

## Silent Forest Campaign Proposal: Community Supported Bird Monitoring on Babi and Lasia Islands.

### 1. Abstract:

An outer laying island chain off the coast of Sumatra, Simeulue District comprises Simeulue Island and 146 smaller outer islands. Laying just 350 kilometres north of the equator, the region consists of highly biodiverse tropical rainforest and coral reefs. Due to its isolated location, Simeulue and surrounding islands are home to high levels of endemic, endangered and critically endangered bird species which are affected by illegal and unsustainable trade including Nias hill myna (*Gracula robusta*) and Simeulue hill myna (*Gracula religiosa miotera*); Babi (Barusan) shama (*Kittacichla malabarica opisthochra*) and Simeulue (Barusan) shama (*Kittacichla malabarica hypoliza*); and silvery pigeon (*Columba argentina*).

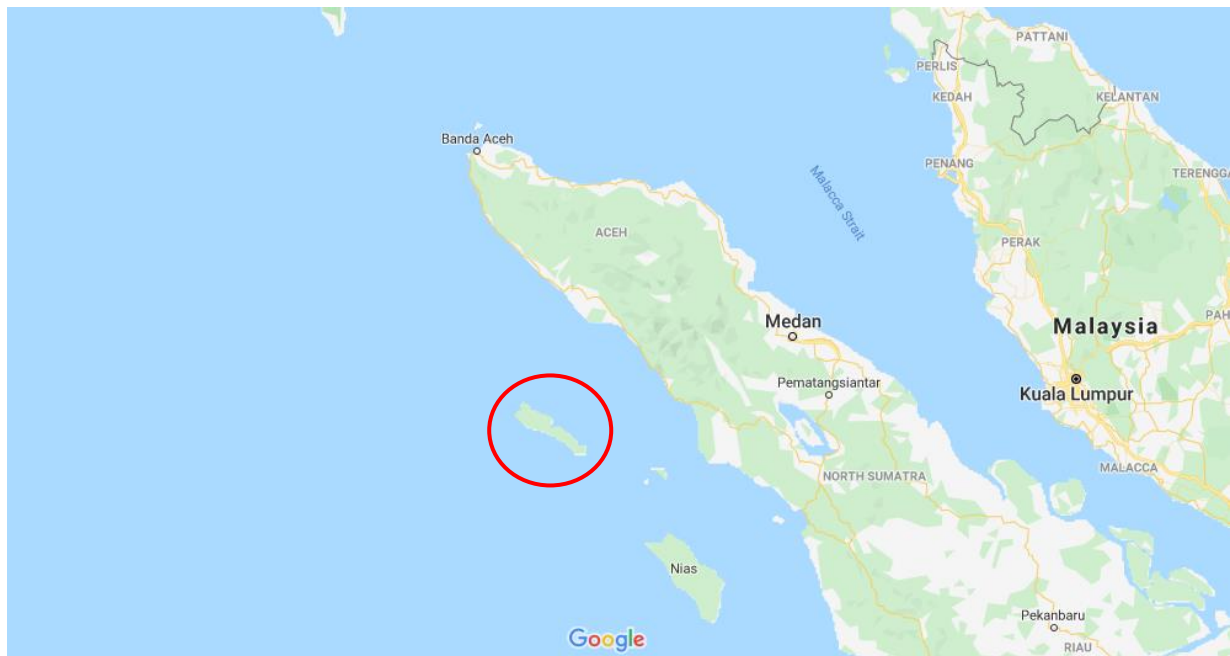


Figure 1. Simeulue Island location (Google Maps).

Indonesia has the highest number of threatened bird species in Asia and the second highest in the world (Chng, Eaton and Miller, 2017; Rentschlar et al., 2018). With birds being the most common pet in Indonesia (Jepson and Ladle, 2005), bird poaching is a culturally ingrained practice in Indonesia, with birds being targeted for the (illegal) pet trade. There is an urgent need to assist with the survival of Simeulue's endemic and threatened bird species.

This project has four interconnected components which will lead to the reduction in poaching of birds in the area:

- (i) A research phase which will lead to a better understanding of Simeulue, Babi and Lasia's bird populations and habitats as well as the current poaching threats,

- (ii) Piloting an innovative, efficient and on-going data collection and monitoring approach to Babi and Lasia Islands.
- (iii) An environmental education and conservation awareness raising programme aimed at influencing local attitudes within in Simeulue communities, regional and local politics, and procedures in relation to keeping and catching wild birds.
- (iv) Develop engagement with local owners and trades of birds in cooperation with regional and local authorities.

## *2. Organisation Description:*

[EcosystemImpact](#) provides an interdisciplinary collaborative platform for sustainable initiatives on the internationally significant Bangkaru and Simeulue islands. Partnering with others, we achieve mutually beneficial solutions for sustainable business, people, and the environment.

EcosystemImpact currently runs the Bangkaru Ranger Programme. Bangkaru is internationally recognised as being the largest green turtle nesting site in North West Indonesia, an important nesting site for the North-eastern sub-population of leatherback sea turtles, and one of the last remaining islands to have wild Nias hill mynas.

