

## Darwin Initiative Main: Annual Report

To be completed with reference to the “Project Reporting Information Note”:  
(<https://www.darwininitiative.org.uk/resources-for-projects/information-notes-learning-notes-briefing-papers-and-reviews/> ).

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes)

**Submission Deadline: May 12<sup>th</sup> 2023 (extension granted)**

**Submit to: [BCF-Reports@niras.com](mailto:BCF-Reports@niras.com) including your project ref in the subject line**

### Darwin Initiative Project Information

Project reference	28-005
Project title	Orangutan Honey – Beekeeping for Critically Endangered Orangutans and Livelihoods
Country/ies	Indonesia
Lead Partner	PanEco
Project partner(s)	Yayasan Ekosistem Lestari (YEL)
Darwin Initiative grant value	£402,812
Start/end dates of project	October 1st 2021 – September 30th 2024
Reporting period (e.g. Apr 2022 – Mar 2023) and number (e.g. Annual Report 1, 2, 3)	April 1st 2022 – March 31st 2023, Annual report 2
Project Leader name	Dr Ian Singleton OBE
Project website/blog/social media	n/a
Report author(s) and date	Dr Ian Singleton, Vicky Dauncey, Dr Brigitte Spillmann, YEL

### 1. Project summary

Only 13,530 Critically Endangered Sumatran orangutans (*Pongo abelii*) remain in the wild, severely threatened by unrelenting forest habitat loss and fragmentation in Sumatra, Indonesia. Multiple, viable populations must be in place across Sumatra, and reintroducing ex-captive orangutans to highly-protected forests is a key government strategy alongside complementary forest habitat protection. Since 2011, PanEco, YEL and partners have been establishing an entirely new, genetically viable population in the 16,000 ha Jantho Pine Forest Nature Reserve (hereafter Jantho) in the Indonesian province of Aceh to expand species distribution and create a ‘safety-net’ population. Despite being highly protected, Jantho remains at risk due to persisting illegal activities. Local people have also experienced multiple livelihood stresses and shocks as a result of the COVID-19 pandemic, putting further pressures on Jantho forest resources and increasing threats to orangutans.

This project plans, overall, to reintroduce a further 24 Sumatran Orangutans to Jantho, at a rate of approximately eight individuals per year (baseline 138 released individuals, September 31st 2021), surpassing the minimum population viability target of 150 individuals – achieving a significant species-conservation milestone. In the first eighteen months of the project, we have

already released 12 individuals (2 in year 1 and 10 in year 2), bringing the total number released to date to 150, and meeting key population viability point. Through local community empowerment, we are working to protect Jantho through SMART patrols, monitoring and surveying activities, undertaking 200 patrol days in the last 12 months. In addition, we are already working with four Jantho-area communities to establish new honey cooperatives to increase household income from sustainable sources, supporting two communities to sell honey to the local market alongside conducting environmental education activities to build long-term community stewardship of Jantho.

## **2. Project stakeholders/ partners**

Our project represents a truly collaborative partnership. Partners have not united solely for the purpose of this project but have in fact been working closely together for Sumatran and Tapanuli orangutan (*Pongo abelii* and *Pongo tapanuliensis*) conservation within the Indonesian provinces of North Sumatra and Aceh for 21 years. PanEco and Yayasan Ekosistem Lestari (YEL) work together to implement the Sumatran Orangutan Conservation Programme (SOCP), a multi-faceted programme that works in collaboration with the Nature Conservation Authorities of Aceh and North Sumatra (BKSDA Aceh and BKSDA Sumatera Utara) and the Gunung Leuser National Park Authority (BBTNGL), and under Memorandum of Understanding with the Indonesian Ministry of Environment and Forestry. The SOCP works to conserve orangutans in Sumatra through rescue, rehabilitation and reintroduction of ex-captive orangutans, surveys, and monitoring of wild orangutan populations,

YEL were involved in project development processes from the outset. PanEco held all project development meetings with YEL. We do not work in a top down manner, project development and ongoing management is collaborative and bottom-up, based on the strengths and ambitions of YEL. In development processes, PanEco plays the role of bringing together and honing different ideas for achieving conservation impact into a cohesive whole. All indicators and targets were set by YEL themselves.

This collaborative approach towards project monitoring and decision making has continued into the second year of the project. Regular check-in and discussion meetings with YEL and the PanEco team have taken place throughout the year (approximately every two months or more frequently) either by Zoom or in person where possible and regular communication takes place via a specific project WhatsApp group. We encourage relaxed and informal communication on the WhatsApp group so that all project staff feel comfortable reaching out to the PanEco team when questions or issues arise. Multiple joint site visits have been conducted.

The partnership with forest adjacent Jantho communities is central to the project and has continued to grow in strength and size in year 2. Our partnership with the Acehese provincial Nature Conservation Authority (BKSDA Aceh) is also a central tenet of the project and the long-term Jantho Orangutan Reintroduction Programme is a joint venture with BKSDA Aceh and run under an MoU.

## **3. Project progress**

### **3.1 Progress in carrying out project Activities**

#### ***i. Project start up workshop***

#### ***ii. Monitoring & evaluation tools design and processes (including design of additional baselines for poverty impacts, to enhance the income indicators we have already set, and educational impacts)***

#### ***iii. Internal annual reviews of monitoring data***

#### **iv. Final review**

Activities i) and ii) were completed in year 1. Regular reviews of monitoring data (at least quarterly) have continued in year 2. Our final review will take place at project end point (September 2024).

### **OUTPUT 1: Rehabilitated (and translocated) Sumatran orangutans are released and monitored in Jantho Nature Reserve**

#### **Activity 1.1: Orangutan release**

#### **Activity 1.2: Daily post-release monitoring**

#### **Activity 1.3: Orangutan surveys (JRF)**

#### Orangutan release and translocation

Orangutan reintroduction<sup>1</sup> has continued throughout year 2 and is on-track. Ten orangutans were released, as detailed in table 1.

<b>Year 2 quarter</b>	<b>No. of orangutans</b>	
Q1	1	Mark Laklak (May); rehabilitant orangutan.
Q2	4	Bina Wana (July), Bumi (August), Lembang (September), Rory (September); all rehabilitant orangutans.
Q3	0	
Q4	5	Siga (January), Allysa (March); both rehabilitant orangutans. Muazam (January) and Roisya and her infant (March) three wild translocated orangutans <sup>2</sup>

**Table 1. Orangutans released at Jantho, year 2.**

#### Post-release monitoring

Post-release monitoring (PRM) by our SOCP field teams is ongoing at Jantho and teams have followed 48 orangutans over 437 follow days (multiple teams), for 3,734 hours of observation. This breaks as shown in table 2.

<b>Year 2 quarter</b>	<b>No. of orangutans</b>	<b>No. of days</b>	<b>No. of hours</b>
1	14	68	556
2	13	162	1,494
3	10	95	793
4	11	112	891
<b>Total year 2</b>	<b>48 orangutans</b>	<b>437 days</b>	<b>3,734 hours</b>

**Table 2. Post-release orangutan monitoring data, year 2**

In addition to monitoring newly released orangutans, the PRM team often find and observe previously released orangutans who return to spend some time closer the release area. Some examples of previously released orangutans observed by the PRM from year 2 is as follows:

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<sup>1</sup> Orangutan rehabilitation prior to reintroduction takes place at the SOCP Orangutan Rescue and Rehabilitation Centre in Sibolangit, Medan. It is the flagship element of the SOCP (Sumatran Orangutan Conservation Programme), YEL and PanEco's long-term, joint initiative. It is a separate to the Darwin project, but rehabilitant orangutans released at Jantho during the Darwin project period originate from the Sibolangit Centre. The Centre houses an average of 60-70 orangutans at any one time all at different stages of their rehabilitation journey. Orangutans ready for reintroduction are released at two sites in Sumatra, Jantho is one of them. See the SOCP website for more details.

<sup>2</sup> Please note translocation of wild orangutans is only undertaken as a last resort, and under the instruction from the Nature Conservation Authorities, when orangutans are in serious danger from human-orangutan conflict and mitigation attempts have either failed or deemed not possible.

- Kluet, first released in 2015, was found and observed by the PRM team in Q1 (April) and then again in Q3 (November). She was observed with her new infant, who has been named Kiko and was estimated to be 1-2 months old and in good condition. Another orangutan, Cut Keke also joined Kluet and Kiko for a few days.
- Peunarun, released in 2012 was observed in Q2 (July). Encouragingly, he showed wild behaviours including kiss-squeaking and throwing branches at the PRM team.
- Asel, released in January 2022 (reported in year 1 of the project), was observed again in Q3 (October and December). He appeared in good condition and his body score was 3-4, which is the ideal condition.
- Nemo, a wild orangutan translocated to Jantho in 2016, was observed in Q3 (November and December).
- Keumala and Oscar, released in 2019 and 2011 respectively, were observed in Q3 (November).
- In Q4, Asel, Nemo, Kluet and Kiko were all observed again by PRM team, as well as four other previously released orangutans; Bualn, Wenda, Radaria and Broe. All had ideal body condition scores of 3-4.

In Q1 the PRM team, in addition to routine monitoring activities also expanded the observation trail system. By expanding the trail system, it is now possible for our teams to cover a larger area each day and gather more information on the reintroduced orangutans and biodiversity in general, as well as any disturbances within the Jantho reserve. As the number of orangutans in Jantho Nature Reserve carries on increasing, and dispersing to wider areas, our observation systems need to expand. This expansion is also in response to information from SMART patrol team on the increased distribution of orangutans recorded during patrols.

In Q4, Jantho experienced very heavy rain resulting in some PRM activities cancelled or postponed due to risks of being in forest or cross rivers.

#### Far-ranging orangutan surveys

In addition to the post-release monitoring of orangutans reported above, the Jantho Ranger Federation (JRF) conducted surveys of far-ranging orangutan encountered as part of their SMART patrol missions. Observation of far-ranging orangutans in year 2 is shown table 3.

Year 2 quarter	Direct encounters	Indirect encounters
1	1	93 nests
2	0	19 nests
3	0	5 nests; 2 orangutan foodstuffs; 1 long call
4	0	72 nests
<b>Total year 2</b>	<b>1 direct encounter</b>	<b>192 indirect encounters</b>

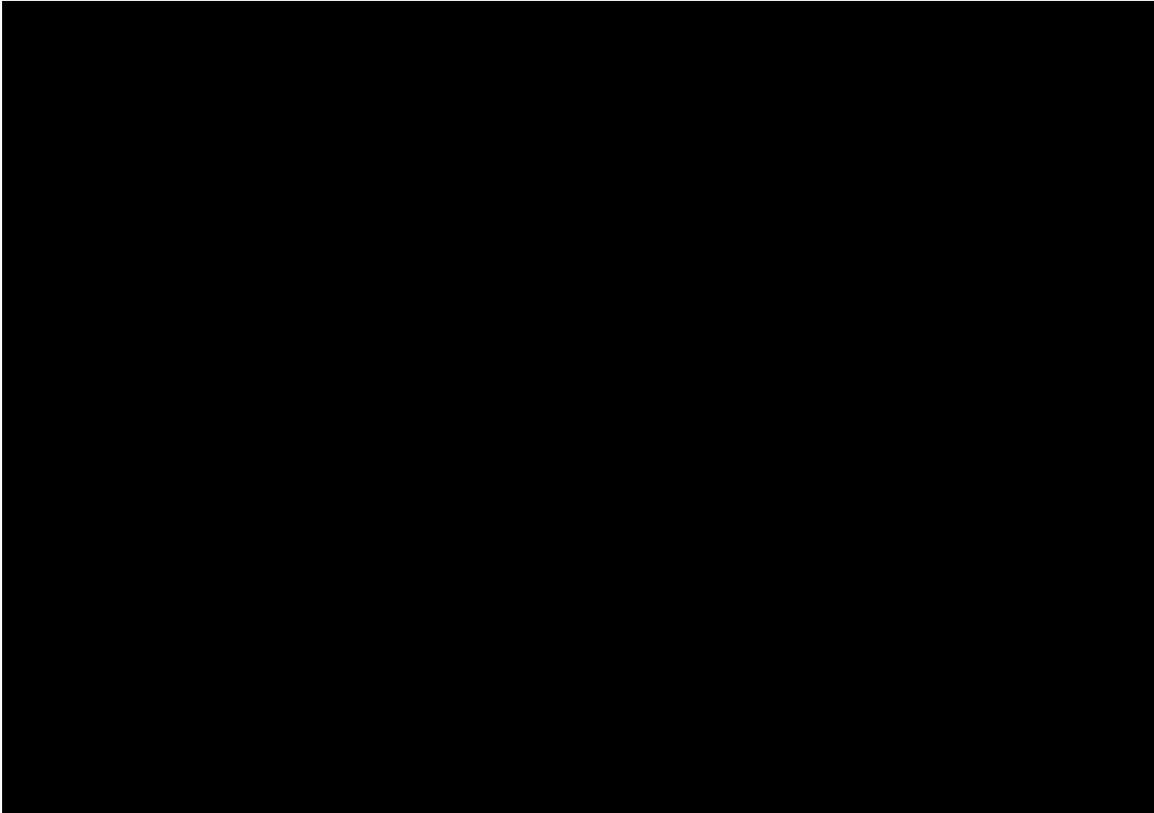
**Table 3. Observations of far-ranging orangutans, year 3.**

During year 2, orangutan nests were encountered across the patrol grid. In Q3 the patrol team undertook a special mission to monitor west of Jantho to Lhoong District, near the east coast of Aceh. The special mission was due to a male orangutan that was rescued in Lhoong District about 50 km from Jantho back in March 2022. The orangutan was a rehabilitant orangutan who was released in Jantho 2021, and it is highly unusual to find an orangutan near this coastal area, especially far from primary forest areas. Therefore, we set up a mission to investigate the possibility of orangutans living in the area between Jantho and Lhoong. A search grid was laid over the 60km area and the team explored selected quadrants, see Figure 1. The team did not record any evidence of orangutan presence but noted habitat potential with several fruiting trees and a low threat encounter rate.



**Figure 1. Map of tracks and grid exploration for orangutans outside of Jantho Nature Reserve, Dec 2022.**

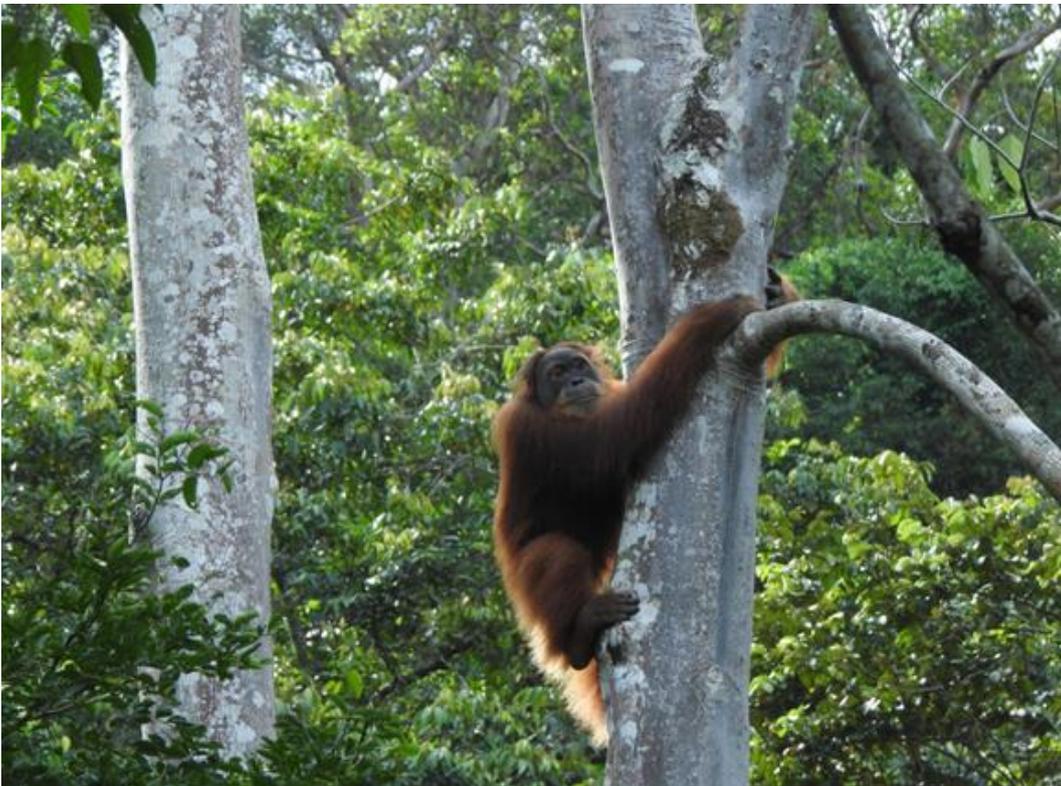
**Supporting evidence**



**Photo 1. Transferring an orangutan in Jantho**



**Photo 2. Q1, Mark Laklak after his release**



**Photo 3. Q3, Rory explores the forest after being released**



**Photo 4. Q4, translocated wild male (Muazam)**



**Photo 5. Q1, Kluet and her infant Kiko**



Photo 6. Q3, Keumala and Asel observed in the forest

**OUTPUT 2: Jantho Nature Reserve (16,000 ha) is protected by the JRF, throughout the project term and JRF capacity is increased.**

**Activity 2.1: Monthly patrol missions take place (average 2 mission/month @ 10 days/mission)**

**Activity 2.2: Identified threats reported to BKSDA Aceh**

**Activity 2.3: Community Ranger training takes place at least 2 events per (calendar) year**

Monthly patrol missions have taken place throughout year 2. Details per quarter are shown in table 4.

Year quarter	2	Missions	Days patrolled	No. of threats	Threat types	% of threats reported to BKSDA
1		6 (2 teams x 3 missions)	60	24	Heavy equipment, NTFP collection, snares and glue traps, hunters, and gold miners	100%
2		6 (2 teams x 3 missions)	60	6	Forest fires, hunters	100%
3		2 (2 teams x 1 mission)	20	18	Hunter camps, hunters, snares, gold mining	100%
4		6 (2 teams x 3 missions)	60	22	Hunter camps, snares, hunters	100%
<b>Total year 2</b>		<b>20 missions</b>	<b>200 days</b>	<b>70 threats</b>		<b>100%</b>

**Table 4. Jantho Patrol data, year 2.**

In addition to orangutans, the patrol teams monitor the presence of other wildlife. There were sightings of several species, including the tracks of Critically Endangered Sumatran tigers (*Panthera tigris sumatrae*), evidence of Critically Endangered Sumatran elephant (*Elephas maximus sumatranus*) and Samba deer.

In year 2, the patrol teams also conducted mammals survey, focusing on five primate species, Gibbons (*Hylobates lar*), Siamangs (*Sympalangus syndactylus*), Thomas' langurs (*Presbytis*

*thomasi*), and two macaque species (*Macaca fascicularis* and *Macaca nemestrina*) in order to update records their current status in Jantho. These surveys were a repetition of baseline surveys conducted in 2013, collecting data on these five primates' species which are considered as competitors for orangutan food. The main goal of this re-survey ten years on is to investigate whether there has been any impact of introducing orangutans into Jantho on these five (inhabitant) species.

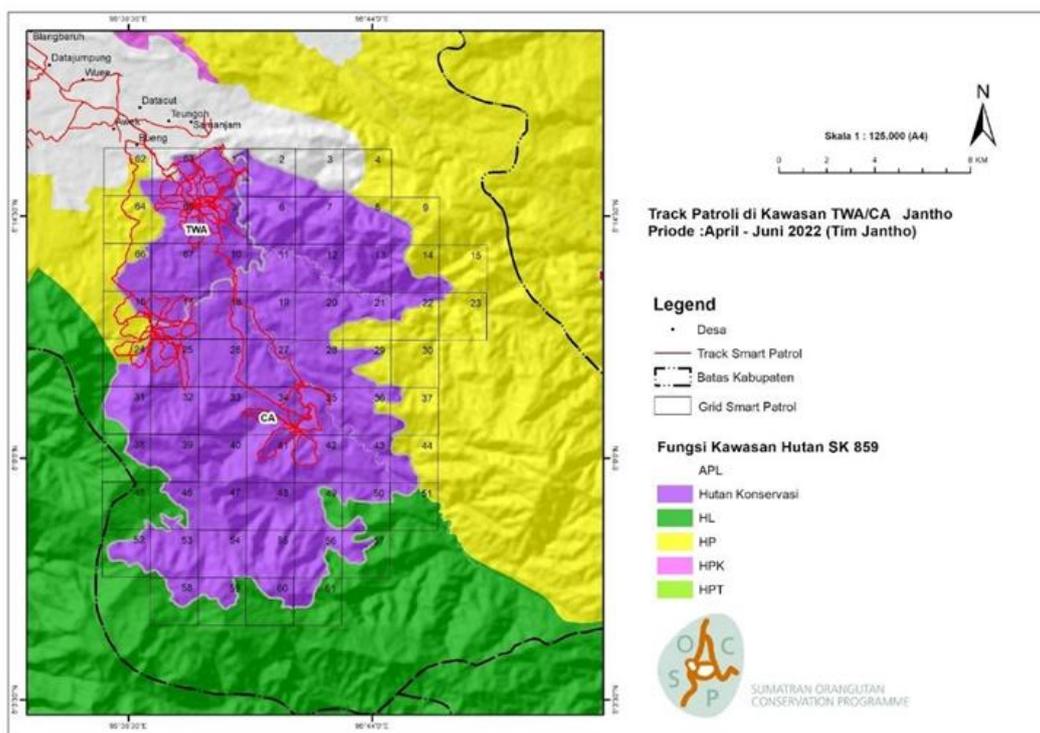
Patrol teams also recorded data on other mammal species using line transects and camera trap surveys. The survey is split between the wet and dry season, with the wet season survey taking place in year 2 (November and December, 2022) and the second part starting in April 2023. The results will help us to understand the current situation and will enable us to develop an area management plan that is suitable for the diverse arrant biodiversity within Jantho.

