hunted for their scales. Increasing understanding of the threats that they face and potential ways to prevent poaching is critical to conserving this species.

Here is how you can help conserve Sunda pangolins:

- Use and share the literature review developed through EWCL's Class 9 Planet Indonesia team as a resource to evaluate and implement potential poaching interventions that can be used in areas of known heavy poaching activity.
- Educate and support environmental education initiatives, such as the pangolin story and activity book developed as part of this project, that can help children develop an appreciation for nature and potentially have a significant influence on their family's attitude and behavior towards poaching and wildlife conservation.
- Support Planet Indonesia and their community-led SMART patrol programs that empower communities to track, monitor, and protect wildlife as well as discourage poaching of wildlife. For more information on SMART Patrols, visit www.planetindonesia.org.
- Funding and resources are required to assess actual Sunda pangolin population dynamics, individual ranges, movements, and distributions in the landscape in protected areas of West Kalimantan.
- Reduce the demand for scales – don't buy pangolin products, and report wildlife crimes. For more information and to report wildlife crime, visit: <https://www.savepangolins.org/donate>.
- Spread the word about pangolins conservation with friends and family! As more people understand the threats that pangolins face, more action will be directed to strengthening conservation efforts.

FUNDS EARNED

In October of 2022, our group submitted an application for the maximum request amount of \$5,000 to the SeaWorld Busch Gardens Conservation Fund to support graphic design and printing of outreach materials, translation services, and other project support. In December of 2022, we were thrilled to receive word that we were awarded a \$6,500 grant award, exceeding our original request by \$1,500. For more information on the SeaWorld Busch Gardens Conservation Fund, please visit <https://swbg-conservationfund.org/>.

Our group also submitted an application to the Mohamed bin Zayed Species Conservation Fund in October of 2022. We were notified in December of 2022 that we were awarded our full request of \$9,000 to support training and outreach materials, translation services, and survey

development costs. For more information about the Mohamed bin Zayed Conservation fund and to learn more about our project, visit <https://www.speciesconservation.org/case-studies-projects/sunda-pangolin/30616>.

In total, our group was able to raise a total of \$15,500 in funds to support our project efforts from two wildlife conservation grant programs. Our original project plan required funds to support 1-2 of our project team to travel to West Kalimantan, Indonesia to assist with surveys and pilot test behavior change interventions identified during our original survey phase. However, after reviewing the survey results and re-evaluating what would be realistic to implement during the project timeframe, our team decided that spending a significant amount of funding for travel, lodging, and meals would not be the best use of grant funding. Therefore we did not end up using as many funds as we originally anticipated we would need. Any funds not used to finish the project printing will be returned to the funder. To date, our team has spent \$2,994 on surveys, translation, graphic design, printing, and final product development costs.

In addition to fundraising, our group provided over \$10,000 in in-kind contributions from the time spent on this project from weekly group meetings, development of final products, and meetings with partner organizations. Combined with our grant funding, our team contributed over \$25,000 to pangolin through this two-year project. We could not be more excited to support such a worthy cause, and have learned so much throughout the process.

We would like to thank our funding partners from the SeaWorld Busch Gardens Conservation Fund and the Mohamed bin Zayed Species Conservation Fund for supporting our work and helping us to conserve and educate future conservationists about the Sunda pangolin. We could not have done much of this work without your generous support.

We also want to thank the EWCL Board and leadership, our follow cohort members, and the broader EWCL community for providing such a life-changing, world-changing program for all of us as emerging leaders, and for the species around the world that we all strive to protect.