EcosystemImpact also works closely with Simeulue based partner [āluān](#), eco coconut oil company, and [Mahi-Mahi Resort](#), to develop landscape level conservation and business solutions.

As part of its environmental education initiatives, EcosystemImpact runs a Nature School (Sekolah Alam), which teaches local children basic English whilst concentrating on conservation themes, so as to increase awareness around environmental issue.

## *3. Project and Area Background:*

An outer laying island chain off the coast of Sumatra, Simeulue District comprises Simeulue Island and 146 smaller outer islands. Laying just 350 kilometres north of the equator, the region's nature consists of highly biodiverse tropical rainforest and coral reefs. Due to its isolated location, Simeulue is home to high levels of endemic species. Due to poaching for the pet trade and consumption, many of Simeulue Islands species are now considered endangered (EN) and critically endangered (CR) by the International Union for Conservation of Nature (IUCN) and IUCN's Asian Songbird Trade Specialist Group (ASTSG): Nias hill myna (IUCN CR), Simeulue hill myna (ASTSG CR), Babi (Barusan) shama (ASTSG CR), Simeulue (Barusan) shama (ASTSG CR), silvery pigeon (IUCN CR), green sea turtle (IUCN EN), hawksbill sea turtle (IUCN CR) and Leatherback (IUCN Data Deficient, suspected CR).

Simeulue District is home to 80,674 people with the majority living on Simeulue Island, with only a number seven of the larger islands in the chain being inhabited, including Simeulue. Simeulue still maintains 70% forest cover, with around 60% of this being Hutan Lindung (Protected Forest) (Figure 2).



Figure 2. Map showing areas of Hutan Lindung (green) and Hutan Produksi (yellow) on - moving from left to right - Simeulue (largest island), Lasia and Babi.

Having only recently been subject to development and international attention – after the 2004 tsunami and cessation of 30 years of protracted civil conflict – Simeulue maintains large amounts of highly biodiverse old growth primary forest.

This project focuses on three islands in the chain: Simeulue, the largest island in the chain; and Babi and Lasia, two uninhabited neighbouring rainforest islands of which both maintain close to 100% forest cover, with 62% of Lasia and 50% of Bab Island being protected as Hutan Lindung (Figure 3, Table 1). Lasia has some sparse coconut plantations which are irregularly harvested.

**Table 1. Babi and Lasia Islands area, area of Hutan Lindung (HL) and percentage HL.**

Island	Island Area (Hectares)	HL Area (Hectares)	% HL
Lasia	1,523	939	62%
Babi	4,620	2,305	50%