JRF Training

In Q3, prior to the patrol teams undertaking the mammal surveys they received methodology training. The team received both theoretical and practical training in three different data collection methods; line transects, fixed point counts, and camera trapping. Training was delivered by the YEL biodiversity and research team. To make the learning process as effective as possible, the team were assisted in the field surveys by the three YEL mentors, gaining direct feedback as they learned and developed new skills. In addition to the SMART patrol team members, the mammal survey team also consisted of two PRM staff and three youth community members. The three youths were from villages around Jantho and two have now become backup manpower for our activities in Jantho.

In Q4, we conducted an evaluation of the SMART Patrol team's activities in 2022, assessing performance, analysing the results and receiving feedback from the teams. Furthermore, in Q4, patrol teams were given refresher SMART and survival skills training, and introduction training to drone surveys and mapping, bioacoustics monitoring and ecotourism.

**Supporting evidence**



**Figure 2. Patrol tracks Q1, Jantho Ranger teams**



Photo 7. Q1 Resin tapping threat found by Jantho Ranger team

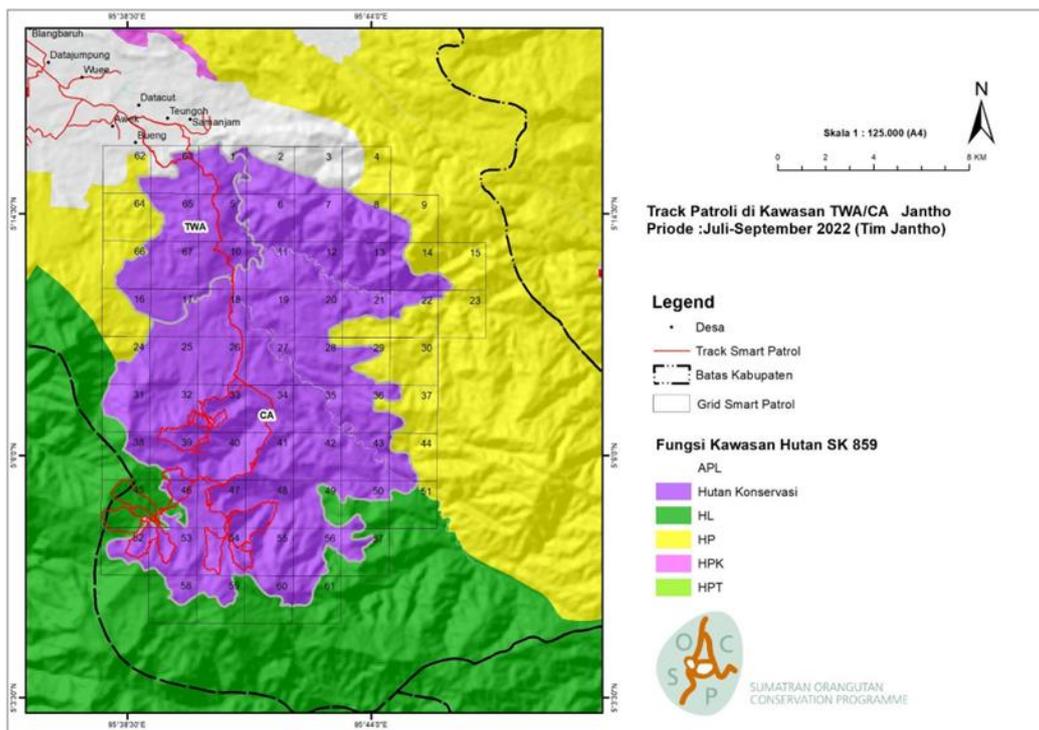


Figure 3. Patrol tracks Q2, Jantho Ranger teams



Photo 8. Sumatran tiger footprint found by Jantho Ranger team Q2.

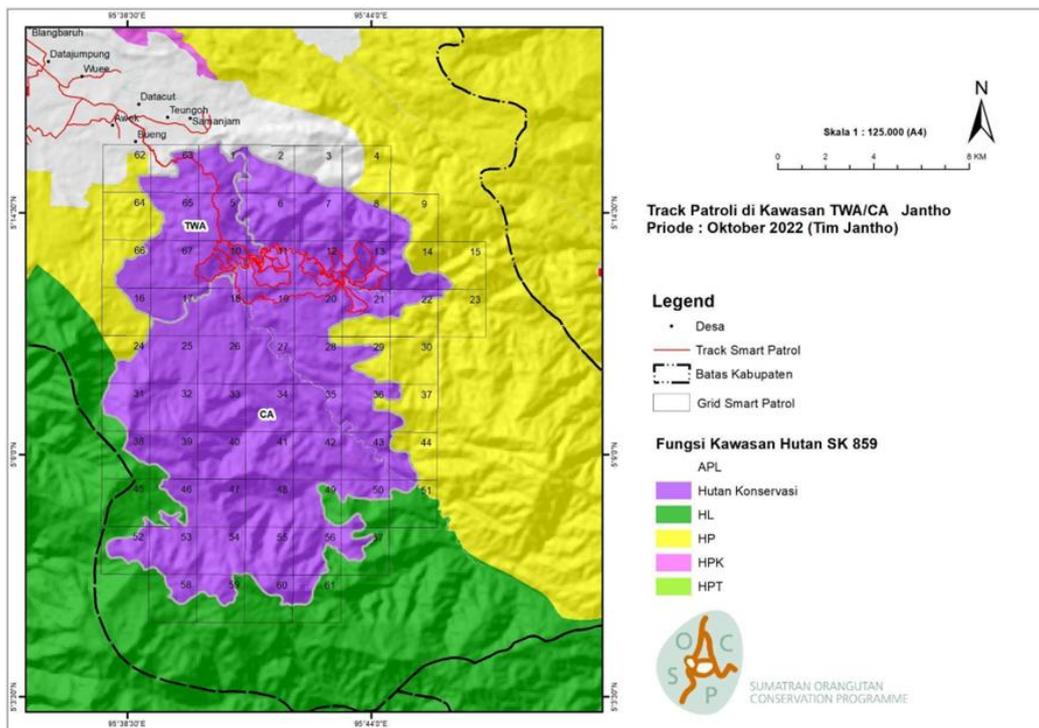


Figure 4. Patrol tracks Q3, Jantho Ranger teams

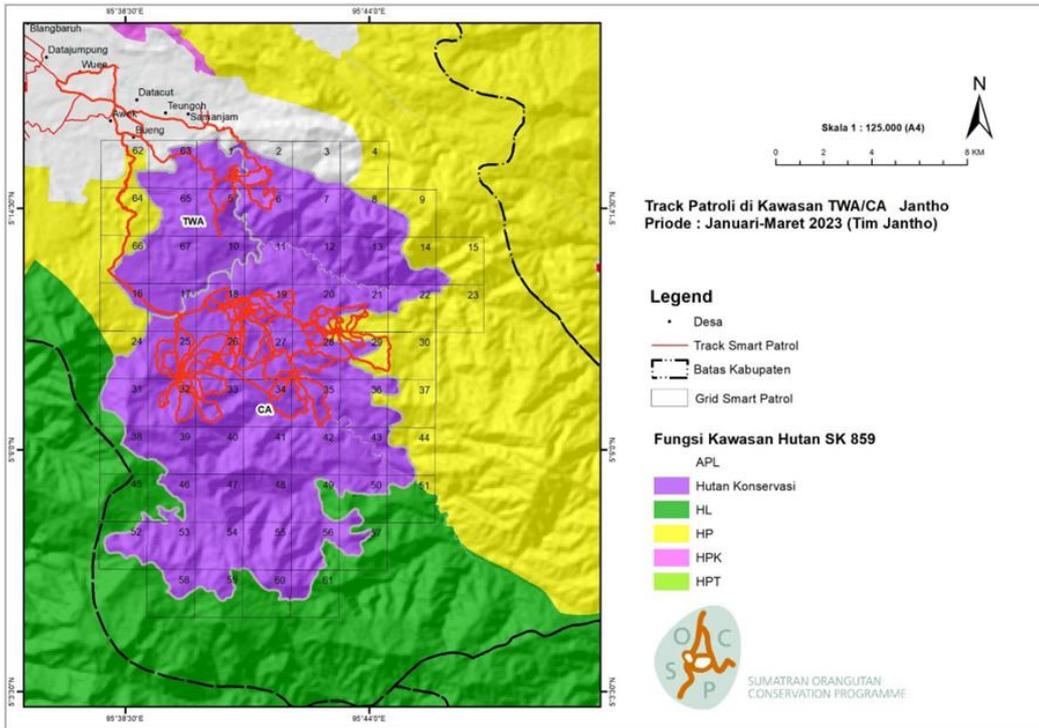


Figure 5. Patrol tracks Q4, Jantho Ranger teams

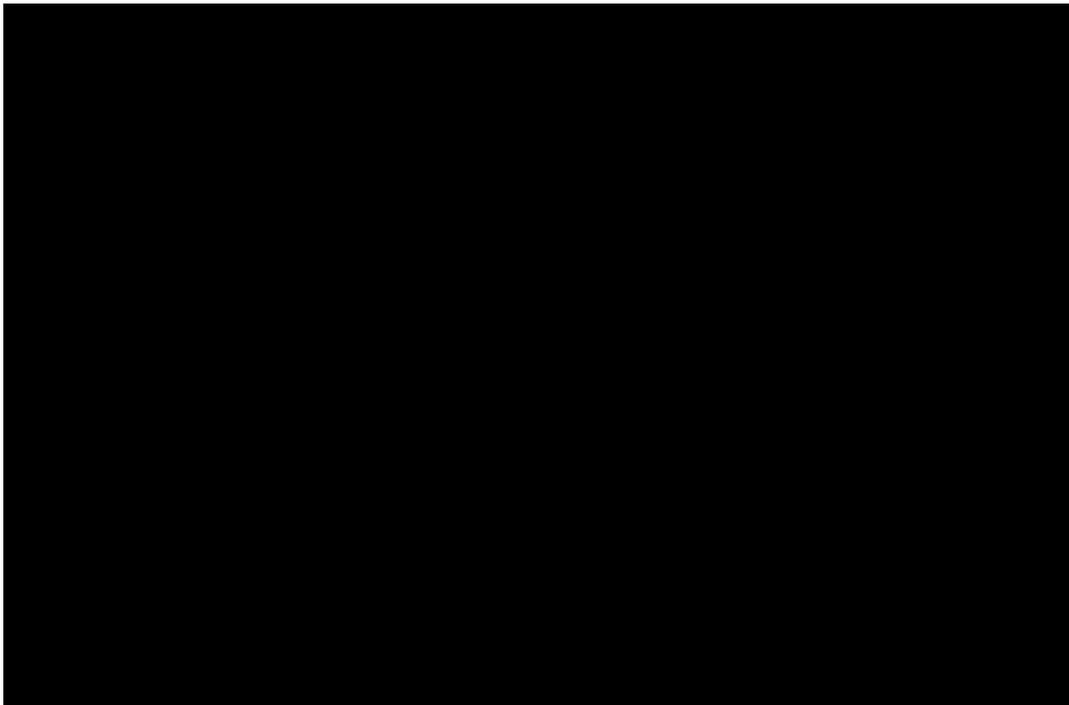
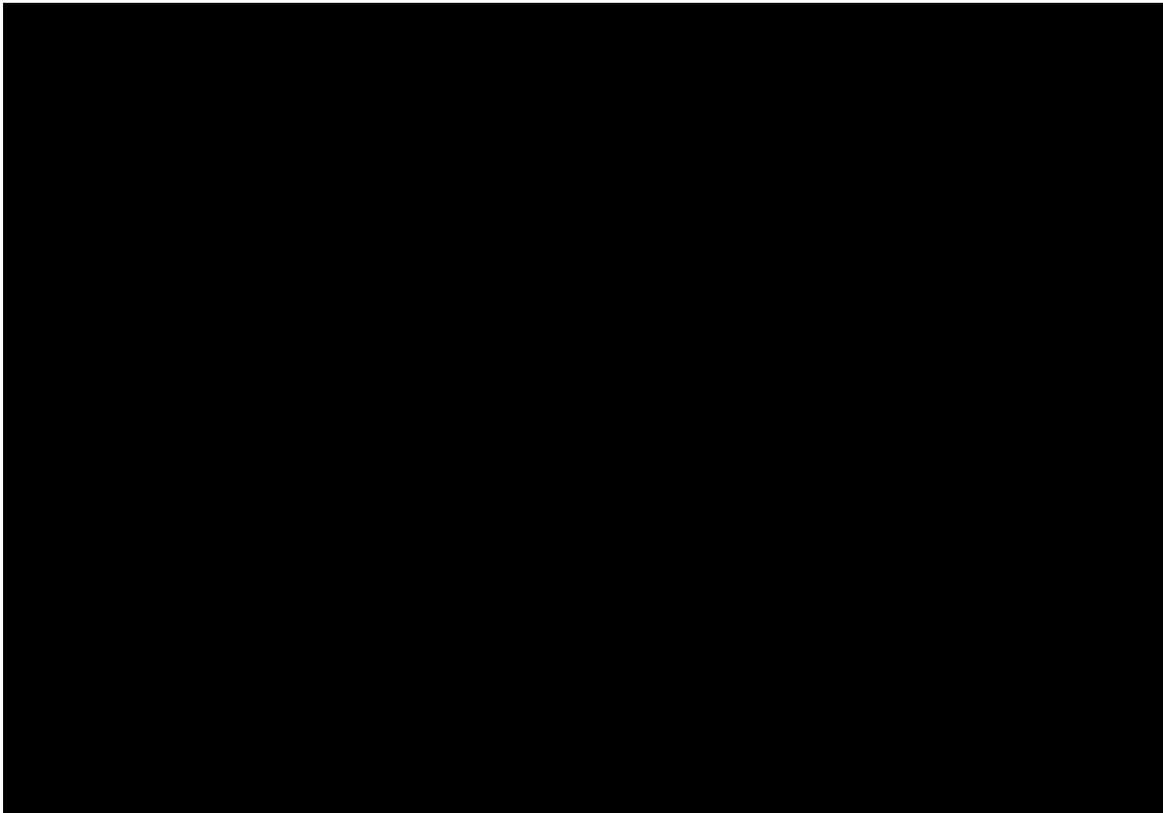
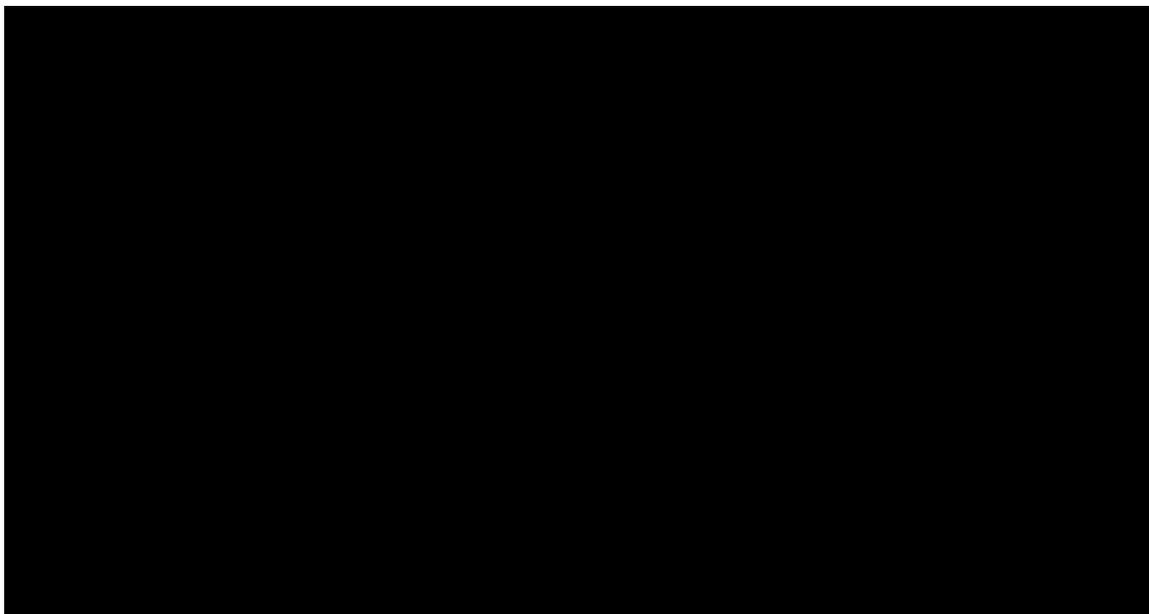


Photo 9. Ranger dismantling a nylon snare, Q4



**Photo 10. Ranger team patrolling in an unprotected area near Jantho Nature Reserve**



**Photo 11. Jantho Patrol team training; topic: introduction to drone and aerial monitoring Q4**

**OUTPUT 3: The six project communities have strengthened livelihoods opportunities, capacities and collaboration through newly established, functioning and profitable honey cooperatives.**

***Activity 3.1: Participatory training of at least 12 community members (four community members in by end of September 2022; a further 8 by September 2023) in certified, professional beekeeping including cultivation and post-harvest processing (1st stage)***

***Activity 3.2: Local procurement of beehives and supply to community (200 overall, 100 in by end of September 2022; a further 100 by September 2023)***

***Activity 3.3: Participatory training in business management and operations***

**Activity 3.4: Facilitation of cooperative model establishment, equitable benefit sharing mechanisms and signing of community conservation contracts<sup>3</sup>**

**Activity 3.5: Cooperatives are supported with everyday operations, management and technical issues**

Honey Team development

In Q1 and Q2, four people (4 men, 0 women) from the two project communities were trained in the more intensive *A.mellifera* & *Trigona*<sup>4</sup> cultivation and harvesting. Additionally, one person completed further in-depth training on *A. mellifera* cultivation and harvesting at a honeybee farm in Riau province. These individuals are the first members of the more specialised “Honey Team” and are monitoring and assisting the bee-keeping efforts across the first two communities (Jantho Baru and Jantho Lama) and have supported harvesting. Members of the Honey Team from the third and fourth project villages (Jalin and Gampong Weu) have not been identified yet due to these villages being at an earlier stage in their enterprise development process, but it is planned for year 3 of the project.

New group formation, community training and legal establishment

The specialist capacity building of the Honey Team is taking place alongside more general “community beekeeping” capacity building of the wider community group members. Training in building an organisation is also taking place with each community as they are supported to form their cooperative groups and supported to establish their legal status.

The first two project villages **Jantho Baru** and **Jantho Lama** formed their groups in year 1 of the project and training in community beekeeping, group development and business management was delivered, as previously reported. Follow on training was delivered to Jantho Lama group in year 2, Q1. This was delivered to 20 people (14 women, 6 men), centred on strengthening community groups. The group proceeded to hold a meeting in Q1 (attended by 14 women, 6 men) to elect members to leadership roles; Chief, Secretary and Finance Officer, with a woman being elected to the latter position, and collectively formulated the cooperatives’ organisational values i.e., mutual respect, knowledge sharing and collaboration.

Excitingly, in year 2, the legal status of the first two cooperative groups was officially established. In Jantho Baru village in Q1 with the group name **Rumah Linot** and in Jantho Lama village in Q2 with the group name **Linot Jantho**. Support was delivered by YEL staff to assist the groups with gaining their legal status.

Beekeeping and group development training for the 3<sup>rd</sup> community, **Jalin**, was held at the end of Q2 (attended by 27 participants; 11 women, 16 men) and in Q3 the community took the official decision to form community beekeeping group. Jalin village met in Q3 to elect a Chief, Secretary, and Treasurer and also formulate the values of the organisation, benefit sharing mechanism, and

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<sup>3</sup> Community conservation contracts have not been developed yet and progress towards this will take place in year 3. It is felt by the project team that it is too early on in the project for the conservation contracts to be approached and this will take place once the benefits of the beekeeping enterprises are more firmly demonstrated.

<sup>4</sup> Currently only *Trigona sp.* are being reared by Jantho communities. The longer-term plan is that both *Trigona sp.* and *A. mellifera* are reared by Jantho communities hence the more intense training delivered to the Honey Team incorporating both species. However, *A. mellifera* is more challenging in the conditions at Jantho and therefore we are still at the trial stage with *A. mellifera*, and our colonies are currently situated away from the project site (in Riau province) until we progress further with *A. mellifera* trials. While *Trigona sp.* hives produce less honey than *A. mellifera* hives, the price locally for is much higher for *Trigona sp.* and therefore in terms of the project outcomes and impacts, we are confident that these can be reached even if only *Trigona sp.* is feasible within the project timeframe.