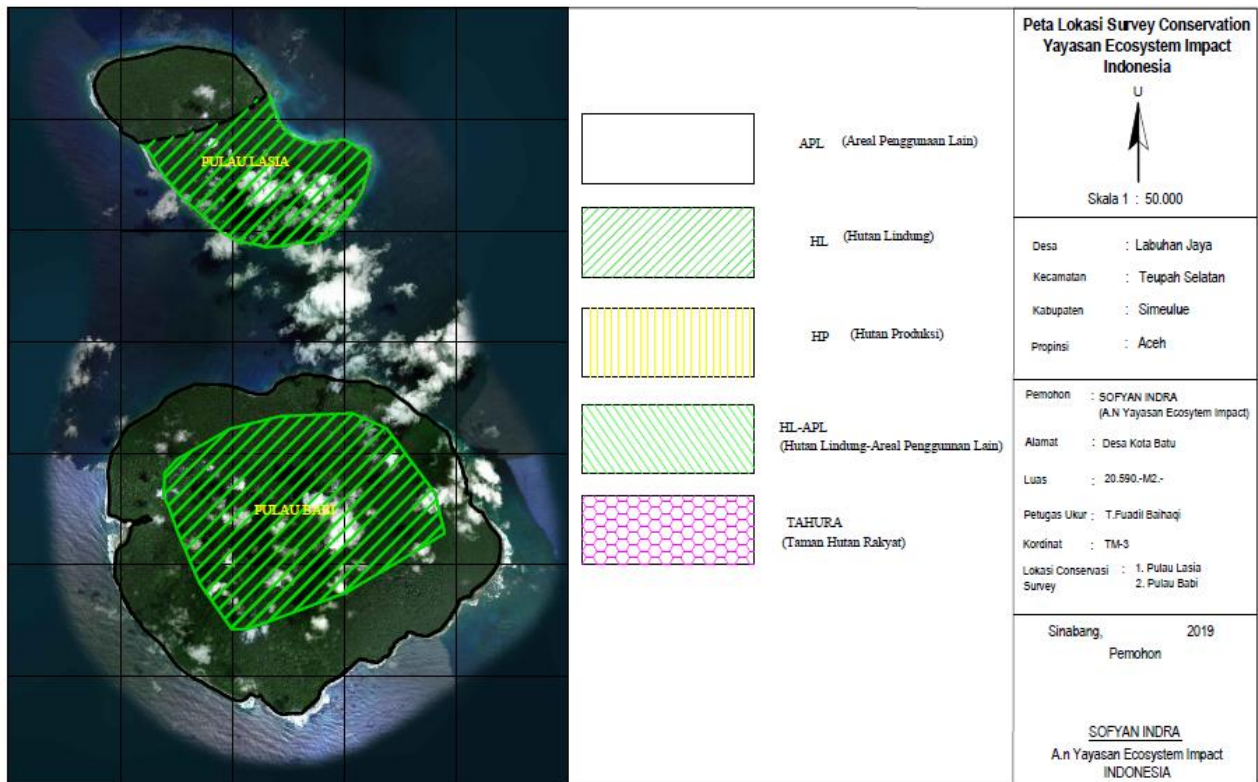


Figure 3. Babi and Lasia Islands with Hutan Lindung

Because of Simeulue archipelago's distance from mainland Sumatra, and the absence of large predators, it is home to large numbers of endemic and endangered bird species. Simeulue is home to two endemic bird species and 26 endemic subspecies, most of which are vulnerable to exploitation.

Three endemic bird forms on Simeulue are now very likely to be extinct in the wild and only persist to be kept as pets. Until now there has been no efforts to save these species through the establishment of a conservation breeding programme. EcosystemImpact is currently establishing a scientifically run conservation breeding programme for the below listed subspecies (see section 4. For more information on EcosystemImpact's breeding programme):

1. The endemic Simeulue hill myna (*Gracula religiosa miotera*). A genetically and morphologically highly distinct population within the hill myna complex that may well warrant endemic species-level recognition (Švejcárová, 2017; Ng et al., 2020).
2. Babi (Barusan) shama (*Kittacichla malabarica opisthochra*) and Simeulue (Barusan) shama (*Kittacichla malabarica hypoliza*) near-extinct subspecies, according to the IUCN Asian Songbird Trade Specialist Group (ASTSG) (Lee et al., 2016) and National University Singapore's Avian Evolution Lab (Rheindt et al., 2019).

In November 2019, EAZA and EcosystemImpact observed the presence of IUCN Critically Endangered Nias hill myna (*Gracula robusta*) on Babi (Figure 4).



Figure 4. Nias hill myna (*Gracula robusta*) on Babi, November 2019 (Captured by EAZA's Simon Bruslund).

With birds being the most common pet in Indonesia, bird poaching is a culturally ingrained practice in Indonesia, with birds being targeted for the illegal pet trade. There is an urgent need to assist with the survival of Simeulue's endemic and threatened bird species. The Indonesian songbird crisis is an internationally recognised conservation concern, with the IUCN SSC ASTSG being established to counter the illegal and unsustainable trade in songbirds (Lee et al., 2016).

#### 4. EcosystemImpact's Current Bird Projects (already funded and not part of this funding proposal)

EcosystemImpact is well connected with the ASTSG and maintains regular communication. In partnership with ASTSG, EAZA set up the Silent Forest Asian Songbird Crisis Campaign. EAZA have provided 35,000 Euro via EcosystemImpact to run the Treasure Island: Saving the hidden avian treasures project on Bangkaru. This programme employs seven full time rangers and a supervisor, who work on a 15-day shift rotation to maintain constant ranger presence of Bangkaru's bird and turtle populations.

EcosystemImpact is currently in the process of developing a breeding programme at our Simeulue base Mahi-Mahi Resort for endemic and endangered species of the Simeulue Island chain: Simeulue hill myna (*Gracula religiosa miotera*), Babi (Barusan) shama (*Kittacichla malabarica opisthochra*) and Simeulue (Barusan) shama (*Kittacichla malabarica hypoliza*). Funding has been supplied by Marlow

Bird Park / Zoologische Gesellschaft Fur Arten-Und Populaionsschutz (ZGAP) and Wildlife Reserves Singapore (WRS), to develop this breeding programme in partnership with Sumatran Orangutan Conservation Programme (SOCP).

The document which lays out the types of plants and animals protected under Indonesian law, is the Ministry of Environment and Forestry's NOMOR P.106/MENLHK/SETJEN/KUM.1/12/2018. Having yet to gain subspecies classification, Barusan shama are classed as White-rumped Shama. There is no mention of White-rumped shama in P.106, and thus they are not protected under Indonesian law. The implication of this is that EcosystemImpact are able to buy, house and breed shama without the need for a memorandum of understanding (MoU). Simeulue hill myna however, are classed as common hill myna which are mentioned in P.106 and thus protected under Indonesian law.

EcosystemImpact are currently undergoing the process of gaining the required MoU with Balai Konservasi Sumber Daya Alam (BKSDA) – the Indonesian government department for Natural Resources and Conservation – to be able to acquire, hold and breed Simeulue hill myna. EcosystemImpact will purchase and breed Barusan shama whilst continuing to develop the required MoU to house and breed Simeulue hill myna BKSDA. EcosystemImpact board member Wahdi Asmi, a respected Acehnese conservationist who maintains a positive relationship with BKSDA, is currently developing the EcosystemImpact-BKSDA MoU.

In order to be able to purchase shama, and to have to required relationships to confiscate with compensation hill myna in the future, EcosystemImpact is in communication with local owners and traders of birds, whilst developing our relationship with BKSDA and Simeulue Lingkungan Hidup (Environment Sector). EcosystemImpact has a positive relationship with Malik, Simeulue's bird supplier and breeder. Malik is conservation minded enough to understand that in order for his business to continue, a viable and healthy population of these birds needs to be secured. He has agreed to cooperate and sell Barusan shama, but would like to keep a distance between EcosystemImpact activities and his business. Other bird owners and small-scale traders have agreed to sell EcosystemImpact birds, and both BKSDA and Simeulue Lingkungan Hidup are aware of our activities with the necessary documentation being developed.

## *5. Project Outline*

This project has four main interconnected components:

- (i) A research phase which will lead to a better understanding of Simeulue, Babi and Lasia's bird populations and habitat, as well as the current poaching threats.
- (ii) Piloting an innovative and efficient on-going data collection and monitoring approach to Babi and Lasia Islands.
- (iii) An environmental education programme aimed at developing conservation awareness in Simeulue communities, including a focus on endangered species.
- (iv) Develop engagement with local owners and trades of birds in cooperation with regional and local authorities.

### 5.1 Research and Protection Focus:

Further research is needed to understand the presence, location and population sizes of Simeulue, Babi and Lasia's endemic and endangered bird species. All species Simeulue hill myna (*Gracula religiosa miotera*), Nias hill myna (*Gracula robusta*), silvery pigeon (*Columba argentina*), Babi (Barusan) shama (*Kittacichla malabarica opisthochra*) and Simeulue (Barusan) shama (*Kittacichla malabarica hypoliza*) are considered either close to, or already, extinct in the wild – with Nias hill myna being the only species with well documented evidence of remaining wild populations on both Babi (F. E. Rheindt unpubl. data; S. Bruslund unpubl. data) and in the Banyak Islands (Ng et al., 2020).

Existing research on Simeulue hill myna, Babi and Simeulue Barusan shama suggests that they are extinct in the wild. Rheindt et al. (2019) have failed to find any wild *Kittacichla malabarica opisthochra* or *Kittacichla malabarica hypoliza* and state that their 'fieldwork in the Barusan Islands over the last few years has helped gain a better understanding of the field status of each of the different [Barusan shama] island populations, pointing at their likely extinction in the wild on all islands except Siberut' (p.31).

Švejarová (2017) and Ng et al. (2020) outline the threats to the hill myna group due to the unsustainably and illegal trade. Through genetic analysis, both papers find that Simeulue hill myna (*miotera*) are a distinct form, with Ng et al. (2020) stating that *miotera's* 'distinctness is at least as pronounced as that of *robusta* from Nias, justifying equal treatment' as a species (p. 8-9). Ng et al. (2020) also state that 'on multiple recent excursions to Simeulue, most recently in July 2018, we were unable to find the bird [*miotera*]' (p.10).

However, although these research papers give an indication that these species close too, if not already extinct in the wild, the focus of each papers has been on the genetic and morphological distinctions of species/subspecies. Through conversations with local bird poachers, traders and within local communities, EcosystemImpact has gained information that wild populations of Simeulue hill myna, Babi and Simeulue Barusan shama still exist. Full and rigorous surveys of these locations are needed to gain definitive results on wild populations.