Articles of Association (meeting attended by 17 people; 7 women, 10 men). In Q4, Jalin established their cooperative legal status.

Beekeeping and group development training for the 4<sup>th</sup> project community, **Gampong Weu**, was held in Q4 and attended by 23 people from 22 households. Training was received positively and following the training the group decided that they would establish a honey cooperative consisting of the 22 households, and also proceeded to elect the Chief, Secretary and Treasurer, and establish their benefit sharing mechanism. Gampong Weu has not yet drafted their Articles of Association due to members need to prioritise rice paddy harvesting in Q4, however, preparation for beekeeping was undertaken including assessing potential beehive locations and planting of bee forage plants. Group development will continue in year 3.

All group facilitation was carried out by M. Taufik Abda who has extensive experience working with local communities and indigenous people in Aceh Province.

#### Beehive procurement and distribution

In total, 308 beehives have been procured and distributed to date across project years 1 and 2, well ahead of schedule. In year 2, the Linot Jantho group (in Jantho Lama village), Jalin village and Gampong Weu received hives. As of March 31<sup>st</sup> 2023, hive numbers and locations were: Jantho Baru (Rumah Jantho group) 68; Jantho Lama village (Linot Jantho group) 60; Jalin 78; Gampong Weu 66; and at the Fajar Lestari nursery 32. These total 304 as four hives failed, please see the lessons learned section for details.

#### Support with harvests and everyday operations

The **Rumah Linot** and **Linot Jantho** groups harvested over the June – December period. Initially Initial yields in this time were about 100-200 ml per beehive, which is below the average *Trigona sp.* yield (200-300 ml per hive) and then Q3 harvests reached 200-300 ml beehive. It was extremely encouraging to see the community *Trigona sp.* harvest volumes increasing. A single harvest then took place in Q4 (March) however, yields were lower again due to the rainy season and bee forage availability; this is to be expected as with less foraging availability the bees require the honey to be left in the hive and not harvested in full in order for the bees to have enough food to see the season through. There is variation in the volume hives produced, for the keepers experiencing lower than average volumes the Honey Team works to support then to ensure the right level of hive care and enhancement of foraging plants within their vicinity. In total in year 2, 132 kg of honey was produced.

Following harvests in year 2, the Rumah Linot and Linot Jantho cooperatives were supported with professional quality testing with honey samples to gain insights into product quality. The honey samples were sent to an accredited laboratory managed under the Indonesian Ministry of Industry. The aim was to assess the quality of the honey produced and use the feedback to improve beekeeping operations, for example enhancing foraging plants available through further planting, in order to increase quality and ultimately marketability. The results from the first tests (Q1) showed that the honey was pure, fresh honey, but it is not fully ripe meaning that the water content and acidity were high. The second samples sent for testing (Q2) were improved in all five key parameters including water content and acidity. Quality is affected by severable factors including the weather and the blooming of plants in the vicinity. During year 2, we have quality tested every two months and will continue to do so.

Regular meetings were held with cooperative groups throughout the year. Examples include a meeting with the Rumah Linot group in Q1 for check-in purposes and group strengthening. In Q2 practices were further honed by developing a pro forma to record harvesting and production. The Honey Team members are conducting regular beehive checks and assisting community group members with technical issues such as providing roofs for beehives and how to address competition between colonies.

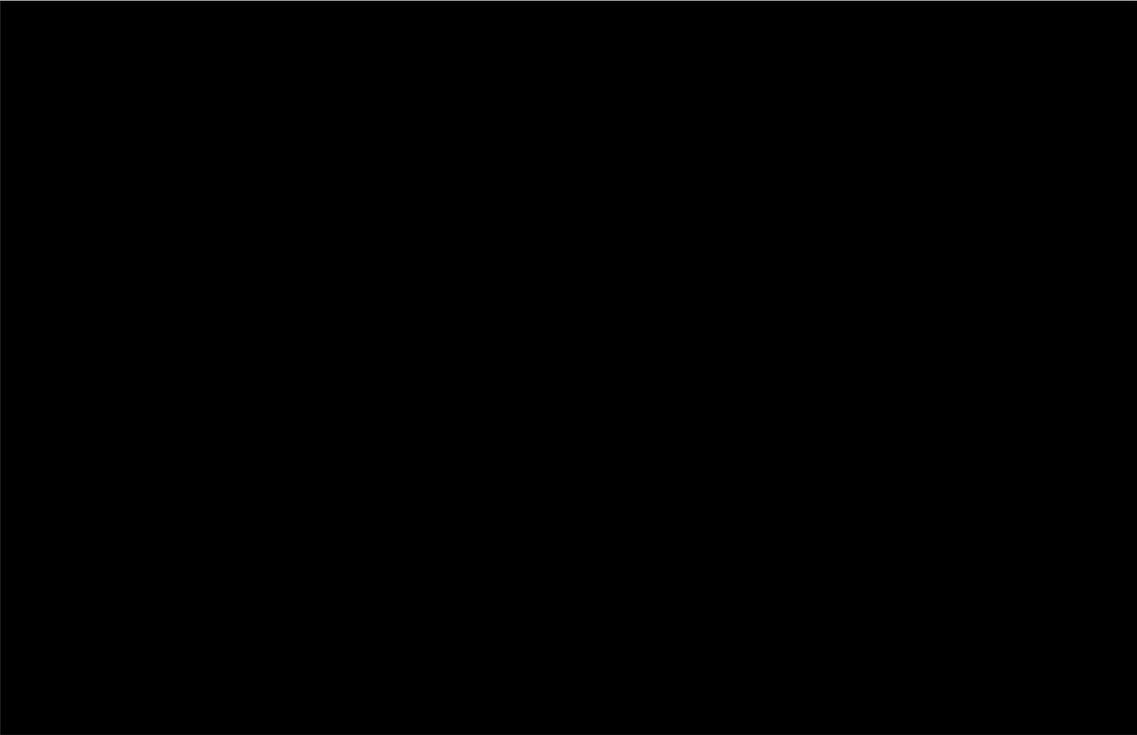
Furthermore, bee forage locally is being enhanced by enrichment planting with over 400 seedlings in year 2, either purchased or grown from seeds collected locally. Planting is taking place across two nursery sites and all four project communities. Organic fertiliser is also being produced from local materials to support planting with the co-benefit of community members learning about fertiliser production techniques and how organic fertiliser could be used on their land.

### Supporting evidence

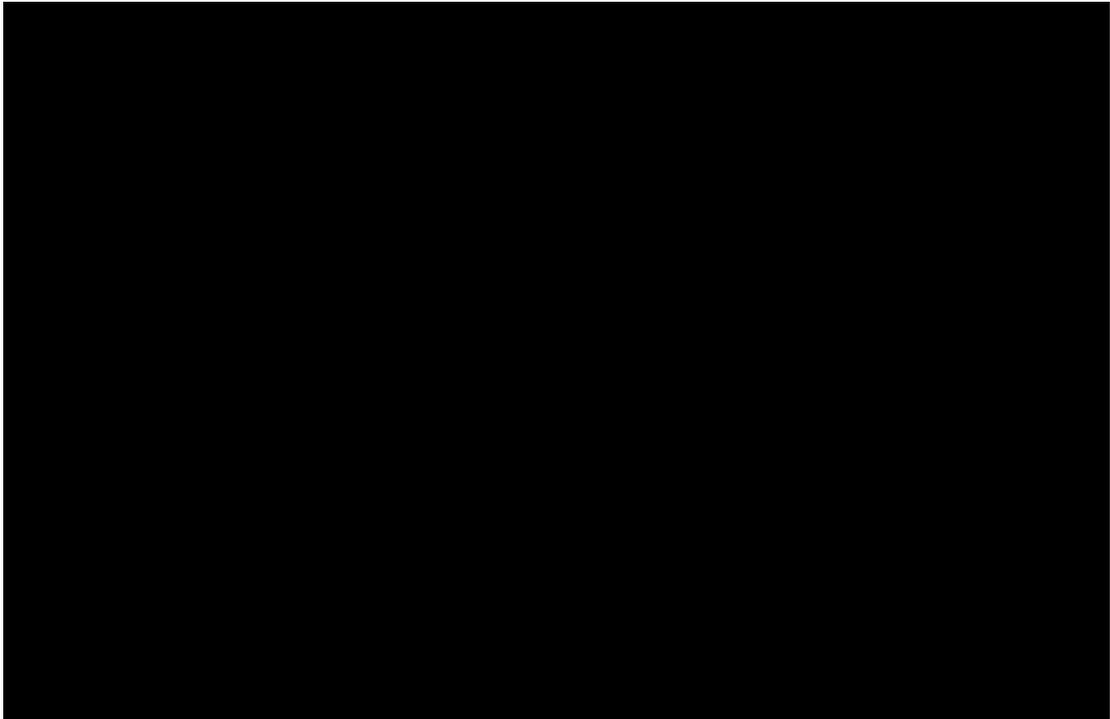
1. Example attendance lists from community meetings
2. Report on study visit to Riau (in Bahasa Indonesia)
3. List of plants in the Fajar Lestari Nursery
4. Deed of incorporation Rumah Linot
5. Deed of incorporation Linot Jantho
6. Articles of Association Jantho Linot
7. Lab test results



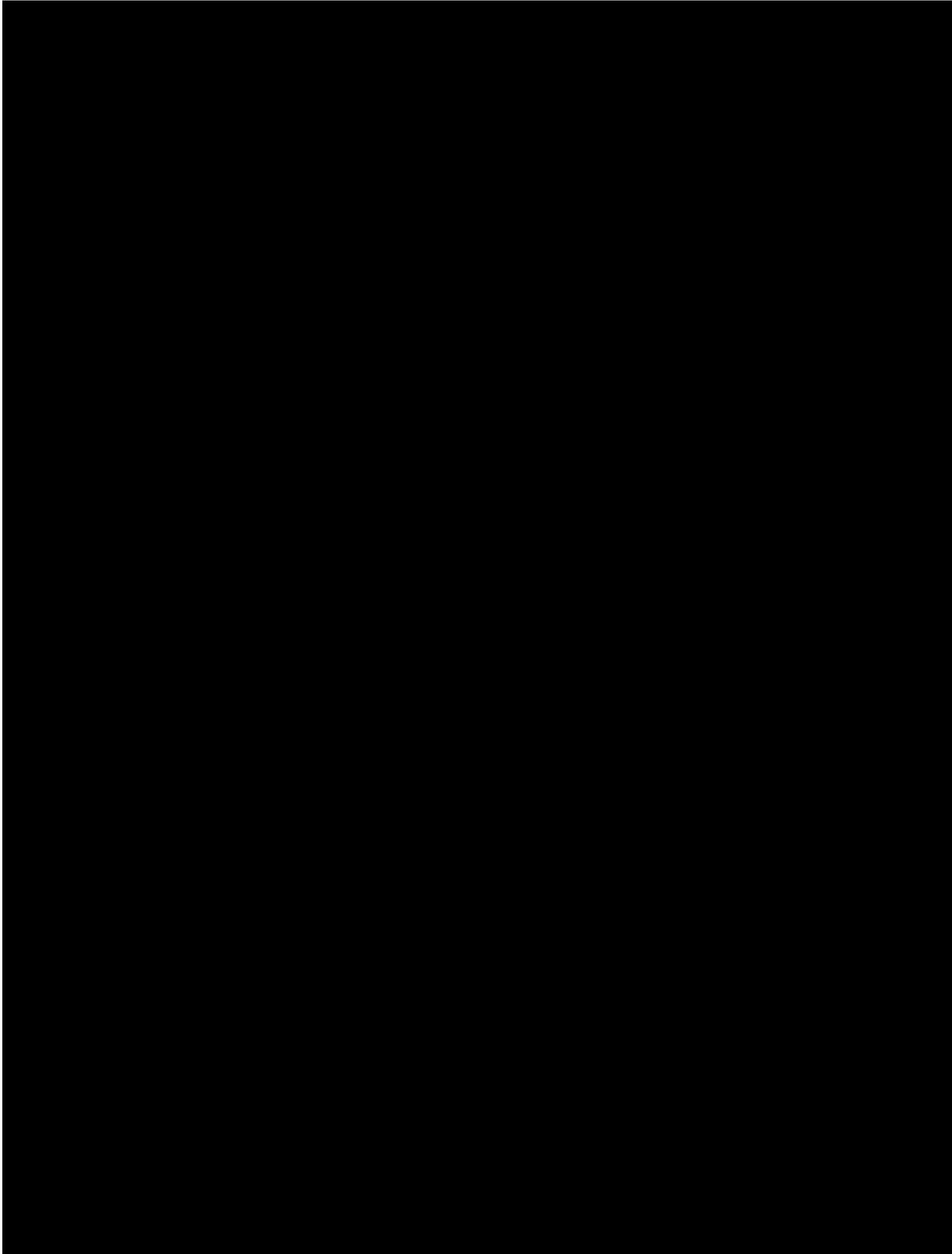
**Photo 12. Beehive at Fajar Lestari Nursey**



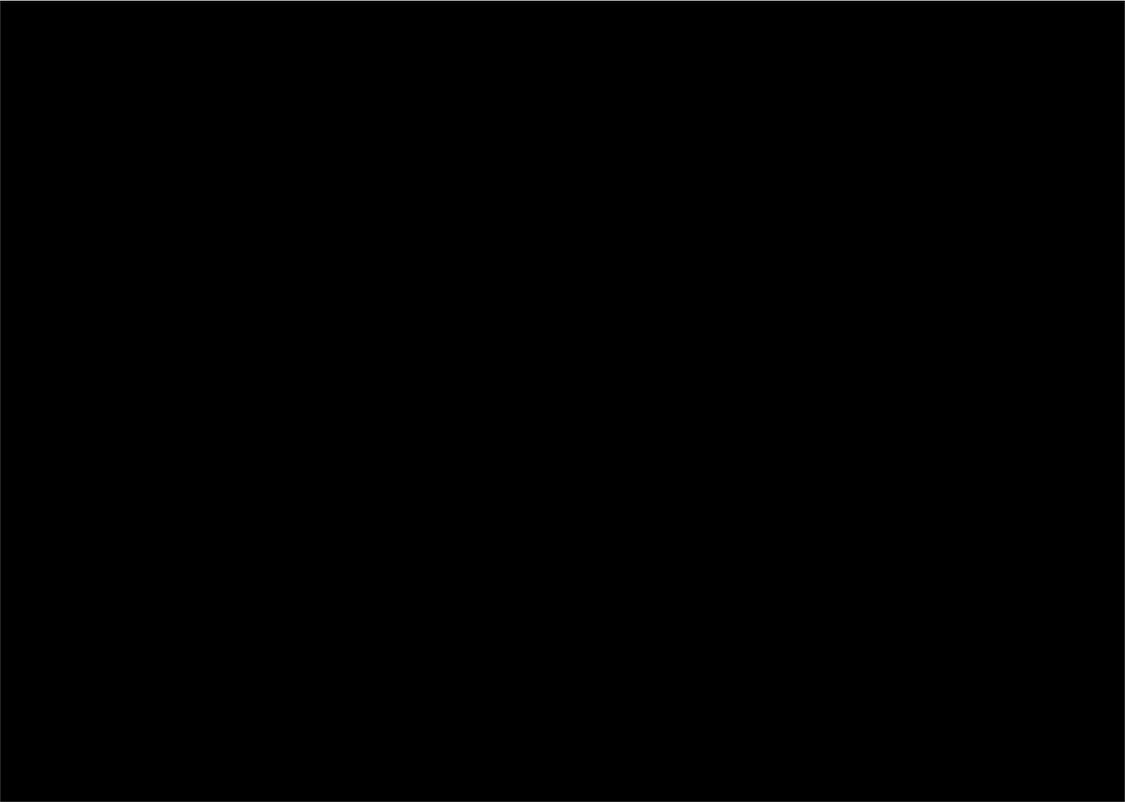
**Photo 13. Q1, Jantho Baru community training**



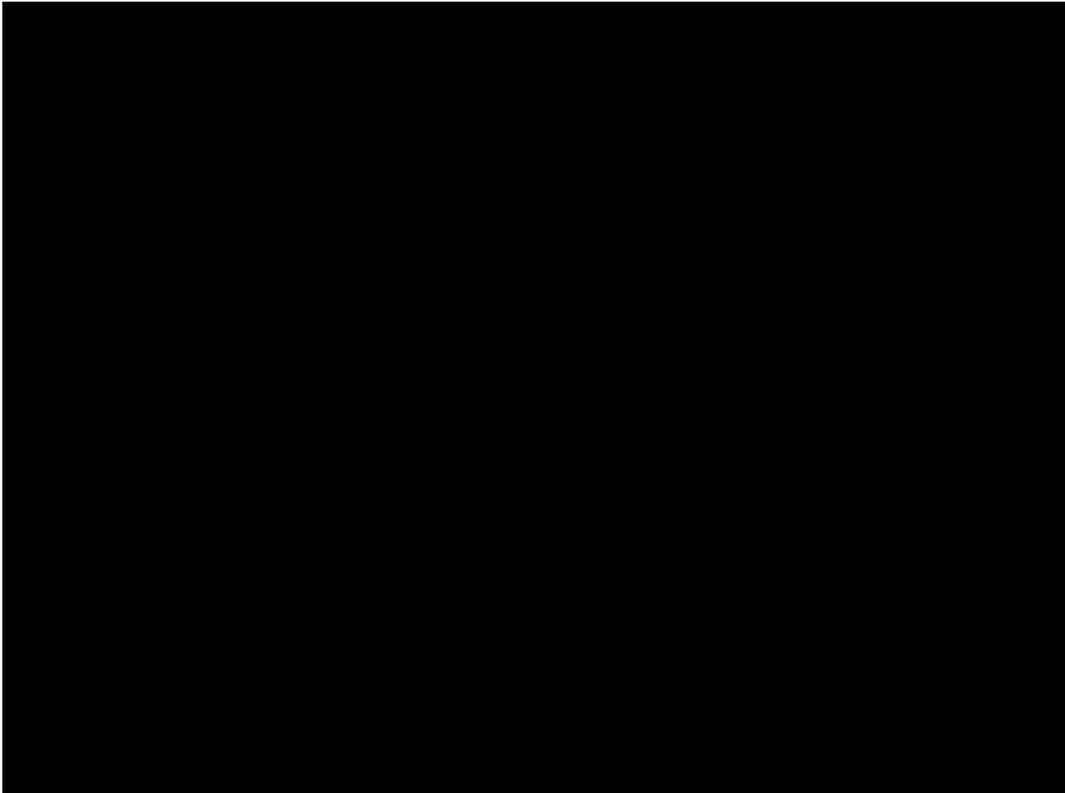
**Photo 14. Q2, Training in Jalin community**