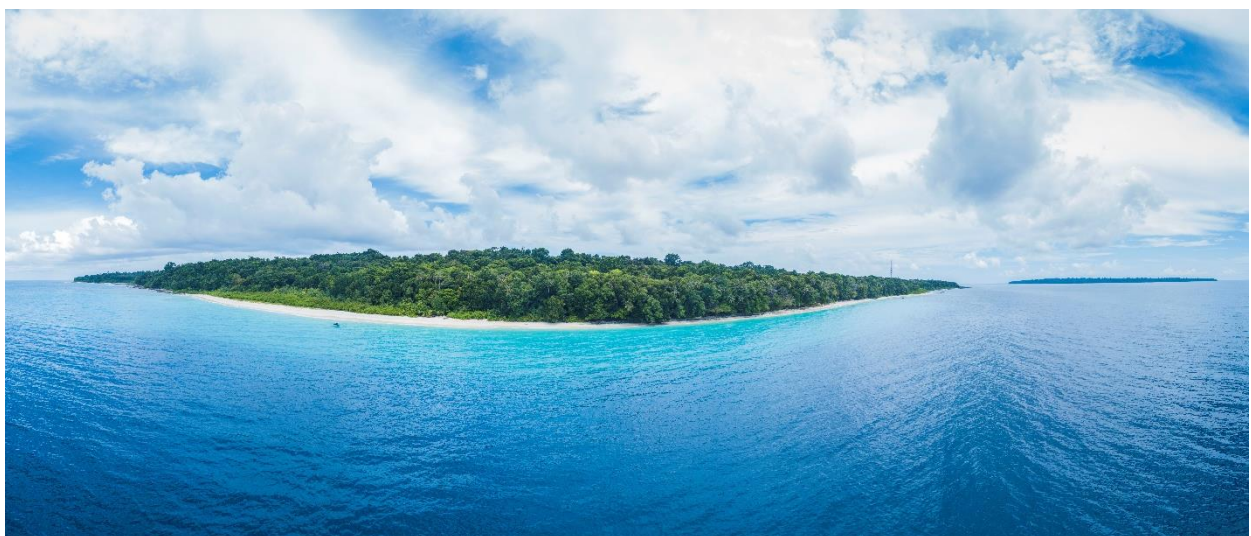


Figure 5. Babi Island in the left foreground and Lasia at the right background (Photo EcosystemImpact's Prastiano Septiawan).

EcosystemImpact has a strong scientific support network, having partnered with National University Singapore's Avian Evolution Lab and Syiah Kuala University, Banda Aceh, to carry out systematic bird surveys on Simeulue and surrounding islands.

EcosystemImpact is also connected with Agus Nurza of [Aceh Birder](#) as a consultant who has provided an estimate for his services (see budget). EcosystemImpact plans to work with contacts at Syiah Kuala University to assist with the survey permit application process, survey work and to publish the findings of these surveys.

Simeulue, Babi and Lasia all maintain large areas of Protected Forest (Hutan Lindung), which is a sufficient Protected Status to develop ranger programmes under Indonesian law. If any of the targeted bird species are discovered in the wild, EcosystemImpact will communicate these discoveries with the international bird conservation community and seek to inform and gain funding as part of our broader vision to initiate a Protection Plan for these islands. We will take appropriate immediate action to provide in situ protection wherever possible.

As stated above, EcosystemImpact is currently developing a breeding programme on Simeulue. It is essential that there are well protected forest areas for conservation translocations, which will require an integrated legal/spatial and community-based approach. Before the translocation of these birds, feasibility studies are needed to identify and confirm the best sites for any conservation translocations including for rescued or confiscated birds in addition to the birds from the breeding programme. These surveys are not currently accounted for in this proposal, as the proposal is for full bird surveys of the stated locations and the development of an innovative, efficient on-going data collection and monitoring approach to Babi and Lasia Islands, along with environmental education work to develop conservation awareness within key identified communities.

This project will initiate conversations with communities around the possibilities of setting up community-based patrols. Taking inspiration from EcosystemImpact's partner HAKA and LPHK Damaran Baru's newly formed women's ranger team – the first in Aceh – EcosystemImpact plans to actively involve women and men in these community-based conservation programmes.

### *5.2 Piloting an innovative, efficient on-going data collection and monitoring approach to Babi and Lasia Islands*

EcosystemImpact and government partner BKSDA has been successful at reducing wildlife poaching on Bangkaru Island through a traditional conservation ranger approach, where rangers are paid full-time salaries to patrol the island on a daily basis. This programme employs seven full time rangers and a supervisor and costs USD50,000 per annum in direct costs. As we expand our conservation activities to Simeulue, costs could quickly expand 10-fold under this same model.





*Figure 6. The Bangkaru Rangers on patrol (Photo Paul Hilton).*

Through this proposal, EcosystemImpact will pilot a sustainable fishing enterprise that concurrently supports on-going data collection and monitoring work for conservation. We plan to purchase a boat which will be leased to a 'crew' of community ranger / fishers at a subsidised rate in exchange for compliance with sustainable fishing practices and data collection and monitoring.

Benefits of this approach:

- (i) Subsidise community ranger salaries to keep minimum annual budget requirements as low as possible on an on-going basis.
- (ii) Achieve greater community buy-in if managed carefully. as there is a direct focus on economic well-being in addition to conservation.
- (iii) Provide a point of leverage if the data collection and monitoring work is not being undertaken professionally - i.e. the boat can be taken away. Expectations will need to be carefully managed from the outset.
- (iv) Enable EcosystemImpact to learn more about the fishing sector, which is an important component of the overall vision to establish a greater protection status and management regime for Babi and Lasia Islands.

- (v) Broader lessons to be learnt. If the pilot goes to plan, EcosystemImpact will be in a strong position to replicate the integrated sustainable enterprise / data collection and monitoring approach in other priority areas around Simeulue. For example, a similar approach could be taken in more agricultural orientated communities where instead of boat, the ranger team is assisted into an added-value processing unit for coconut by-products or rice husking. Even if things do not go to plan in the pilot, and we are fully aware that there are bound to be a few twists and turns along the way, there will be much to learn that will inform EcosystemImpact's conservation work going forward.



*Figure 7. A Simeulue fishing boat, showing the classic Indonesian vessel style (Photo aluan's Blake Dunlop).*

Risks of this approach, and mitigatory measures:

- (i) Damage / loss of boat. Can be mitigated with insurance coverage, which is included in budget.
- (ii) Increased damage to the ecosystem / overfishing. One more boat in the waters is not likely to have an overall impact. Catch will be monitored and training/education/awareness-raising will be carried out.

- (iii) Incorrect weighting of incentives and disincentives. Removal of a boat from the village could have a detrimental impact on social relations and potentially on wildlife/conservation activities. Mitigation impact here is to ensure that the 'Coordinator' to be recruited for this programme has the necessary community engagement skills and experience to manage these sensitivities. Community engagement must be managed in a step-wise, culturally sensitive manner.



*Figure 8. Showing one of Simeulue's larger fishing vessels. The EcosystemImpact boat would need to be this larger style, which could handle possible rough seas and with enough space for the crew to sleep (Photo aluan's Blake Dunlop).*

The phasing of activities and desired outcomes of the approach are as follows:

- (i) Stakeholder consultation and relationship building with relevant government agencies, Police, Navy, Camat, Panglima Laot (traditional Aceh marine management authority), village level authorities and Fauna & Flora International. Through this process we would seek to understand perspectives from the various stakeholders and build consensus for increased protection status for Babi and Lasia. During these meetings it might emerge that there is a possibility of government support to this programme, for example. We will seek to build partnerships on this wherever possible.
- (ii) Design appropriate structure of the Fisher/Ranger programme, including ongoing assessment methods.

- (iii) Undertake initial training/internship of a group of potential Fisher/Rangers. A larger cohort will initially be trained, from which a smaller cohort of Fisher/Rangers will be selected.
- (iv) Through (1) and (2) above, we aim to learn in greater detail what people's interests are, what threats there are to Babi and Lasia Islands, how best to address these threats, and who are the best people to work alongside, and through what management systems.
- (v) Invest in a wooden fishing boat that the Ranger team will use to both collect data and monitor the islands while also undertaking sustainable fishing practises.
- (vi) The initial thinking is that there will be two teams consisting of three Rangers. Each team will have a one-week shift. The Coordinator of the Rangers will participate every third week. These details are to be finalised through activities (1) - (4) above though.
- (vii) Rangers will circumnavigate the islands once they start the shift, and then the third and sixth day of the shift. During the island tours the Rangers will communicate with every boat crew coming in proximity of the islands and do short education lessons about the islands, the importance of maintaining them as healthy ecosystems, what the protected species are, and the prohibited fishing techniques.
- (viii) As the community of fishermen is quite small it is expected that the local Rangers will prevent illegal wildlife exploitation on the island by talking/explaining to fishermen what is legal and what is illegal. Where there are violations of the law the Rangers will immediately inform local authorities via their satellite phone.
- (ix) Shift reports will be handed out to the Coordinator of the Rangers, who will process monthly reports for all stakeholders.

### *5.3 Education Focus:*

There is currently no environmental education in Simeulue. As part of its environmental education initiative, EcosystemImpact runs a Nature School (Sekolah Alam), which teaches a small group of local children around Mahi-Mahi resort basic English whilst concentrating on conservation themes, so as to increase awareness around environmental issues. This has enabled us to understand baseline environmental education levels and to pilot the most effective ways of engaging young people.

EcosystemImpact plans to widen our environmental education influence across Simeulue with a focus on endangered bird and turtle species. We plan to build curriculum and learning support tools, for example comic books. Facilitated properly, this will enable a large number of people to receive the information. Within the proposed budget, is salary for the EcosystemImpact Educator (Fitri, a Simeulue local), who is budgeted at spending 80% of her time on this project over the 18-month period. As Fitri is currently studying an online teaching degree which has been funded through other EcosystemImpact sources, so 20% of her time will be occupied with studies. Her role will be to teach Nature Club sessions, develop conservation educational material, work with local government to

design conservation based educational material, and build community support for EcosystemImpact's conservation projects as described in this proposal.



*Figure 9. An EcosystemImpact Sekolah Alam or Nature Club session (Photo aluan's Blake Dunlop).*

A medium-term goal is to develop materials that can be utilised in the formal education sector. At a meeting with the Head of the Education Department in 2019, our support and collaboration was welcomed. The education component of this project will determine the most appropriate way for EcosystemImpact to have a wide impact across Simeulue on urgent bird and turtle conservation. We will work in collaboration with the Dinas Pendidikan (Education Department) on this strategy. It may take some time to align with the Education Department formally. With the Dinas Pendidikan, the EcosystemImpact Educator will develop a curriculum that can be informally utilised in schools and via community groups in critical bird conservation areas.

This curriculum, and the relationship built with the Dinas Pendidikan through developing it, is crucial for EcosystemImpact's long-term vision and the ongoing success of this project. The conservation focused curriculum will be used as a means to develop environmental awareness - with a focus on reducing poaching - and build relationships in areas highlighted through the surveys carried out by Agus Nurza as biodiversity priority hotspots.