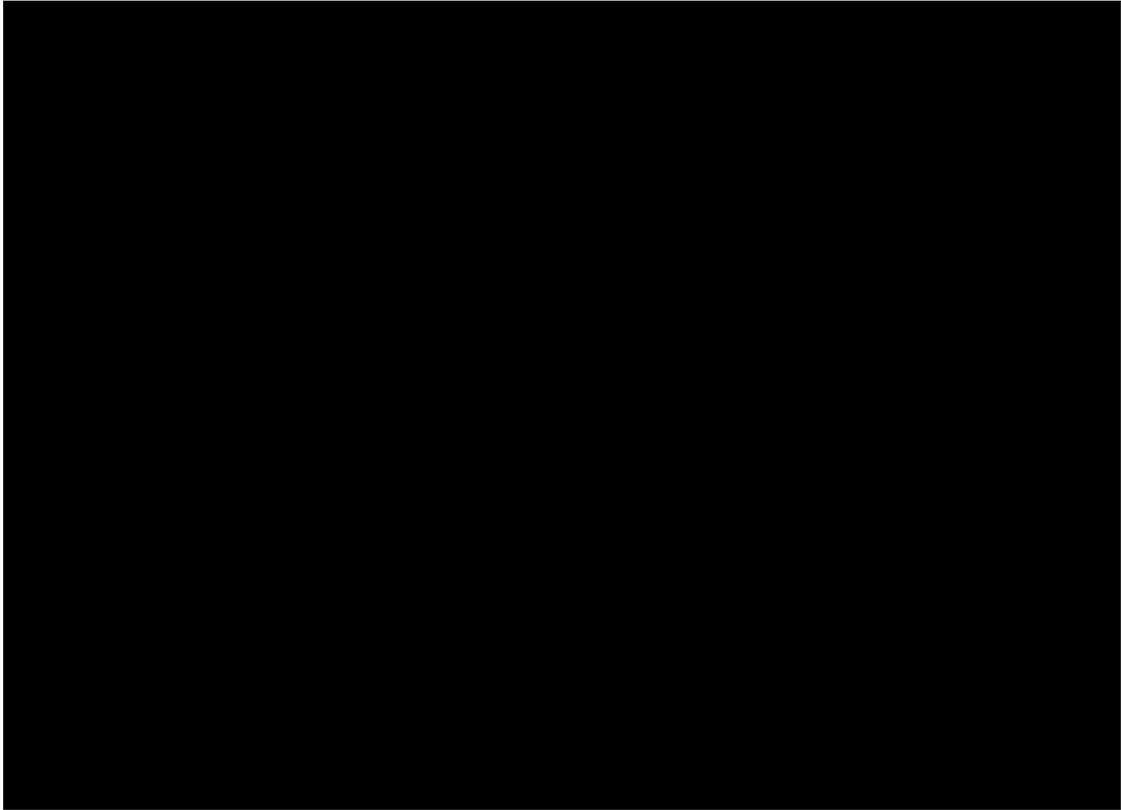
**Photo 15. Q2, Harvesting**



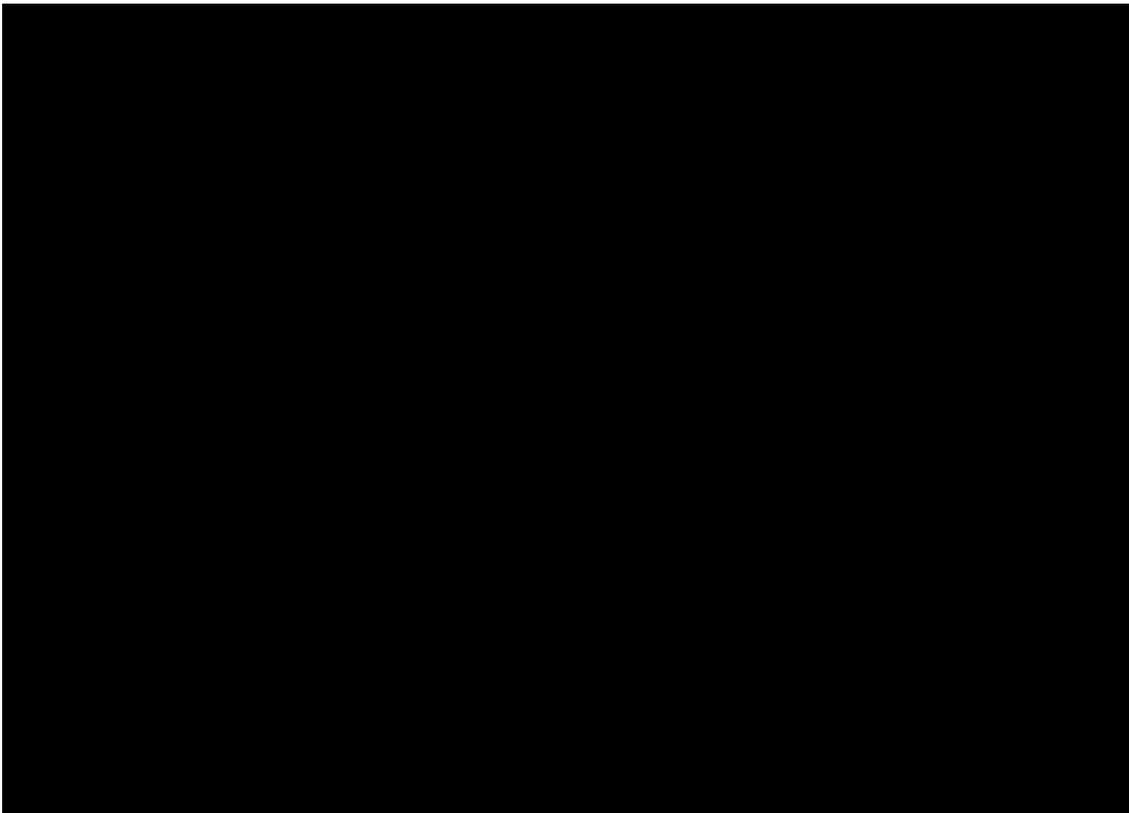
**Photo 16. Q3, Jalin group meeting**



**Photo 17. Q3, Fajar sorting seeds to sow in the nursery**



**Photo 18. Q4, community training and group development Gampong Weu**



**Photo 19. Q4, community training Gampong Weu**

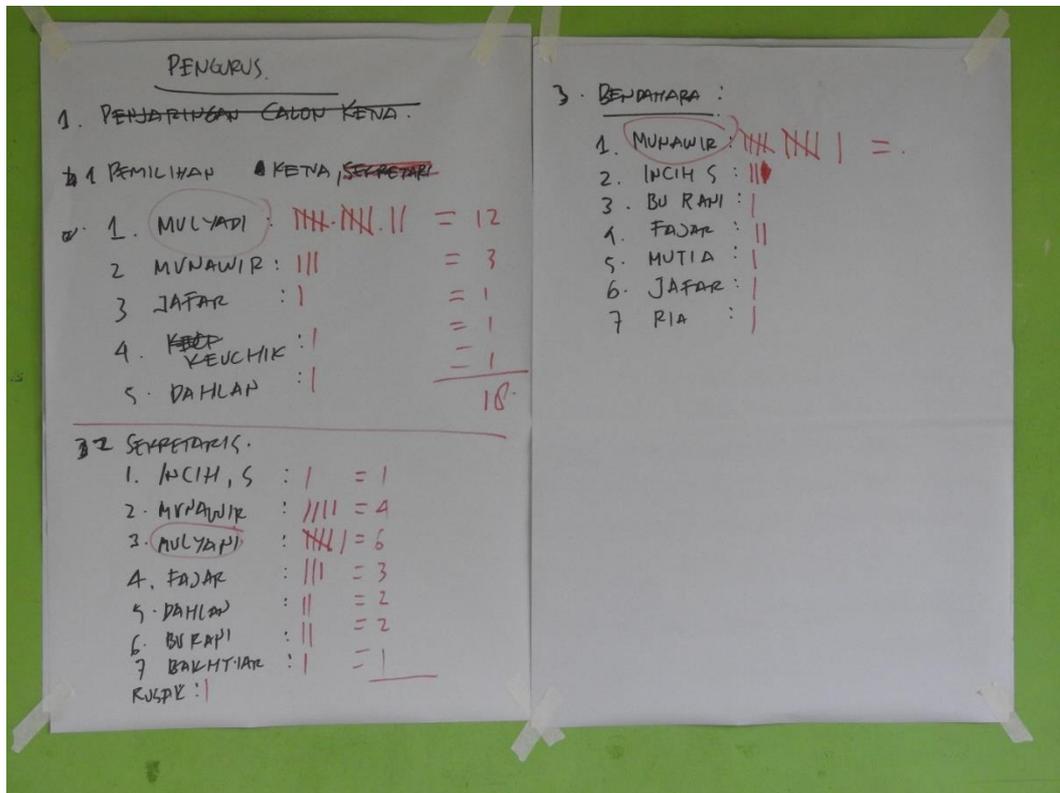


Photo 20. Q4, results of election for Gampong Weu group positions

**OUTPUT 4: YEL-owned conservation enterprise ‘SumaBee’ is established, the brand developed and marketed.**

**Activity 4.1: The SumaBee business is established as a legal Indonesian entity**

**Activity 4.2: Branding is established, and marketing implemented**

**Activity 4.3: Target volumes of honey are processed (2nd stage) and packaged**

**Activity 4.4: Product presence online is established**

Establishment of ‘SumaBee’ has progressed well in year 2. The legal entity has been established to conduct trading, registered as PT Jatari (Jantho Alam Lestari). Draft branding / logo options were designed in Q2, and specific packaging designs were explored. The packaging modes were selected (glass jars/bottles) which will entail different volume options (50 ml – 250 ml). In Q3, two final designs were selected to be used as SumaBee branding.

Alongside SumaBee development in year 2, YEL supported communities to sell honey directly to the local market in volumes of 1 litre or less. While *Trigona sp.* hives produce less honey than *A. mellifera* hives, the price locally for is much higher for *Trigona sp.* In Q3 and Q4 a total of 95kg of honey (100% of the honey put out for sale locally!) was sold locally in Aceh province by the communities, with support with by the YEL team in contacting local buyers. Local prices for honey are increasing (USD 25-35/kg) due to an increase in honey consumption by local communities. These local prices are much higher than the general retail market price (USD 11-15/kg). As agreed within the rules of the cooperative, income from the sales was distributed amongst group members.

Certain permits need to be acquired before a wider market can be reached and honey quality needs to be stable. A study trip was conducted in Q3 to visit households in Riau who were part of the first household honey enterprises in Indonesia to achieve the necessary permits to reach larger national markets. The study trip was to learn mor about post-harvest treatment, packaging, marketing, and the required permits. The process towards acquiring the first necessary permit (PIRT) begun at the end of year 2 and will continue in year 3.

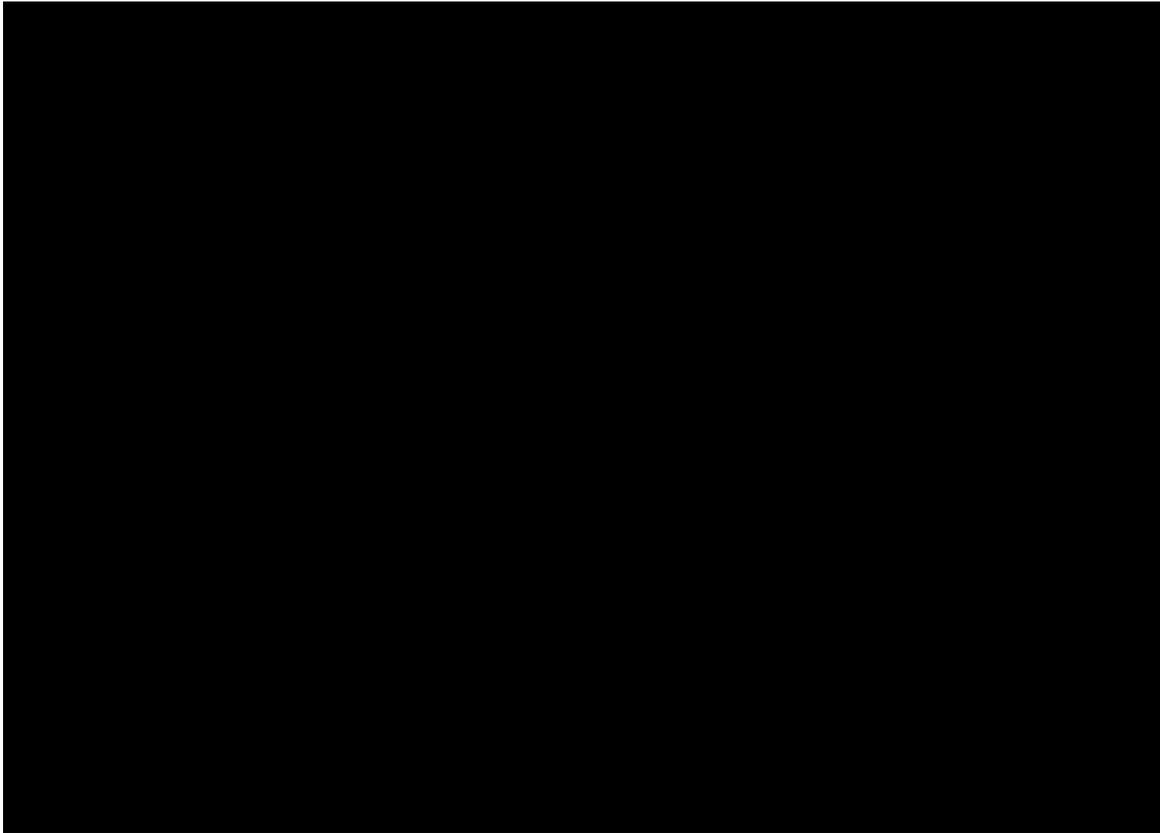
YEL and community representatives joined a local exhibition organised by the Regent of Aceh Besar district. At the exhibition the groups introduced their product to the public and to representatives from local government.

Progress towards an online presence has been made. In Q3, the project team decided to recruit a new team member (sitting within YEL) to focus specifically on honey marketing, and in Q4 the new team member joined. The SumaBee brand was introduced on social media ([Instagram](#) and [Facebook](#)) in Q4, at first with the approach of sharing information about bees more generally before product advertising which is planned to take place in year 3.

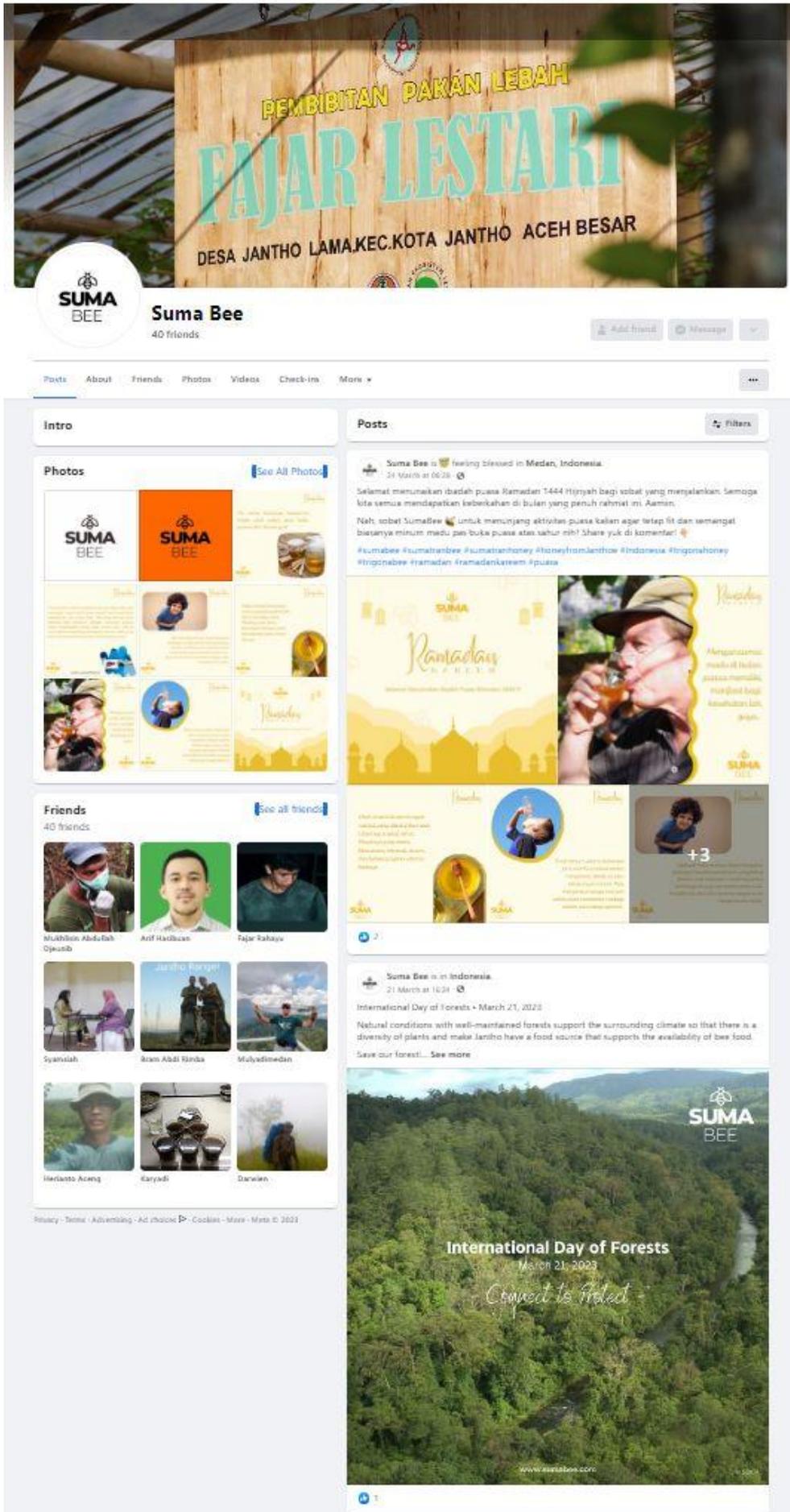
**Supporting evidence**



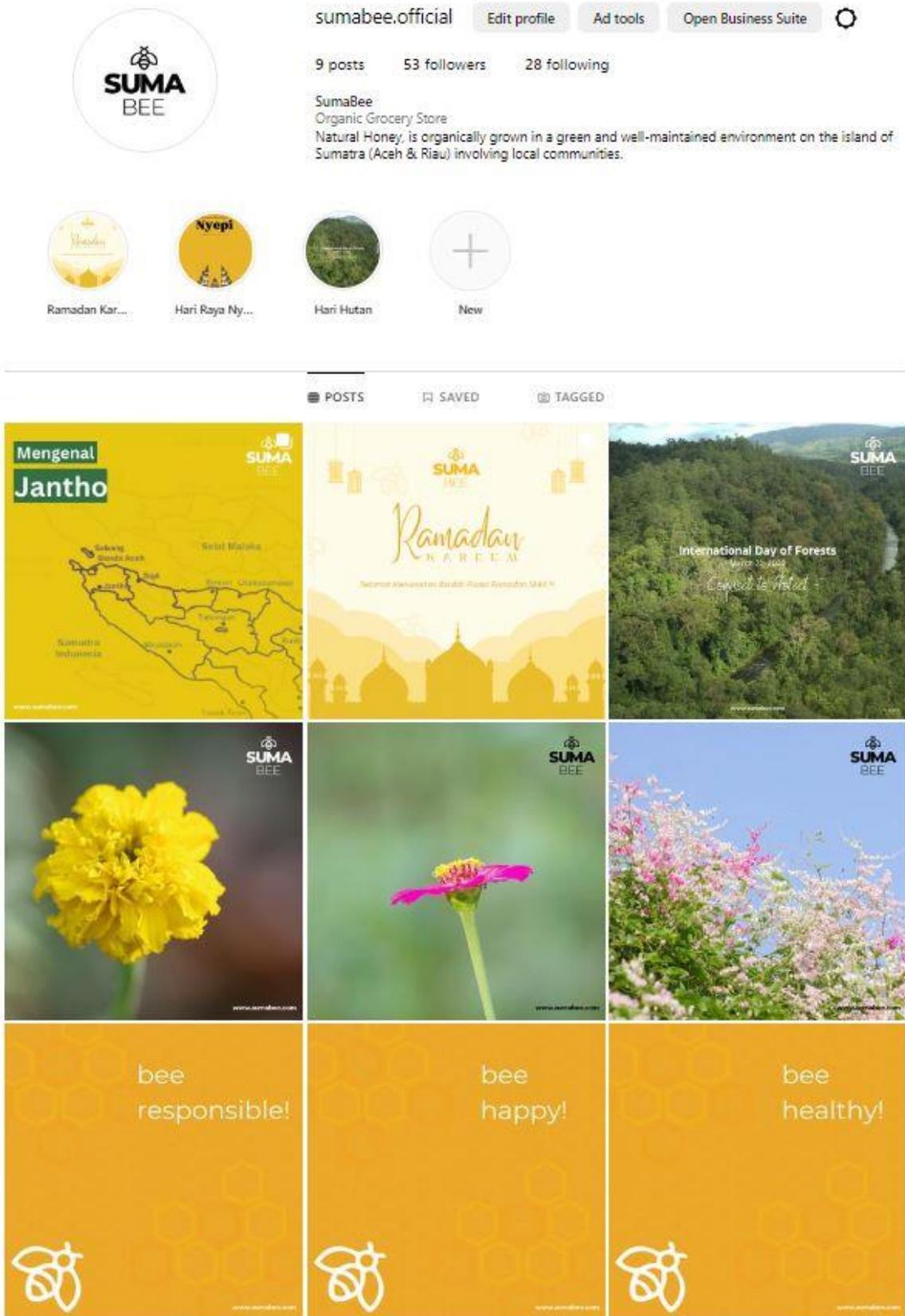
- 8. SumaBee brand and logo designs
- 9. PT Jatari Deed (Akte)



**Photo 21. Q3, Exhibition in Aceh Besar**



SumaBee FaceBook screenshot



Q4, SumaBee Instagram screenshot

**OUTPUT 5: The six project communities are informed and engaged in actions to protect local forest biodiversity including Sumatran orangutans, through conservation educational and awareness-raising activities.**

***Activity 5.1: Baseline survey measures existing knowledge, attitudes and practices on forest, orangutan and biodiversity protection***

***Activity 5.2: Module outline and structure developed***

***Activity 5.3: Pre and post-training surveys developed***

***Activity 5.4: Education activities take place across all project communities***

***Activity 5.5: Kemah Konservasi takes place***

As reported at the end of year 1, the baseline KAP survey on forest, orangutan and biodiversity protection was conducted for 295 households from eight different Jantho area communities. Analysis of the KAP survey took place in year 2 and insights from the communities' baseline knowledge levels were incorporated into module development. Pre and post training questions were also developed and incorporated into the educational modules focussing on the topics of ecosystem services, conservation, and sustainable use. Work was done to tailor modules to different groups of people including school ages community members and older groups and work to formalise language within the modules took place.

Active delivery of education to communities is not yet taking place meaning we are slightly behind on this aspect of the project plans. The focus on honing the modules, and subsequent delays in original delivery timeframe is due to the team having taken the strategic decision to spend more time preparing and ensuring the education programme is designed and comprehensive enough to meaningfully contribute to long-term, sustainable conservation impact in the Jantho area. Delivery will begin in earnest in year 3.