EcosystemImpact's educator will carry out environmental awareness sessions for communities within these highlighted priority areas using the developed curriculum material. Education is a crucial part of developing a successful community ranger programme, as it builds the environmental awareness and conservation ethic required to ensure that communities cooperate and buy into

conservation projects. The education element of this project will thus work alongside the survey and ranger programme to build wider community support for both the proposed Babi and Lasia community ranger programme and within areas highlighted through survey work as important biodiversity areas in need to protection.

Using existing funding granted for environmental education, EcosystemImpact is currently providing sponsorships for women from the Simeulue Region to study degrees in teaching at Indonesia's Universitas Terbuka (Open University). One scholarship has already been granted, and EcosystemImpact will continue to provide further opportunities for community members who show passion and promise for education with a focus on women.

Along with being the first awardee of this scholarship, Fitri was sponsored to participate in a Green Educator Course at the Green School in Bali, focusing on developing environmental education teaching skills. As a local who speaks Simeulue's language (a distinct local language), and with experience in teaching, Fitri is thus the perfect candidate to develop an environmental education programme on Simeulue Island. EcosystemImpact continues to search for a second candidate for the environmental education scholarship, and will enrol this awardee when found using funding sourced outside of this proposal.

The funding provided will enable EcosystemImpact to build environmental education materials, develop a conservation curriculum, further train EcosystemImpact's education staff and develop relations with government and local communities; working towards EcosystemImpact's ability to implement a conservation themed environmental education curriculum.

## *6. Project Sustainability and Outcomes*

The innovative Babi and Lasia community ranger and sustainable fishing enterprise has been developed out of a need to find financially viable and sustainable alternatives to traditional ranger programmes, and increase project sustainability through achieving greater community buy-in. Through leasing the fishing boat to the community rangers / fishing crew, salaries will be kept to a minimum as sales from fish caught will subsidise salaries.

Although operational, maintenance and boat insurance costs will be covered by EcosystemImpact (see budget), the community ranger / fishing crew will be responsible for the boat. The larger style fishing boat that will be purchased are sought after within local communities, but out of the price range of many Simeulue fisher-people. EcosystemImpact believes a sense of responsibility and pride will be achieved through being chosen to participate as a community ranger / fishing crew member. As the boat will be an EcosystemImpact asset, if the monitoring activities are not being carried out, or if the boat is not cared for as defined upon signing the contract to become a ranger / fishing crew member, EcosystemImpact retains leverage power to withdraw members from the crew or the boat itself.

By working with BKSDA and Simeulue Lingkungan Hidup, EcosystemImpact will increase the political sustainability of the project. Through involving BKSDA in the Bangkaru Ranger Programme, BKSDA have now taken responsibility for managing Bangkaru, with between one and two BKSDA rangers

being posted on Bangkaru at all times alongside the EcosystemImpact rangers. Having government support for conservation projects is essential in order to secure longevity. EcosystemImpact have taken members of Simeulue Lingkungan Hidup to Babi and Lasia to discuss protecting the islands. The idea was met positively with Simeulue Lingkungan Hidup saying they would support the project.

EcosystemImpact see Babi and Lasia Islands as critical parts of EcosystemImpact's long-term Simeulue Islands conservation plan. Although further feasibility studies are needed (budget not included within this funding proposal), EcosystemImpact and partners believe that these islands could be potentially important conservation translocation sites for Sumatra wide breeding programmes – EcosystemImpact's Simeulue based breeding facility included.

EcosystemImpact is part of a collaborative group of organisations including Mahi-Mahi Resort and āluān – a Simeulue based organic coconut oil producer. Together we share the goal of bringing landscape level conservation protection to Bangkaru and Simeulue Islands. Both Mahi-Mahi and āluān have been set up to financially support EcosystemImpact, with both being partly financed through Green Impact Bonds that will provide annual 'interest' payments to EcosystemImpact. āluān also has a profit share arrangement with EcosystemImpact and āluān's replanting scheme has a build in 3% annual contribution to EcosystemImpact. Although set up to provide future finances to support EcosystemImpact's conservation activities, both Mahi-Mahi and āluān are newly developed companies and are yet in the position to reliably provide financial support. Investment finance raised for āluān also directly supports EcosystemImpact's conservation initiatives.

As two of the largest employers on Simeulue, āluān and Mahi-Mahi have developed a wide influence across Simeulue, both within government and communities. This is crucial for the success and sustainability of this and all EcosystemImpact's projects. Sourcing from over 300 small holders and their families, āluān was designed to provide Simeulue wide sustainable livelihood options and develop community buy-in. This level of employment means that āluān has considerable political support on Simeulue and is able to influence decisions made within local and regional government.

As coconuts are part of Simeulue's landscape and culture, no large-scale deforestation or land degradation is required. Through utilising existing agricultural land, āluān provides a financially viable and environmentally friendly alternative to palm oil plantations and other activities that lead to deforestation and unsustainable natural resource use – such as forest wood collection, slash and burn for forest gardens and other agroforestry plantations – which Simeulue communities turn to if not provided with an alternative livelihood option.

EcosystemImpact is working with [Pacsafe](#), an eco-friendly bag company. Pacsafe's logo features a turtle and the company was set up to support turtle conservation projects. Pacsafe have been providing USD 15,000 funding for the Bangkaru Ranger Programme for two years. In 2020 Pacsafe declared EcosystemImpact as their only conservation partner, and will likely provide larger amounts of funding in the future (although Corona has negatively impacted their 2020 business year). Although Pacsafe's focus is the turtles of Bangkaru, they are also interested in supporting EcosystemImpact's wider conservation projects, including Babi and Lasia.

## 7. References

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## 9. Budget

\*As the staff listed below will be responsible for other EcosystemImpact projects, salaries are worked out as a percentage of the time they will spend on this project over the 18-month period.

- EcosystemImpact Management (Tom) is budgeted to spend 20% of time his time on this project. IDR 50,400,000 includes a contribution to visa costs.
- EcosystemImpact Coordinator (new recruit) is budgeted to spend 63% of their time on this project, as the development of the Babi and Lasia community ranger / sustainable fishing crew will be their main responsibility.
- EcosystemImpact Educator (Fitri) is budgeted to spend 80% of her time on this project.

1 Euro = 16,150 IDR

	Detail	Unit	Frq	Cost/Unit (IDR)	Total (IDR)	Total (Euro)
<b>1. *EcosystemImpact Salaries</b>						<b>10,305</b>
1.1.	EcosystemImpact Management (Tom)	1	3.6	14,000,000	50,400,000	3,121
1.2.	EcosystemImpact Coordinator (new recruit)	1	11.3	5,500,000	61,875,000	3,831
1.3.	EcosystemImpact Educator (Fitri)	1	14.3	3,800,000	54,150,000	3,353
<b>2. Operational</b>						<b>3,598</b>
2.1.	Stakeholder meetings	1	9	1,000,000	9,000,000	557
2.2.	Ranger trainings	1	6	3,000,000	18,000,000	1,115
2.3.	Simeulue Field trips	2	18	200,000	7,200,000	446
2.4.	Transportation EcosystemImpact Board Members Banda Aceh-Simeulue	2	1	3,200,000	6,400,000	396
2.5.	Simeulue accommodation	2	2	375,000	1,500,000	93
2.6.	Transportation EcosystemImpact Staff: Simeulue-Jakarta-Simeulue	2	1	4,000,000	8,000,000	495
2.7.	Jakarta accommodation, subsistence and transport	2	4	1,000,000	8,000,000	495
<b>3. Survey Work (hiring scientific teams)</b>						<b>4,087</b>
3.1.	Permit	1	1	1,000,000	1,000,000	62
3.2.	Bird survey	1	1	65,000,000	65,000,000	4,025
<b>4. Equipment for Survey Work (will be provided to rangers after survey work)</b>						<b>805</b>
4.1.	GPS	1	1	4,000,000	4,000,000	248
4.2.	Drybag	1	1	300,000	300,000	19
4.3.	Raincoat	2	1	150,000	300,000	19
4.4.	Sound recording devises (monitoring for bird calls)	1	1	8,400,000	8,400,000	520

<b>5. Equipment for data collection and monitoring</b>						<b>3,642</b>
5.1	Wooden fishing boat	1	1	40,000,000	40,000,000	2,477
5.2	Camera	1	1	5,000,000	5,000,000	310
5.3	Uniform	6	1	650,000	3,900,000	241
5.4	Drybag	2	1	300,000	600,000	37
5.5	Raincoat	4	1	150,000	600,000	37
5.6	Headlamp	6	1	100,000	600,000	37
5.7	Walkie talkie	2	1	500,000	1,000,000	62
5.8	Baterai Rechargeable AAA (headlamp)	1	3	225,000	675,000	42
5.9	Baterai Rechargeable Eneloop AA (gps)	1	3	150,000	450,000	28
5.1.0	Water filter	1	2	1,500,000	3,000,000	186
5.1.1	Container for storage	3	1	200,000	600,000	37
5.1.2	Tent	2	1	1,200,000	2,400,000	149
<b>6. Operationalising data collection and monitoring</b>						<b>8,359</b>
6.1	Ranger salaries	6	13	1,200,000	93,600,000	5,796
6.2	Operational costs, including boat maintenance	1	12	3,200,000	38,400,000	2,378
6.3	Boat insurance	1	1	3,000,000	3,000,000	186
<b>7. Education Development and Equipment</b>						<b>588</b>
7.1.	White Board	2	1	50,000	100,000	6
7.2.	Writing Book	100	1	10,000	1,000,000	62
7.3.	Pens	100	1	3,000	300,000	19
7.4.	Pencil	100	1	3,000	300,000	19
7.5.	Paint	20	1	30,000	600,000	37
7.6.	Paint Brush	30	1	20,000	600,000	37
7.7.	Paper	10	1	60,000	600,000	37
7.8.	Laptop	1	1	6,000,000	6,000,000	372
<b>Total for 18 Month</b>						<b>31,384</b>
				<b>10% Administration Costs</b>		<b>3,138</b>
<b>Grand Total</b>						<b>34,522</b>