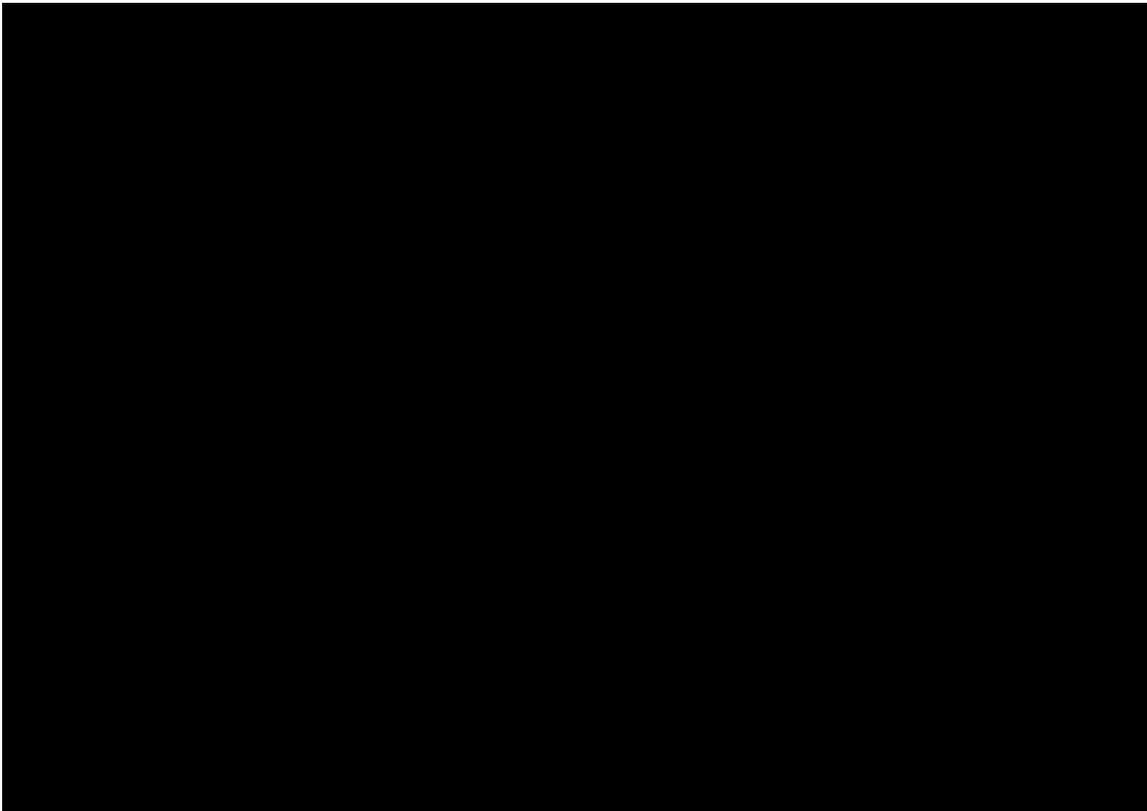
In the meantime, we have been seizing the chance for opportunistic delivery of educational pieces when receiving visitors at the Fajar Lestari Nursery. Visitors have included school and university groups, local government representatives, women's groups, and international NGOs WCS and FFI. Furthermore, four students from the local agricultural high school (2 women; 2 men) began a three-month internship and six undergraduate students (all women) from Syiah Kuala University completed 10-day placements at the Fajar Lestari Nursery in Q4. Visitors are not only interested to learn about beekeeping but they also keen to learn about the collaboration with forest-edge communities and how the ongoing relationship is maintained so it can be replicated in other places.

The Kemah Konservasi are planned for year 3, and we have been in touch with several potential collaborating partners for the activities.

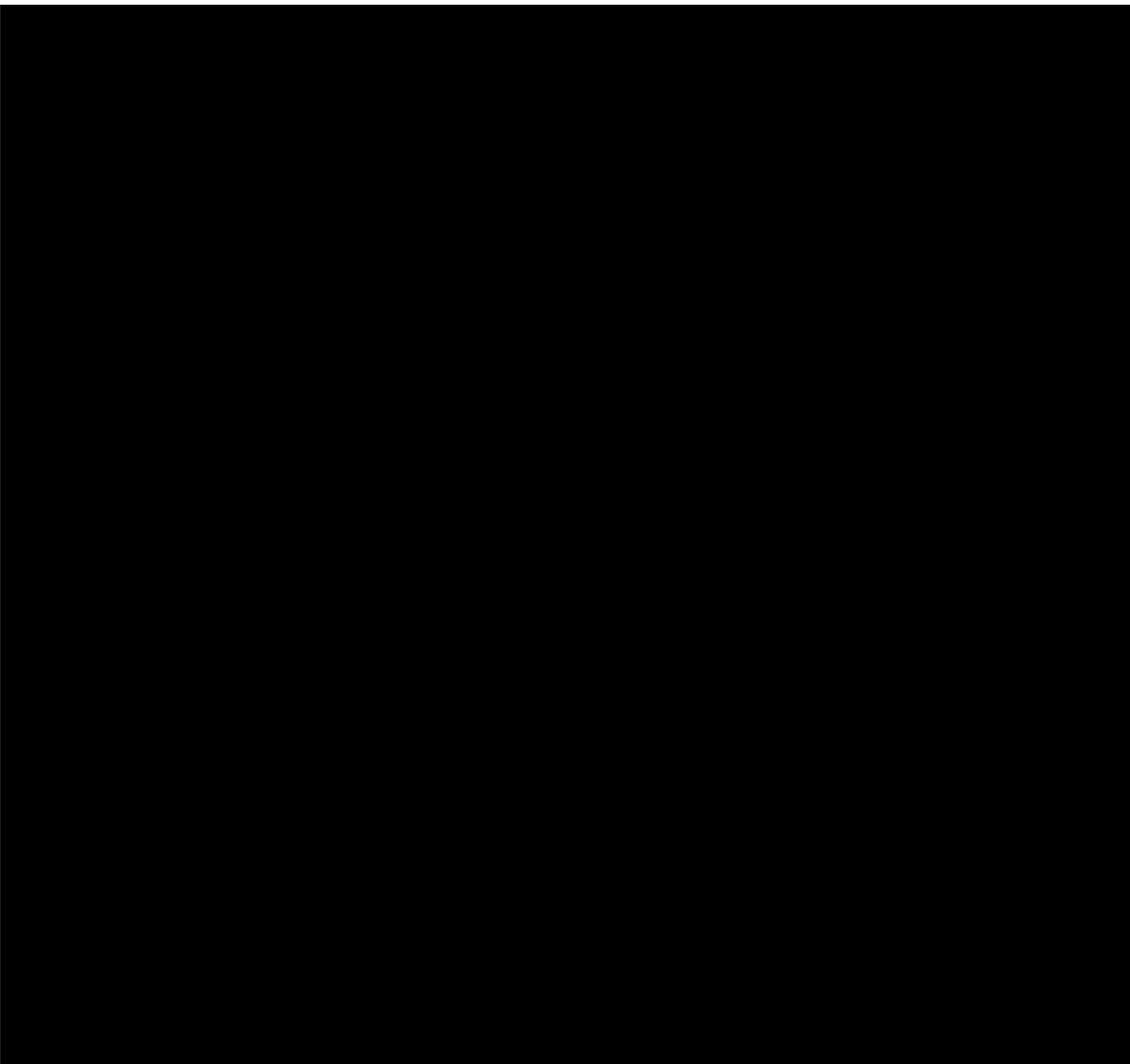
### **Supporting evidence**



10. Example questionnaire
11. Socio-economic and environmental education baseline report
12. Draft education modules



**Photo 22. Q3, ISBI students at Fajar Lestari Nursery**



**Photo 23. Agricultural High School, visit to Jantho**

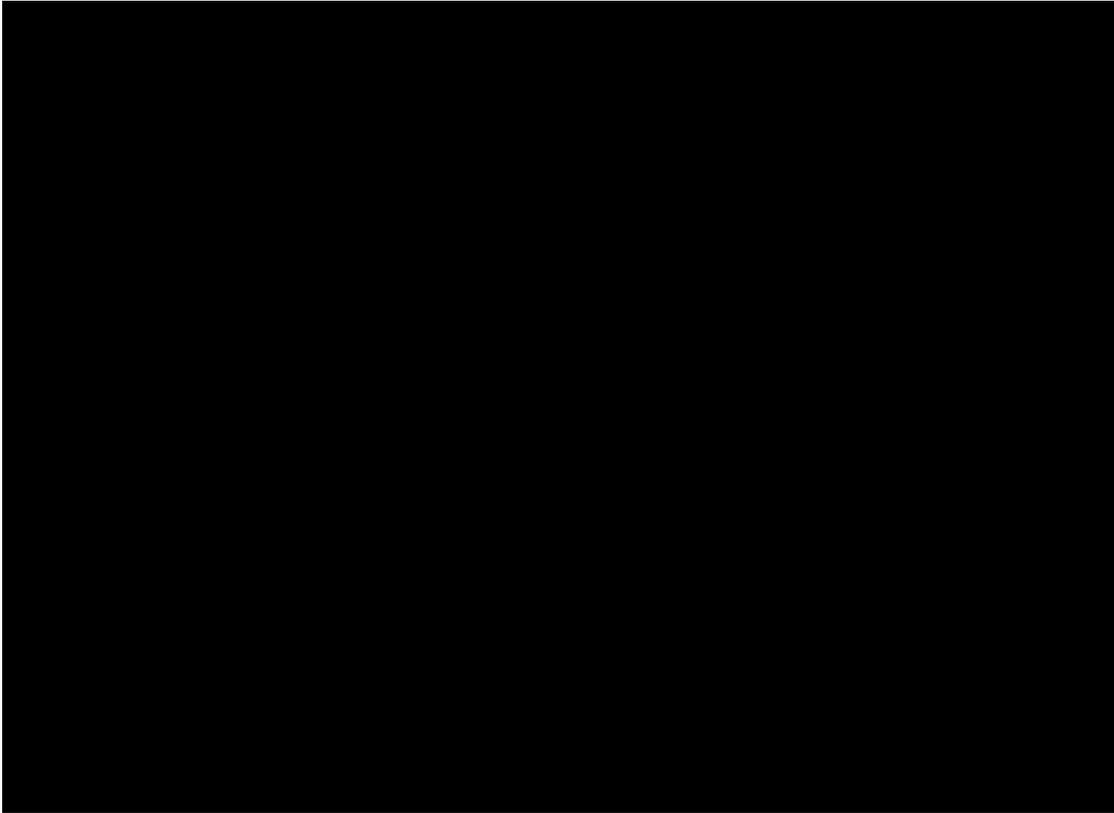


Photo 24. Q4, undergraduate students checking bee foraging plants

### 3.2 Progress towards project Outputs

**OUTPUT 1: Rehabilitated Sumatran orangutans are released & monitored in Jantho Reserve.**

Note to reviewer: In line with instructions on this reporting template, I have not repeated information given in a previous section but instead referenced that section. Much of the information given in section 3.1 above in order to present a full picture of the work is relevant to Output Indicators as well so please read these two sections together.

***Indicator 1.1: 24 rehabilitated or translocated Sumatran orangutans successfully released into Jantho forest by project end;***

Reference section 3.1 for information and supporting evidence. In summary, 10 orangutans were released in year 2 of the project. Overall, 12 orangutans have been released across years 1 and 2. This brings us exactly to target as we are 18 months (half-way) into the project term and halfway to reaching our end of project target of 24 releases.

***Indicator 1.2: Daily post-release orangutan monitoring to be conducted for 3 months (aligned to IUCN guidelines) for each orangutan released.***

Reference section 3.1 for information and supporting evidence. In summary, all released orangutans in year 2 were post-release monitored aligning with IUCN guidelines. Post-release monitoring is also conducted for orangutans released in previous periods that are encountered by the PRM team, as detailed in the activities section. In total over year 2, the PRM team monitored 48 orangutans over 437 days for a total of 3,734 observation hours, see table 2.

***Indicator 1.3: 100% of found far-ranging (previously released) orangutans are monitored as part of JRF missions throughout the project term.***

Reference section 3.1 for information and supporting evidence. In summary, 100% of far ranging orangutans encountered by JRF teams were monitored. This entails once direct encounter and 192 indirect encounters, see table 3.

**OUTPUT 2: Jantho Nature Reserve (16,000 ha) is protected by the JRF, throughout the project term and JRF capacity is increased.**

***Indicator 2.1: At least 66 JRF missions (22 per [calendar] year; average 10 days per mission) take place including SMART patrols, habitat monitoring, and biodiversity surveys are completed by project completion.***

Reference section 3.1 for information (table 4) and supporting evidence. In summary, 20 patrol missions took place in year 2, mission length was 10 days per mission. Fewer missions were undertaken in Q3 due to adverse weather conditions and the associated risks with teams entering the forest. This includes heavy rain which swells rivers making them dangerous to cross. This is normal within a tropical forest setting.

***Indicator 2.2: 100% of threats reported to BKSDA Aceh between Oct 1 2021-30th Sept 2024.***

Reference section 3.1 for information (table 4) and supporting evidence. In summary, 100% (70 out of 70) of threats encountered by patrol, teams were reported to BKSDA Aceh.

***Indicator 2.3: At least 6 JRF training events take place (2/calendar year) within the project period and Community Rangers are confident and using new skills as part of patrol missions.***

Reference section 3.1 for information and supporting evidence. In summary, in Q3, teams received training in mammal survey methodologies including theoretical and practical training in three different data collection methods; line transects, fixed point counts, and camera trapping. In Q4, teams received refresher SMART and survival skills training, and introduction training to drone surveys and mapping, bioacoustics monitoring and ecotourism. We have therefore met the year 2 target for this indicator.

**OUTPUT 3: The six project communities have strengthened livelihoods opportunities, capacities and collaboration through newly established, functioning and profitable honey cooperatives.**

***Indicator 3.1: (i) At least 4 community members (from two communities) are trained in professional, certified beekeeping by end of September 2022; (ii) a further 8 community members (from a further four communities) are trained in professional certified beekeeping by the end of September 2023.***

Reference section 3.1 for information and supporting evidence. In summary, four community members have now received intensive training and are part of the specialist 'Honey Team'. The current members come from the first two communities. Members from the second two communities are planned to join the team in early year 3. We are therefore on track with this indicator to date.

***Indicator 3.2: At least 100 beehives are provided to each of the two Y1 communities by the end of September 2022; and a further 100 beehives per community are provided to each of the additional four Y2 communities by end of September 2023.***

Reference section 3.1 for information and supporting evidence. In summary, 308 beehives have been procured and distributed to communities to date. We are therefore on track with this indicator to date.

***Indicator 3.3: Two honey cooperatives (minimum 20 households/cooperative) are established, and training provided in business management and operations by end of September 2022; and a further four honey cooperatives (minimum 20 households per cooperative) are established, and training provided in business management and operations by the end of September 2023.***

Reference section 3.1 for information and supporting evidence. In summary, four community groups each with at least 20 household members have been formed to date and have been provided with a variety of training and are at different stages of development (for details see activity section). We are therefore on track with this indicator to date.

**Indicator 3.4: (i) Cooperative rules and processes are established, (iii) conservation contracts signed between YEL and each cooperative by the end of September 2023 (2 initial communities) and project end (4 further communities).**

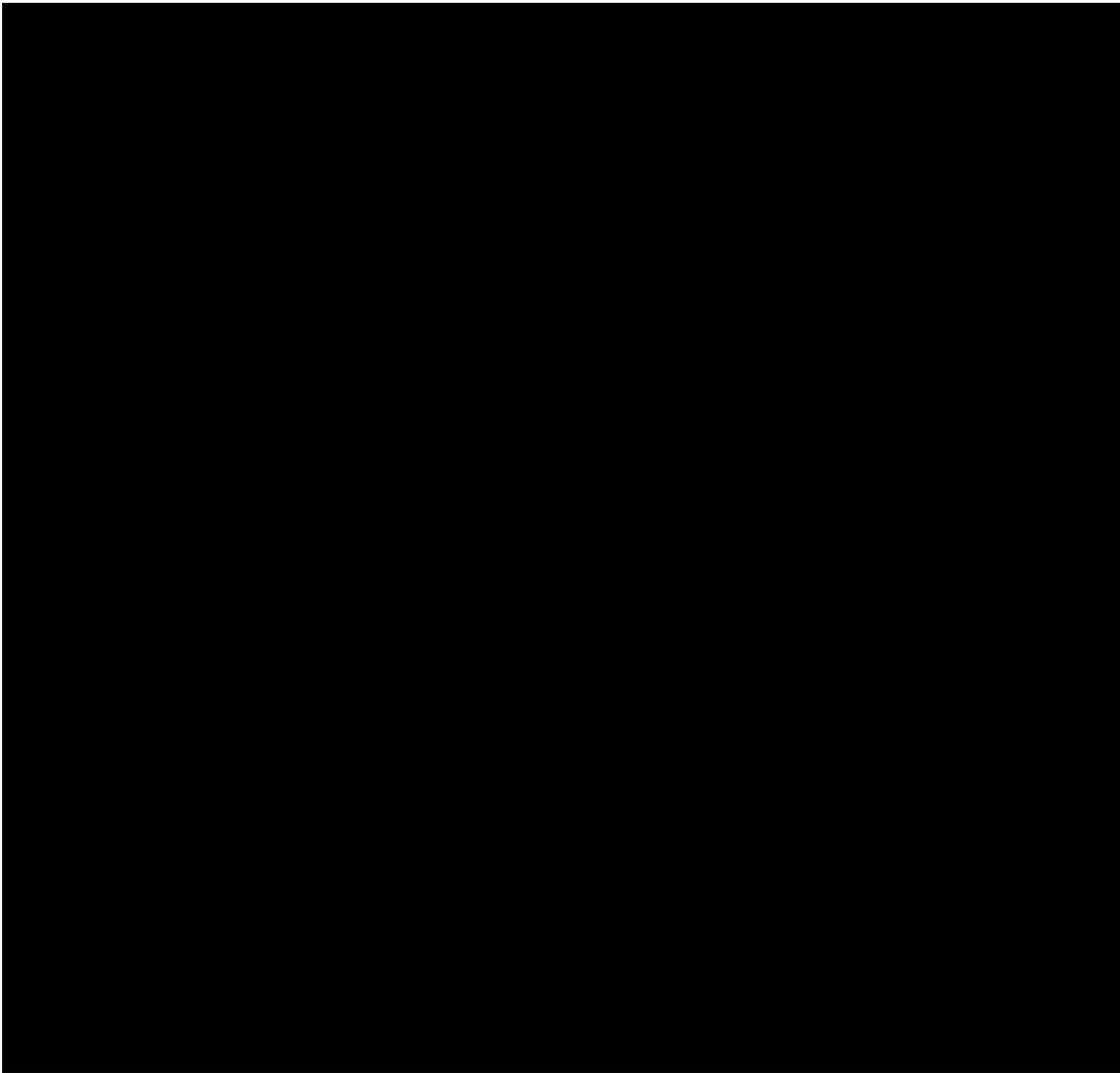
Reference section 3.1 for information and supporting evidence. In summary, see table 5, we are on-track with this indicator to date.

Village Name	Community beekeeping group formed	Leadership positions elected	Articles of Association and other rules developed	Legal Status established
Jantho Baru	Yes	Yes	Yes	Yes (name: Rumah Linot)
Jantho Lama	Yes	Yes	Yes	Yes (name: Linot Jantho)
Jalin	Yes	Yes	Yes	Yes
Gampong Weu	Yes	Yes	Not yet	Not yet

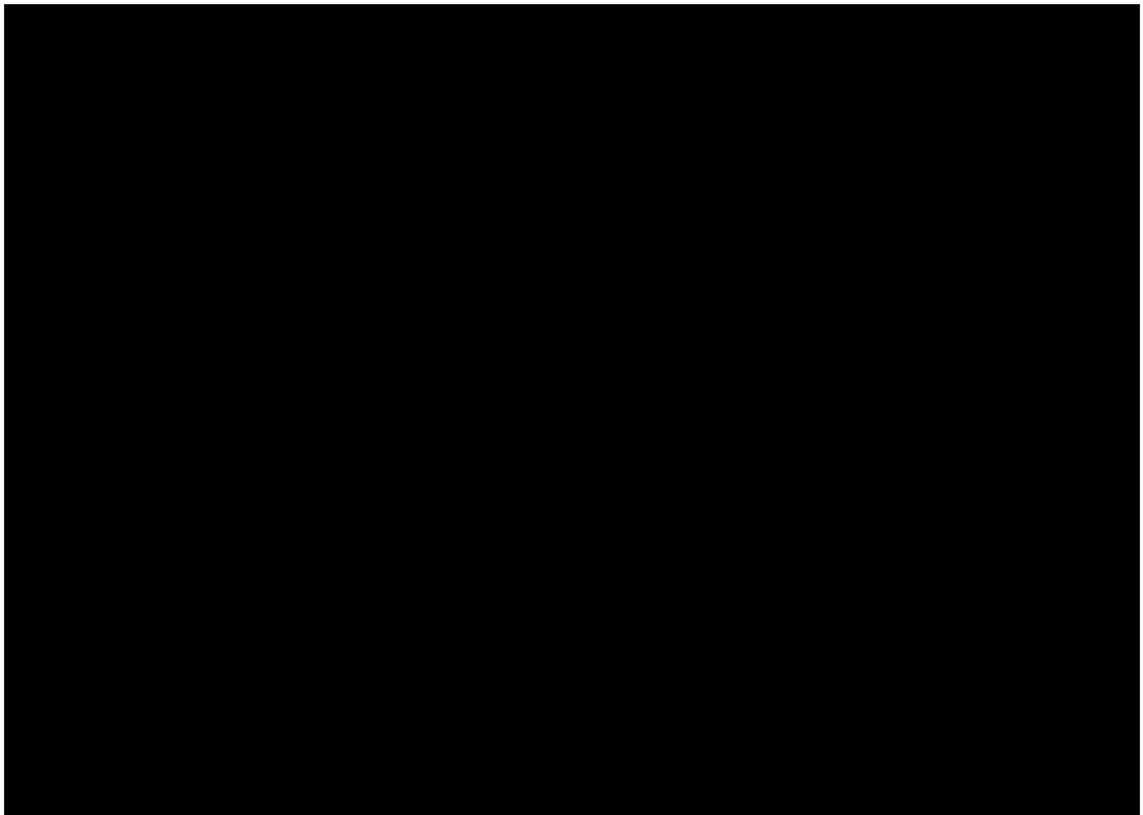
**Table 5. Community group development stages, year 2.**

**Indicator 3.5: Each honey cooperative produces a minimum of 1 tonne of quality honey annually, by project end.**

Reference section 3.1 for information and supporting evidence. In summary, 132 kg of honey was harvested in year 2.



**Photo 25. Q2, sharing the harvest**



**Photo 26. Q4, Community training and group development in Gampong Weu**

**OUTPUT 4: YEL-owned conservation enterprise ‘SumaBee’ is established, the brand developed and marketed.**

***Indicator 4.1: At least 2 tonnes of quality honey are purchased (by SumaBee) from the honey cooperatives by the end September 2023; at least 6 tonnes of quality honey are purchased (by SumaBee) from the honey cooperatives by project end.***

This indicator is set for the future and so we will report on it in the next reporting period. For progress to date Reference section 3.1 for information and supporting evidence. In summary, 132 kg of honey has been harvested and 95 kg put out for sale into the local market with 100% of the 95 kg sold!

***Indicator 4.2: At least 2 tonnes of quality honey are processed and packaged by SumaBee by the end of September 2023; at least 6 tonnes of quality honey are processed and packaged by SumeBee by project end.***

This indicator is set for the future and so we will report on it in the next reporting period.

***Indicator 4.3: The SumaBee products (2-4 SKUs 60g – 450g) and brand is developed and digitally marketed in line with the SumaBee business planning.***

Reference section 3.1 for information and supporting evidence. In summary, SumaBee brand development is well underway with designs established and social media marketing already underway.

***Indictor 4.4: SumaBee products are available through at least 3 online, direct to consumer platforms by the end of September 2023.***

Reference section 3.1 for information and supporting evidence. In summary, social media marketing has begun and will be fully developed in year 3 alongside presence on direct to consumer platforms.

***Indicator 4.5: SumaBee realises a per item margin of \$3 USD per kg of honey, by project end.***

We will report on this indicator at project end.

**OUTPUT 5: The six project communities are informed and engaged in actions to protect local forest biodiversity including Sumatran orangutans, through conservation educational and awareness-raising activities.**

***Indicator 5.1: At least 3 community education modules are developed, including presentations and interactive digital media (videos, photos, etc) by end of September 2022. Topics include ecosystem services, conservation and sustainable use***

Reference section 3.1 for information and supporting evidence. In summary, module development continued throughout year 2 incorporating community knowledge baselines levels gleaned from the KAP survey and tailoring language to different community groups. We are off track with this indicator but aim to catch up in year 3.

***Indicator 5.2: At least 600 people (minimum 50% women) in 6 communities participate in 5.1 module delivery activities by end of project (End of September 2022: Target 100 people; End of September 2023: Target 500 people (cumulative); end of project: Target 600 people (cumulative)***

Reference section 3.1 for information and supporting evidence. We have not yet begun delivery of community education in earnest (although opportunistic education delivery is taking place, Reference section 3.1). We are therefore off track with this indicator (Reference section 3.1 for justification) and will aim to catch up in year 3.

***Indicator 5.3: 100 local youths (across 6 villages neighbouring Jantho) are inspired and unified as forest protectors through “Kemah Konservasi” training by project end. Training topics include tropical rainforest, endangered species, sustainable use of natural resources, threats to biodiversity.***

Kemah Konservasi are scheduled for years 3 and 4.

### **3.3 Progress towards the project Outcome**

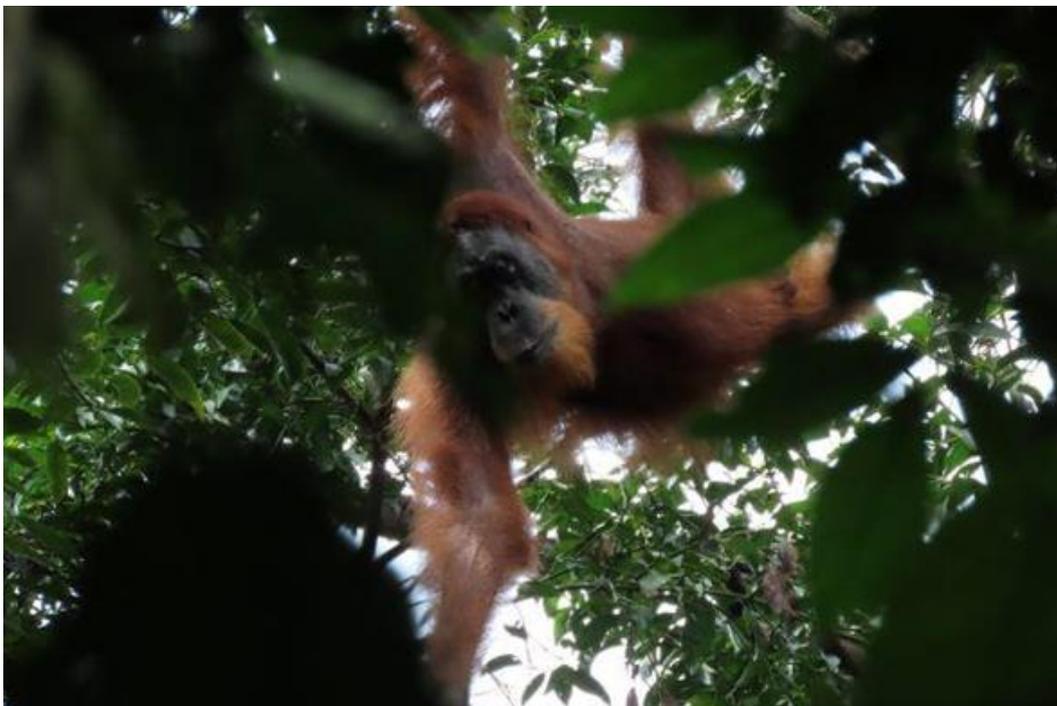
**OUTCOME:** The Jantho orangutan population is viable, with Jantho Nature Reserve protected and illegal activities reduced; aided by strengthened local environmental stewardship and enhanced livelihoods through profitable, sustainable honey enterprises

**0.1: Jantho orangutan population increased by at least 17% (from 138 to 162 individuals), reaching and exceeding the minimum viable orangutan population size, by project end**

Reference activities and outputs sections for information and supporting evidence. In summary, 10 orangutans were released in year 2 of the project, equating to a 7.14% increase over the year 2 period. Overall, 12 orangutans have been released across years 1 and 2. This brings us exactly to target as we are 18 months (half-way) into the project term and halfway to reaching our end of project target of 24 releases. From the baseline of 138 individuals, at the end of year 2 we had released 150 orangutans in Jantho. This equates to an 8.69% increase since the start of the project.



**Photo 26. Kiko, Kluet’s infant**



**Photo 27. Unflanged male (far-ranging) encountered by JRF patrol team**

**0.2: (i) 25% reduction in annual snares/traps encounter rate per kilometre patrolled across the entire Jantho Nature Reserve from the baseline 0.04/km (2017 - 2019 average); by project end; (ii) 75% reduction in annual snares/traps encounter rate per kilometre patrolled within the critical central river valley area of Jantho from baseline of 0.04/km (2017 - 2019 average) by project end**

Indicators 0.2 (i) and (ii) relate to the threat from snares, across the entire Jantho Reserve and within the critical Central River Valley. Snare encounter rates for year 2 are detailed in table 6. Across the entire Jantho Nature Reserve in year 2 we had an encounter rate of 0.03 snares per km, this represents the target of a 25% reduction from baseline (0.04). In the Central River Valley area in year 2 we had an encounter rate of 0.02 snares per km, this represents a 50% reduction from baseline (0.04). As the project reached the halfway mark at the end of year 2, we are encouraged by these results.

<b>Year 2 quarter</b>	<b>Snares/km Jantho overall</b>	<b>Encounter rate</b>	<b>Snares/ km Central River Valley</b>	<b>Encounter rate</b>
Q1	12/ 223 km	0.05	2/ 91 km	0.02
Q2	0/ 179 km	0	0/ 16 km	0
Q3	3/ 120 km	0.03	2/ 50 km	0.04
Q4	9/ 216 km	0.04	0/ 15 km	0
<b>Year 2 overall</b>	<b>24/ 738 km</b>	<b>0.03</b>	<b>4/ 172 km</b>	<b>0.02</b>

**Table 6. Snare encounter rates, year 2.**

**0.3: (i) The average annual number of VIIRS Fire Hotspots across the entire Jantho Reserve over the three-year project timeframe is at least 25% lower (10.8 or fewer) than baseline (14.4; 2012-2020 average) (measured at project end). (ii) The average annual number of VIIRS Fire Hotspots within the critical central river valley area of Jantho over the three-year project timeframe is at least 75% lower (3.6 or fewer) than baseline (14.4; 2012-2020 average) (measured at project end)**

Indicators 0.3 (i) and (ii) relate to the average annual number of Fire Hotspots across both the entire Jantho Reserve and the critical Central River Valley. This indicator measures the cumulative alerts over the full project time period and therefore will be reported at project end. In

year 2, there were two VIIRS Fire Hotspot alerts, one in Q1 and one in Q2, both were from within the Central River Valley area. As reported in the year 1 annual report, there were no VIIRS Fire Hotspots in the first year<sup>5</sup>. This is normal compared to previous years measured back to 2012.



Photo 28. Q2 Forest fire in a savanna area of Jantho, early July 2022

**0.4: (i) 25% reduction in canopy cover disturbance across the entire Jantho Reserve from a baseline of 1.8 hectares/year (baseline 1.8; 2002-2019) by project end; (ii) 75% reduction in canopy cover disturbance within the critical central river valley area of Jantho from a baseline of 1.8 hectares/year (baseline 1.8; 2002-2019) by project end**

Indicators 0.4 (i) and 0.4 (ii) relate to canopy cover disturbance. GLAD-L alerts and hectares covered for year 2 are detailed in table 7. Overall, in year 2, we have seen 0.613 ha of canopy cover disturbance and none of this has been from the Central River Valley area. This represents an over 50% reduction from baseline for the full Jantho Reserve at this point. However, we will fully report on this indicator at project end but as the project reached the halfway mark at the end of year 2, we are encouraged by these results. For an illustration of Jantho forest loss over the past 20 years see figure 2 below.

Year 2 quarter	No. of GLAD-L alerts	Hectares (Ha)	No. of alerts from within Central River Valley
Q1	2	0.153 ha	0
Q2	4	0.307 ha	0
Q3	0	-	0
Q4	2	0.153 ha	0
<b>Year 2 overall</b>	<b>8</b>	<b>0.613 ha</b>	<b>0</b>

Table 7. GLAD-L alerts and hectares, year 2.

<sup>5</sup> Year 1 of the project was over a period of six months and fell within the wet season and therefore year 2 reports on the project’s first dry season.

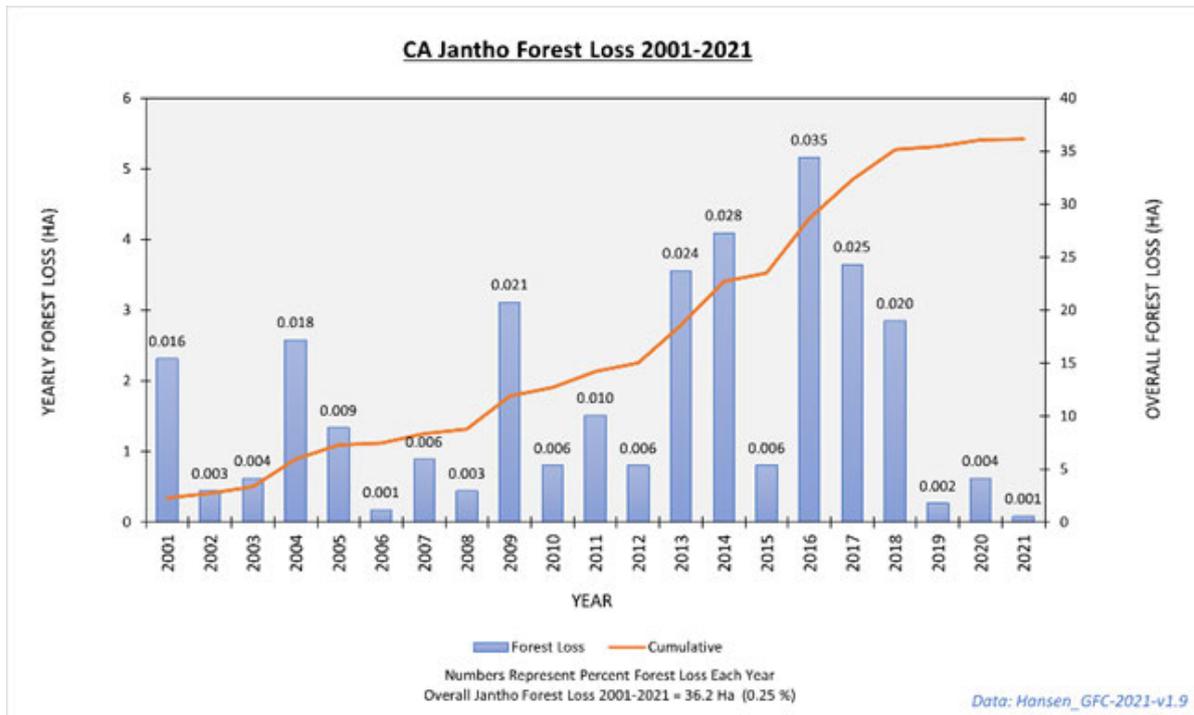


Figure 2. Forest loss within Jantho 2001 - 2021

**0.5: Average household income of 120 honey cooperative members increases by at least 18% (Baseline: \$1,967) % by project end**

We will report on this indicator at project end. While some initial honey sales have taken place to the local market (Reference section 3.1 for details), and the income from sales were split amongst cooperative members from the first two groups as per agreed benefit sharing mechanisms, the amounts received by households were nominal (data to be reported at year 2 half year report). Once harvesting is more regular and yield volumes consistent, we will be able to report more meaningful data for this indicator. Community members, however, were excited and encouraged even though income potential has yet to be realised, it was commented that beekeeping work is far less strenuous than other local livelihood activities such as goat rearing.

**0.6: Knowledge, attitudes, and practices (KAP) show increased support for biodiversity conservation in all six communities, by project end**

To be reported at project end.

**3.4 Monitoring of assumptions**

**OUTCOME Assumptions:**

*PanEco will continue to have permission to rescue and release orangutans in Jantho Pine Forest Nature Reserve (this relationship has existed for 10 years, is part of ongoing agreements for collaboration and we see no reason why this should cease).*

The SOCP (partnership programme run by PanEco and YEL) maintains permission to rescue and release orangutans at Jantho, under MoU the Acehese Provincial Department of Natural Resources and Ecosystem Conservation.

*COVID-19 circumstances or government restrictions do not impede the release of orangutans into Jantho.*

No impacts in year 2 to report

*Jantho will continue to receive protection under Indonesian law, and our partnerships with BKSDA and the Indonesian Government's Directorate General of Natural Resource and*

*Ecosystem Conservation will continue (we see no reason why this should cease and have provided a government support letter).*

No changes to report.

*Fires within Jantho and their severity, although ignited by people, can be impacted by the weather and if we have particularly wet or dry years then this indicator could be skewed. However, we have opted to measure two other additional indicators of conservation outcomes in Jantho (frequency of 'threat signs' and deforestation rate) and therefore we will be able to robustly track project impact even in the case of weather skewed fire data.*

No changes to report.

*The impact of the COVID-19 pandemic on livelihoods does not outweigh the desired project impacts; we have made conservative targets as part of the project to mitigate against this risk.*

At this time, this assumption is appearing to hold true.

### **OUTPUT 1 Assumptions**

*Operational permissions maintained and considerations around COVID-19.*

See above.

*COVID-19 restrictions or safety concerns do not impede monitoring or patrols in Jantho. Most of 2020 was disrupted due to COVID-19 and necessary biosecurity measures related to the resident orangutan population. However, we expect to be functioning normally again by July 2021.*

As above, the COVID-19 impact has remained relatively minimal.

### **OUTPUT 2 Assumptions**

*COVID-19 restrictions or safety concerns do not impede monitoring or patrol plans in Jantho. Most of 2020 was disrupted due to COVID-19 and necessary biosecurity measures related to the resident orangutan population. However, we expect to be functioning normally again by July 2021.*

As above, the COVID-19 impact has remained relatively minimal.

*The total mission numbers are calculated by an average two missions per month taking into account occasions such as Ramadan necessary adjustments to schedules will need to be made.*

The only adjustment to patrolling schedules was in Q3 relating to adverse weather conditions.

### **OUTPUT 3 Assumptions**

*Households continue to maintain interest and willingness to participate in honey-enterprise activities, including willingness to support and agree to rules and contracts developed through a participatory process with communities.*

Interest and willingness have been shown as expected.

*PanEco maintains honey specialist consultants (who have supported SOCP in business planning).*

The project has maintained the specialist consultant support (with marketing and branding)

*Market research conducted by the specialist consultant is accurate of the current market situation.*

To be reported on later in the project.

#### **OUTPUT 4 Assumptions**

*600 beehives (100 in each of the six project communities) are producing at least 6 tonnes of honey annually by the end of year 3 - this assumes 9 kilograms per beehive, which is a modest, achievable amount based on our bee-keeping research and technical expert input.*

This may be adjusted based on the difference in species yields between *Trigona* sp. and *A. mellifera*.

*We assume that we will be able to draw on YEL's existing business expertise, including supply chain networks for processing and packaging developed through its other successful enterprise initiatives, this is in combination with the expertise of Stefan Mai, the specialist honey business consultant we are working with for this project.*

Realised as expected.

#### **OUTPUT 5 Assumption**

*Communities (including youth) are willing and able to participate in our conservation activities. SOCP maintains existing relationships with communities, and we are confident there will be significant interest, particularly in conjunction with cooperative activities.*

No change.

### 3.5 Impact: achievement of positive impact on biodiversity and poverty reduction

**Impact Statement:** Multiple, viable Sumatran orangutan populations safely thrive in protected, sustainably managed forest habitat across Sumatra, stewarded by local communities enriched by sustainable, eco-friendly livelihoods, with biodiversity conservation highly-prioritised across Indonesia.

For the long-term survival of Sumatran orangutans, there must be multiple, dispersed, viable and effectively protected populations within Sumatra (Output 1 & 2). To effectively protect these populations, local communities must have sustainable livelihoods and be engaged, actively supporting and ultimately at the forefront of the long-term conservation of Sumatran orangutans and their forest habitat (Outputs 3-5).

Through orangutan reintroduction into Jantho (Output-1), this project is contributing directly to the creation of multiple, dispersed, viable Sumatran orangutan (*Pongo abelli*; Critically Endangered) populations. To achieve effective protection of Jantho, our two-fold approach includes direct forest protection action to deter illegal activities, achieved through JRF patrols and monitoring (Output 2), thereby empowering the local people to lead Jantho protection efforts. This is complemented by sustainable community development and education (Output 4 & 5).

This project is working to economically empower four (and ultimately six) communities in Jantho (those situated closest to the reserve border and to which we attribute unsustainable activities found within Jantho), who are primarily rice farmers and are forest-adjacent, vulnerable communities. Our theory of change is that by investing in local communities to build sustainable income sources linked to forest conservation (Outputs 3 & 4) then individuals are less likely to fall back on illegal activities within Jantho Reserve. Conservation aims are further strengthened by conservation contracts with communities (part of Output 3) and environmental education (Output 5).

Empowerment of the six project communities to earn long-term sustainable income will result in robust livelihood impacts. The expected yield per community (>100 hives per community) will be a minimum 1 ton<sup>6</sup> annually from the first year onwards of beekeeping. This will generate at least \$10,000 USD annually per community, representing an average \$500 additional sustainable annual income per household (there will be a minimum of 20 households per cooperative: 120 households in total), and an average 25% increase from baseline average household income. While upskilling community members in professional beekeeping, cooperative management and operations, these enterprises offer a more sustainable future, while disincentivising fall-back on illegal activities.

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<sup>6</sup> Beehive yields and also estimated income from honey sales will be affected by the final species composition of colonies and the ratio of *Trigona sp.* to *A. mellifera*. Once we are clearer on the feasibility of *A. mellifera* in Jantho we will circle back to look at related project targets.

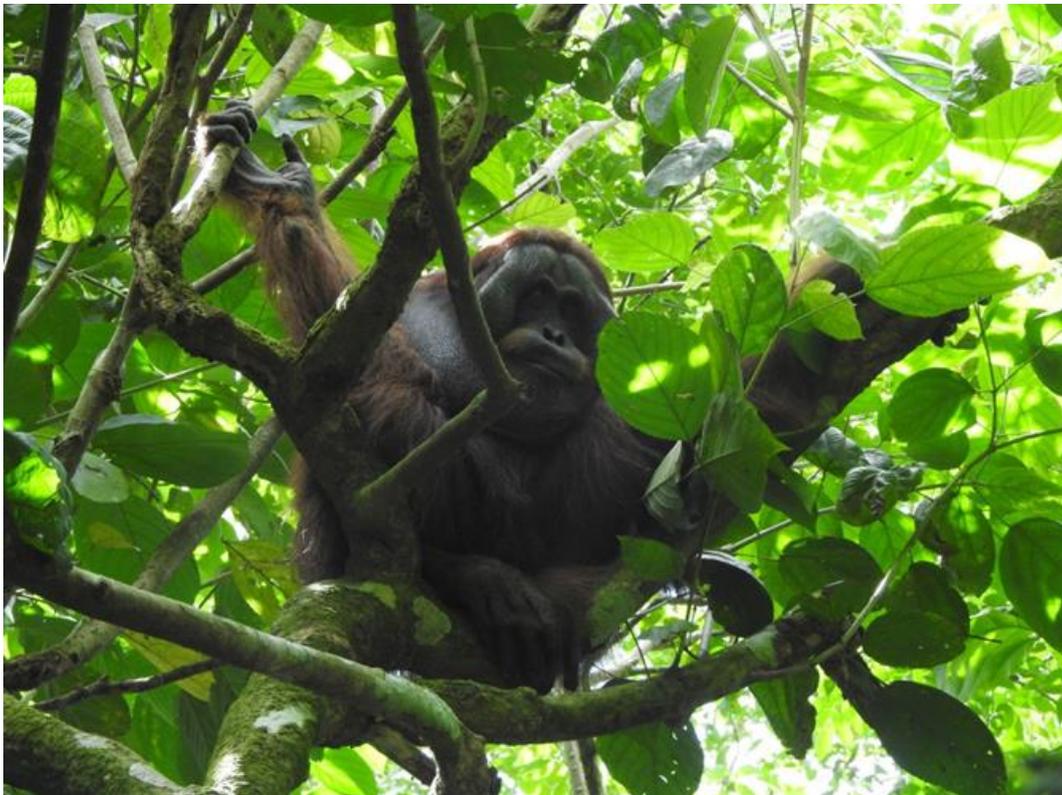


Photo 29. Q3, Asel (released year 1) being monitored after his release

#### 4. Project support to the Conventions, Treaties or Agreements

By achieving our project outcome “The Jantho orangutan population is viable, with Jantho Nature Reserve protected and illegal activities reduced; aided by strengthened local environmental stewardship and enhanced livelihoods through profitable, sustainable honey enterprises” – and particularly Project Outputs 1 & 2, we will support:

**CBD Article 8. In-situ Conservation (d)** “Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings”; and (f) “Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies.”

Through project Output 3 & 4 (Honey Enterprises) we are supporting: **CBD Article 8 (e)** “Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas.”

Through project Output 2 (Forest Monitoring and Protection) we are supporting: **CBD Article 10. Sustainable Use of Components of Biological Diversity (d)** “Support local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced.” Through project Output 5 (Community Conservation Education) we will support **CBD Article 13. Public Education and Awareness (a)** “Promote and encourage understanding of the importance of, and the measures required for, the conservation of biological diversity, as well as its propagation through media, and the inclusion of these topics in educational programmes.”

#### CITES

Sumatran orangutans (*Pongo abelii*) are a CITES Appendix I listed species. This project enables Sumatran orangutans that have become victims of illegal wildlife trade to be rehabilitated and

ultimately have a long-term conservation impact towards the survival of the species by forming vital new populations.

## **UNFCCC**

Through Output 2, in line with Article 4, (d) commitments: "Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests, and oceans..."

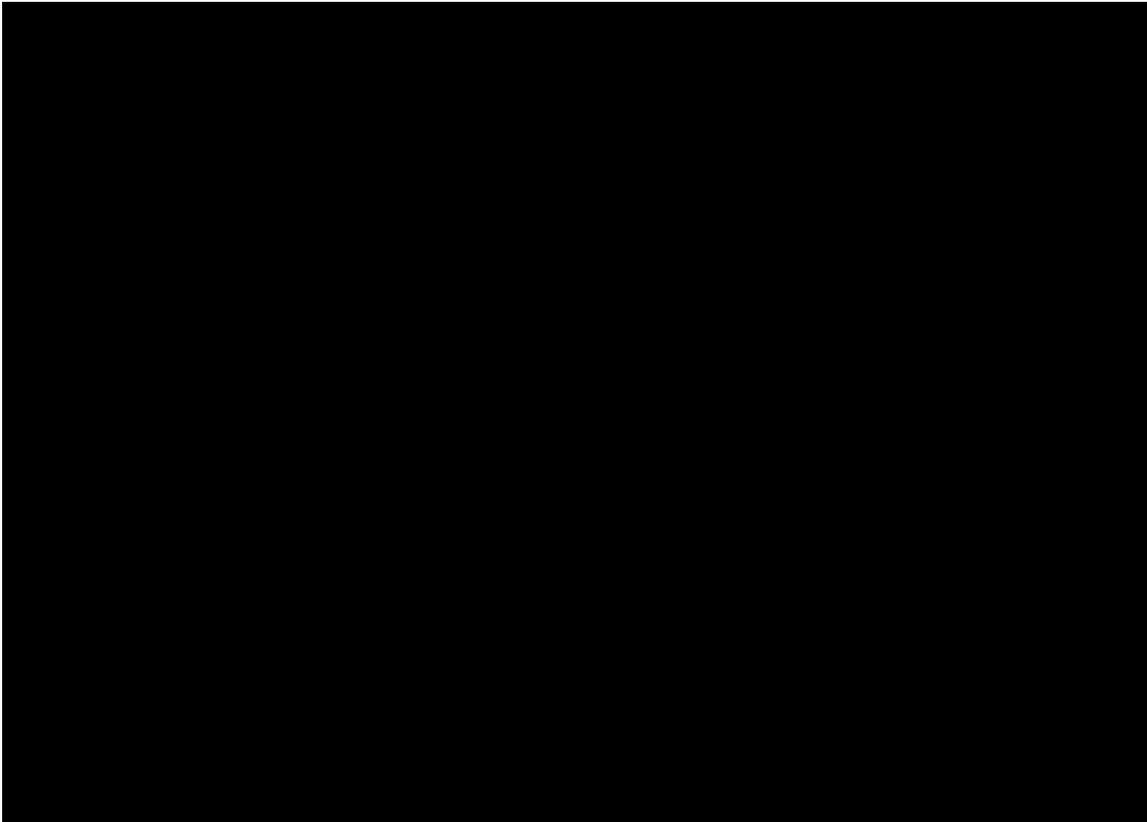
The Ministry of Environment and Forestry is the Indonesian CBD, CITES, and UNFCCC national focal point. The SOCP is working in close collaboration and under a Memorandum of Understanding with the Ditjen of Natural Resources and Ecosystem Conservation, a Directorate General under the Ministry of Environment and Forestry. In addition, the Jantho programme is run under its own MoU between YEL and the Acehese Provincial Department of Natural Resources and Ecosystem Conservation, and liaison regarding this specific project is planned.

## **5. Project support to poverty reduction**

Please reference question 3.5. Direct poverty reduction-related outcomes are anticipated to be realised through activities embedded across the project, including those for JRF community rangers and honey enterprise cooperative members in Jantho-adjacent communities. This includes:

- Our bee-keeping enterprises (Outputs 3 & 4) are empowering vulnerable people to increase their household incomes. We are targeting vulnerable people carrying out unsustainable activities in Jantho, including those economically impacted by the COVID-19 pandemic.
- The forest monitoring and protection activities (Outputs 1 & 2, including activities carried out by the JRF) is providing employment and skills development to local people living around Jantho. Not only does this initiative provide JRF members with a livelihood and income source to support themselves and their family, but it is also empowering them to be essential environmental stewards and critical protectors of the forest and orangutans.

In terms of notable achievements, the project was able to make significant progress with further developing honey enterprises during year 2 of the project (reported in section 3.1). As training and other activities progress and expand the honey enterprise establishment process, including reaching even more people, we are confident this will realise measurable livelihoods benefits to the people and communities participating as the project continues. Training activities were also able to further develop skills of JRF team members (as reported above), while also supporting their livelihoods that provide a critical project service i.e., implementing core project activities centred on orangutan and forest protection.



**Photo 30. Q3, community member in their rice paddy**

## **6. Gender equality and social inclusion**

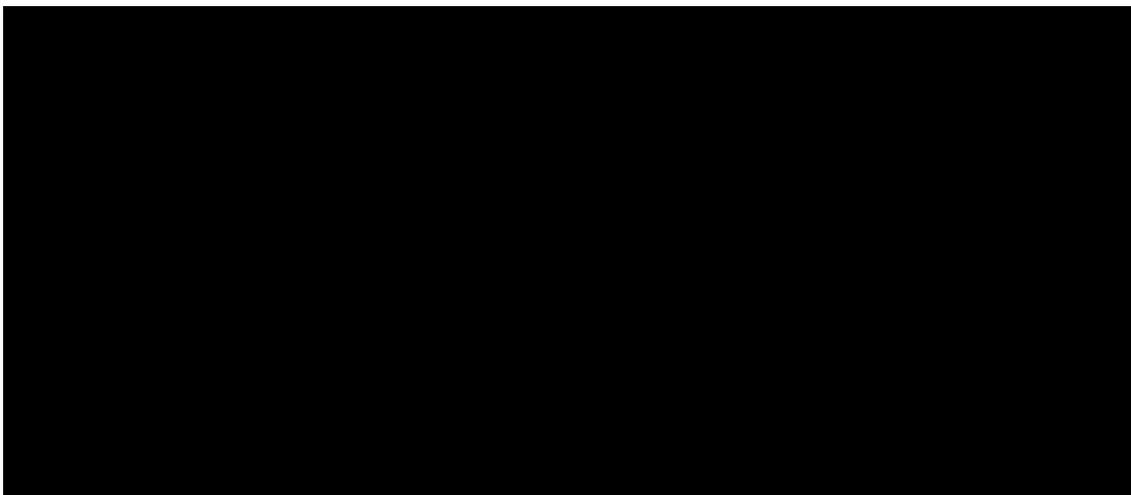
We are actively working to ensure women have equal opportunity to access training and empowerment opportunities. We are doing this by specifically scheduling training events on days and times that enable easier female participation. Furthermore, our staff's long-term relationship with these communities eases challenging gender dynamics within the Acehnese cultural context. We have also been specifically working with pre-existing housewife groups in the villages (connections built through pre-project education activities) to promote and encourage female participation in beekeeping training.

Likewise, for the educational delivery (Output 5) we will ensure the balanced participation of women and men, and girls and boys. Participant records will ensure disaggregated data by gender is collected and reported.

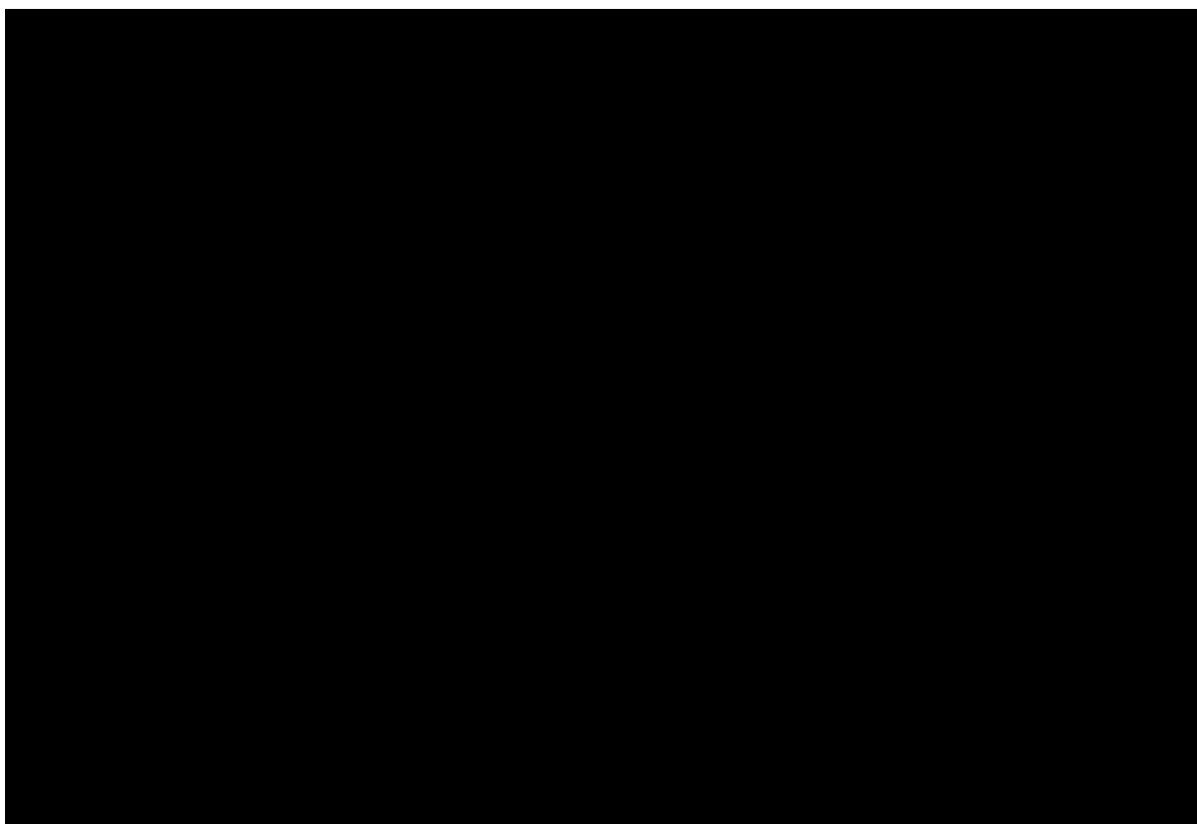
Our approach contributes to FCDO's strategic vision for women and girls, including economic and political empowerment, by supporting women's meaningful participation in community level cooperatives i.e., economic, decision-making structures. The project review will incorporate key evaluation questions exploring project effectiveness in achieving outcome level changes by gender, through incorporating Focus Group Discussions and/or Key Informant Interviews with both women and men.

A challenge the project is currently experiencing is that members of the more specialised 'Honey Team' are all male. The project team will go into year 3 mindful of this and assess ways to achieve more gender balance as new team members are added. Already several female group members have shown interest in becoming more involved with harvesting. In terms of participation at trainings and group meetings we are delighted to report that in year 2 we have achieved a 55% female attendance rate. Furthermore, in terms of group membership, male and female member numbers are similar with two of the groups having more women than men.

Please quantify the proportion of women on the Project Board <sup>7</sup> .	4 out of 7 people (57%) are women
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women <sup>8</sup> .	Both partners, PanEco and YEL, have a senior leadership that is 50% women



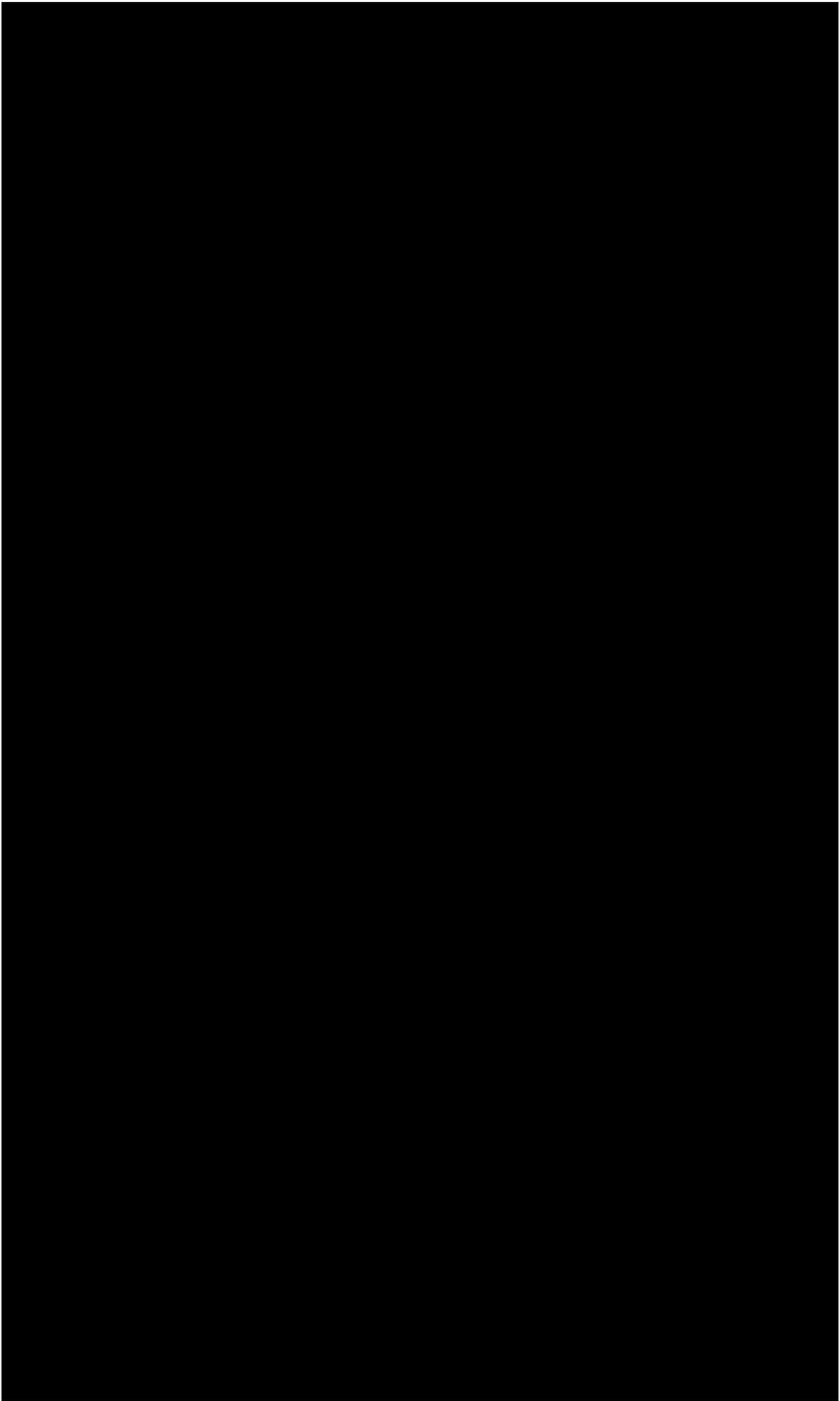
**Photo 31. Q3, Linot Jantho group meeting in the Fajar Lestari Nursery**



**Photo 32. Q3, Jalin group taking seedlings from the nursery to plant in their village area**

<sup>7</sup> A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.

<sup>8</sup> Partners that have formal governance role in the project, and a formal relationship with the project that may involve staff costs and/or budget management responsibilities.



**Photo 33. Q3, Ikbal, a Honey Team member, supporting Ibu Siti to harvest honey**

## 7. Monitoring and evaluation

As reported above in the Impact section, we have a clear theory of change, further defined by the connections across our activities and Output level indicators through to our Outcome indicators.

The project's indicators are detailed above in the Output and Outcomes sections, as well as below in our logframe. The project team uses our M&E results tracker (based on our M&E plan) as a core project management and reporting tool. PanEco holds overall responsibility for coordination, tracking, and recording of M&E data, while also providing support and guidance for good M&E practice.

The M&E results tracker (including the M&E plan) is a living document and revisited quarterly as part of PanEco-YEL check-ins and internal project reporting to determine if changes or updates are needed. While PanEco takes overall responsibility for the M&E plan, it is held as a Google Sheets document inside a shared GDrive folder entitled "Darwin Project Management" that YEL project staff have access to and is used as a central location for all project information.

## 8. Lessons learned

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

### Beehive Loss Challenges

We experienced the failure of four bee colonies (out of a total of 308 provided to the community group), two due to a long-tailed macaque attack and one was attacked by another wild stingless bee species (*T. laeviceps*) and one was attacked by black soldier flies. The loss of beehives is not unusual, but lessons have been incorporated to ways of working.

### Honey Quality and Quantity

Maintaining the quality of honey to a sustainable standard value will continue to be a key challenge. We have had success so far in increasing honey quality and quantity (as reported in section 3.1) but both are affected by several external factors including climactic and ecological conditions and so it is something that we will need to remain vigilant about.

### Environmental education

As reported above in 3.1 we have made progress with development of environmental education modules but are behind schedule in terms of delivery. Focus has been on appropriate adaption of material for different types of community group. Each group needs a different type of outreach with a different approach and focus to develop sustainable community-based conservation. The project team has learned that to develop the required level of specificity requires more time dedication than was initially planned for. The solution that has been developed is the recruitment of a new team member to focus exclusively on the community education aspects of the project. Recruitment will begin year 3, Q1.

## 9. Actions taken in response to previous reviews (if applicable)

The project recently underwent a mid-term review by NIRAS. Points raised in the AR1R were extensively discussed with the reviewers as part of the review process. Therefore, we have not included the relevant points from the AR1R with responses as part of this report. If NIRAS wish us to do so, then please let us know and we will be more than happy provide a separate document. Since the mid-term review in February, we have not received the review report. It would have been helpful when writing this annual report to have seen the mid-term review report and we look forward to receiving it soon.

## 10. Risk Management

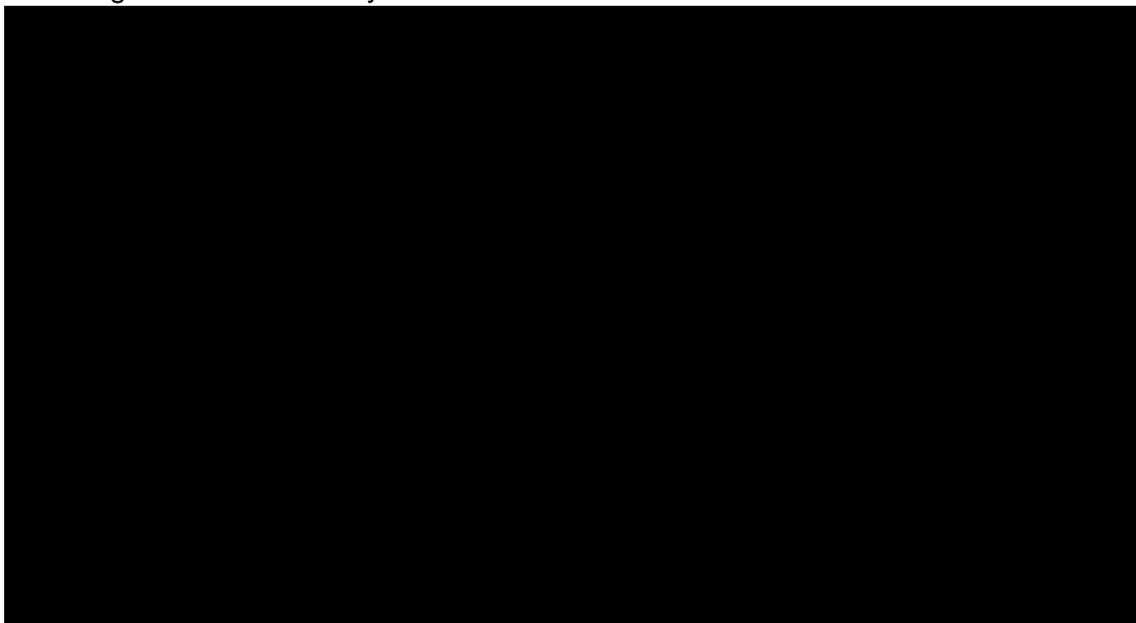
No new risks have arisen in the last 12 months that were not previously accounted for. The project does not keep a risk register.

## 11. Other comments on progress not covered elsewhere

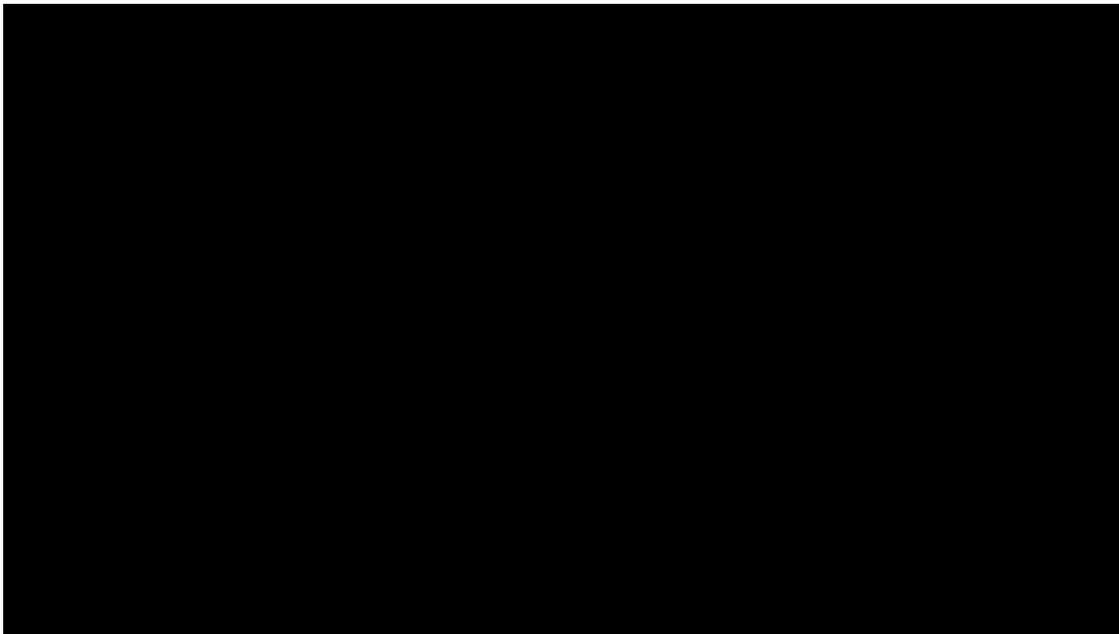
The Fajar Lestari Nursey (FLN) has become a place for high school students and undergraduate students to complete internships, as reported above in section 3.1. Furthermore, the FLN also serves as a place for informal education activities, for example, undergraduate students majoring in music do their exercises at the FLN combining string instrument and Aceh traditional percussion music known as Rapai. The FLN can now accommodate numerous activities not only camping and environmental activities but art and music too. The project team feel that this contributes to the overall goals of building long-term community stewardship for Jantho and the wider natural world.

Fajar, one of the core members of the Honey Team and owner of the FLN, visited an Eco Farm project in Bohorok, Bukit Lawang, North Sumatra. This Eco Farm project is another long-term initiative run by YEL. At the Eco Farm, Fajar worked together with senior staff who taught him about organic farming, how to make organic compost and integrate aspects of traditional farming into ecologically sustainable practices. The goal was to give Fajar some contacts, ideas, and insight into how to ecologically develop the FLN further in the future.

Fajar and several other community members also joined a community group in Timbang Jaya Village to learn Eco Print making using organic materials dyes and fabric. Fajar received training from the women group in the village. Fajar was very enthusiastic about Eco Printing and has plans to bring it to the community in Jantho.



**Photo 34. Q4, Fajar visiting YEL Eco-Farm in Bohorok**



**Photo 35. Q4, Fajar learns Eco Printing in Timbang Jaya village**

## **10. Sustainability and legacy**

The project is embedding approaches that work together to create sustainable, long-term change. For Outputs 1 & 2 (Jantho orangutan reintroductions and JRF forest protection), these initiatives are part of SOCP's long-term strategic priorities beyond the project lifetime and will carry on being run and funded by PanEco and YEL beyond the scope of this project as they are essential to ensuring Sumatran orangutan species survival. Accordingly, we will build on achievements made through this project while evolving and supporting similar activities in the future through a combination of new and existing partnerships and stakeholders dedicated to species conservation. We expect to retain many JRF members trained through this project over the long-term, while providing new opportunities for their continued professional development.

The project is establishing self-sustaining honey cooperatives and 'SumaBee' through YEL's business arm, both of which are designed to be managed for the long-term. The latter is rooted in a business model that will be tested and refined throughout the project cycle to ensure sustainability. We will provide on-going training and support to the communities to further develop the cooperatives beyond the project lifetime. YEL and PanEco will support SumaBee until profitability through unrestricted fundraising (of which we are confident based on previous years and forecasting); based on our business planning we expect profitability by project end.

## **11. Darwin Initiative identity**

The Darwin Initiative funding contributes to a larger programme, in concert with several other donors. However, as Darwin Initiative is the primary donor, we promote it distinctly in project posts and materials.

During year 2, posts about the project by PanEco have been:

- Instagram and Facebook: Three posts on each platform about the project, once on each platform using #DarwinInitiative
- Twitter: Three posts about the project one of them using #DarwinInitiative
- Two pieces of WebNews were published: one about the project mentioning "Darwin Initiative" and the other about the Mid-term Review mentioning "UK Aid".

## 12. Safeguarding

Has your Safeguarding Policy been updated in the past 12 months?	No
Have any concerns been investigated in the past 12 months	No
Does your project have a Safeguarding focal point?	Ian Singleton, Marcel Etterlin and Irena Wettstein
Has the focal point attended any formal training in the last 12 months?	N/a
What proportion (and number) of project staff have received formal training on Safeguarding?	None
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses.	
No	
Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify.	
No	

## 13. Project expenditure

Please expand and complete Table 1. If all receipts have not yet been received, please provide indicative figures and clearly mark them as Draft. The Actual claim form will be taken as the final accounting for funds.

**Table 1: Project expenditure during the reporting period (1 April 2022 – 31 March 2023)**

Project spend (indicative) since last Annual Report	2022/23 Grant (£)	2022/23 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				

Monitoring & Evaluation (M&E)				
Others (see below)				
<b>TOTAL</b>	<b>173,040</b>	<b>169,568.88</b>	<b>-2%</b>	

**Table 2: Project mobilising of matched funding during the reporting period (1 April 2022 – 31 March 2023)**

	Matched funding secured to date	Total matched funding expected by end of project
Matched funding leveraged by the partners to deliver the project.		
Total additional finance mobilised by new activities building on evidence, best practices and project (£)		

**14. OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes**

## Annex 1: Report of progress and achievements against logframe for Financial Year 2022-2023

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
<p><b>Impact</b></p> <p>Multiple, viable Sumatran orangutan populations safely thrive in protected, sustainably-managed forest habitat across Sumatra, stewarded by local communities enriched by sustainable, eco-friendly livelihoods, with biodiversity conservation highly-prioritised across Indonesia.</p>		<p>The newly created (since 2011; via releases and translocations) population of orangutans at Jantho now likely stands at over 150. Jantho communities have seen their first contribution to household income from sustainable produced honey sales.</p>	
<p><b>Outcome</b></p> <p>The Jantho orangutan population is viable, with Jantho Nature Reserve protected and illegal activities reduced; aided by strengthened local environmental stewardship and enhanced livelihoods through profitable, sustainable honey enterprises.</p>	<p>0.1 Jantho orangutan population increased by at least 17% (from 138 to 162 individuals), reaching and exceeding the minimum viable orangutan population size, by project end</p> <p>0.2 (i) 25% reduction in annual snares/traps encounter rate per kilometre patrolled across the entire Jantho Nature Reserve from the baseline 0.04/km (2017 - 2019 average); by project end; (ii) 75% reduction in annual snares/traps encounter rate per kilometre patrolled within the critical central river valley area of Jantho from baseline of 0.04/km (2017 - 2019 average) by project end.</p> <p>0.3 (i) The average annual number of VIIRS Fire Hotspots across the entire Jantho Reserve over the three-year project timeframe is at</p>	<p>10 orangutans were released in year 2 of the project, a 7.14% increase (from baseline of 140 at end of year 1).</p> <p>Overall, 12 orangutans have been released across years 1 and 2. From the pre-project baseline of 138 individuals, by the end of year 2 we had released 150 orangutans in Jantho. This equates to an 8.69% increase since the start of the project.</p> <p>(i) Snare encounter rate for Jantho overall in year 2 was 0.03. This meets the target of a 25% reduction from baseline (0.04)</p> <p>(ii) Snare encounter rate for the Central River Valley Area in year 2 was 0.02. This represents a 50% reduction from baseline (0.04).</p> <p>There were 2 VIIRS Fire Hotspot alerts in Jantho in year 2, both from within the Centra River Valley area during the dry</p>	<p>Continue to release orangutans at Jantho who are at an appropriate rehabilitation stage for release.</p> <p>Continued protection activities (patrolling) and monitoring of snare encounter rates.</p> <p>Continued protection and on-the-ground monitoring activities (patrolling) and monitoring of fires on the ground and also via VIIRS.</p>

	<p>least 25% lower (10.8 or fewer) than baseline (14.4; 2012-2020 average) (measured at project end).</p> <p>ii) The average annual number of VIIRS Fire Hotspots within the critical central river valley area of Jantho over the three-year project timeframe is at least 75% lower (3.6 or fewer) than baseline (14.4; 2012-2020 average) (measured at project end).</p> <p>0.4 (i) 25% reduction in canopy cover disturbance across the entire Jantho Reserve from a baseline of 1.8 hectares/year (baseline 1.8; 2002-2019) by project end. (ii) 75% reduction in canopy cover disturbance within the critical central river valley area of Jantho from a baseline of 1.8 hectares/year (baseline 1.8; 2002-2019) by project end.</p> <p>0.5 Average household income of 120 honey cooperative members increases by at least 18% (Baseline: \$1,967) % by project end.</p> <p>0.6 Knowledge, attitudes and practices show increased support for biodiversity conservation</p>	<p>season. This is normal compared to previous years measured back to 2012.</p> <p>In year 2, we saw 0.613 ha of canopy cover disturbance and none of this has been from the Central River Valley area. This represents an over 50% reduction from baseline for the full Jantho Reserve at this point.</p> <p>To be reported at project end. Household income has only been nominal to date due to the stage at which the project is at.</p> <p>To be reported at project end</p>	<p>Continued protection and on-the-ground monitoring activities (patrolling) and monitoring of deforestation alerts.</p> <p>Continued cooperative development and monitoring of income from honey sales</p> <p>Delivery and monitoring of educational activities</p>
<p><b>Output 1.</b> Rehabilitated Sumatran orangutans are released and monitored in Jantho Nature Reserve</p>	<p>1.1 24 rehabilitated or translocated Sumatran orangutans successfully released into Jantho forest by project end.</p> <p>1.2 Daily post-release orangutan monitoring conducted for 3 months</p>	<p>10 orangutans were released in year 2. Evidence provided in section 3.1</p> <p>PRM has been conducted for all released orangutans in line with IUCN guidelines and also for previously released orangutans encountered by the PRM team near the release area. Evidence provided in section 3.1</p>	

	(aligned to IUCN guidelines) for each orangutan released.  1.3 100% of found far-ranging (previously released) orangutans are monitored as part of JRF missions throughout the project term.	100% of far-ranging orangutans encountered by JRF teams were monitored during year 2 (1 direct encounter, 192 indirect encounters). Evidence provided in section 3.1, see table 3.	
Activities 1.1 Orangutan release (this is based on the readiness of specific individuals in our rehabilitation centre for release)  1.2 Daily post-release monitoring  1.3 Orangutan surveys (JRF)		All activities were conducted as planned	These activities are all continuous through the project period
20 missions were carried out in year 2, Q3 missions were fewer than planned due to adverse weather conditions. Evidence provided in section 3.1, see table 4.  100% of threats were reported to BKSDA (70 of 70). Evidence provided in section 3.1, see table 4.  JRF teams were trained in Q3	2.1: At least 66 JRF missions (22 per [calendar] year; average 10 days per mission) take place including SMART patrols, habitat monitoring, and biodiversity surveys are completed by project completion.  2.2: 100% of threats reported to BKSDA Aceh between (July 2021 – June 2024).  2.3: At least 6 JRF training events take place (2/calendar year) within the project period and Community Rangers are confident and using new skills as part of patrol missions.	20 patrol missions took place in year 2, mission length was 10 days per mission. Fewer missions were undertaken in Q3 due to adverse weather conditions and the associated risks with teams entering the forest. This includes heavy rain which swells rivers making them dangerous to cross. This is normal within a tropical forest setting. Evidence provided in section 3.1, see table 4.  100% of threats encountered by patrol (70 of 70), teams were reported to BKSDA Aceh. Evidence provided in section 3.1, see table 4.  In Q3, teams received training in mammal survey methodologies including theoretical and practical training in three different data collection methods; line transects, fixed point counts, and camera trapping. In Q4, teams received refresher SMART and survival skills training, and introduction training to drone surveys and mapping, bioacoustics monitoring and ecotourism. We have therefore met the year 2 target for this indicator. Evidence provided in section 3.1.	
Activities 2.1 Monthly patrol missions take place (average 2 missions/month @10 days/mission)  2.2 Identified threats reported to BKSDA Aceh  2.3: Community Ranger training takes place, at least 2 events per (calendar) year		Monthly patrol missions took place throughout Q1, Q2 and Q4 (2 per month/6 per quarter), at 10 days per mission. In Q3 only 2 monthly patrol mission were feasible due to adverse weather conditions.  Threats were reported on a monthly basis.  JRF training took place in Q3 and Q4	Monthly patrol missions will continue to take place whenever feasible.  Threats will continue to be reported on a monthly basis.  Training is planned to take place twice.

<p><b>Output 3</b> The six project communities have strengthened livelihoods opportunities, capacities and collaboration through newly established, functioning and profitable honey cooperatives.</p>	<p>3.1: (i) At least 4 community members (from two communities) are trained in professional, certified beekeeping by end of September 2022; (ii) a further 8 community members (from a further four communities) are trained in professional certified beekeeping by the end of September 2023.</p> <p>3.2: At least 100 beehives are provided to each of the two Y1 communities by the end of September 2022; and a further 100 beehives per community are provided to each of the additional four Y2 communities by end of September 2023.</p> <p>3.3: Two honey cooperatives (minimum 20 households/cooperative) are established, and training provided in business management and operations by end of September 2022; and a further four honey cooperatives (minimum 20 households per cooperative) are established, and training provided in business management and operations by the end of September 2023.</p> <p>3.4: (i) Cooperative rules and processes are established, (iii) conservation contracts signed between YEL and each cooperative by the end of September 2023 (2 initial communities) and project end (4 further communities).</p> <p>3.5: Each honey cooperative produces a minimum of 1 tonne of quality honey annually, by project end.</p>	<p>4 community members have now received intensive training and are part of the specialist 'Honey Team'. The current members come from the first 2 communities. Members from the second 2 communities are planned to join the team in early year 3. We are therefore on track with this indicator to date. Evidence provided in section 3.1.</p> <p>308 beehives have been procured and distributed to communities to date. We are therefore on track with this indicator to date. Evidence provided in section 3.1.</p> <p>4 community groups each with at least 20 household members have been formed to date and have been provided with a variety of training and are at different stages of development. We are therefore on track with this indicator to date. For evidence and further details see section 3.1.</p> <p>Of the 4 community groups formed, all four have elected members to leaderships positions, and three of the groups have developed rules, values and Articles of Association, and three have established their legal status. Evidence provided in section 3.1, also see table 5 (in section 3.2).</p> <p>132 kg of honey was harvested by the first 2 communities in year 2. Evidence provided in section 3.1.</p>
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<p>Activities</p> <p>3.1 Participatory training of at least 12 community members (four community members in by end of September 2022; a further 8 by September 2023) in certified, professional beekeeping including cultivation and post-harvest processing (1st stage)</p> <p>3.2 Local procurement of beehives and supply to community (200 overall, 100 in by end of September 2022; a further 100 by September 2023)</p> <p>3.3 Participatory training in business management and operations</p> <p>3.4 Facilitation of cooperative model establishment, equitable benefit sharing mechanisms and signing of community conservation contracts</p> <p>3.5 Cooperatives are supported with everyday operations, management, and technical issues</p>	<p>4 community members have received intensive training and are part of the specialist 'Honey Team'. The current members come from the first 2 communities. Members from the second 2 communities are planned to join the team in early year 3.</p> <p>308 beehives have been procured and distributed.</p> <p>Training in community beekeeping and facilitation of group development (including benefit sharing mechanisms) has been delivered throughout year 2 to the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> community groups. 84 people were trained (46 F &amp; 38 M). See section 3.1 for further details and evidence provided.</p> <p>Support has been provided to all groups throughout year 2.</p>	<p>Honey Team members will be recruited from new project community groups as the groups progress with development.</p> <p>Beehives will be procured and supplied to new project community groups.</p> <p>Training and facilitation of group development will continue with all community groups.</p> <p>All community groups will be supported with operations, management and technical issues on a regular and additionally on a 'needs be' basis.</p>
<p><b>Output 4</b> YEL-owned conservation enterprise 'SumaBee' is established, the brand developed and marketed.</p>	<p>4.1: At least 2 tonnes of quality honey are purchased (by SumaBee) from the honey cooperatives by the end September 2023; at least 6 tonnes of quality honey are purchased (by SumaBee) from the honey cooperatives by project end.</p> <p>4.2: At least 2 tonnes of quality honey are processed and packaged by SumaBee by the end of September 2023; at least 6 tonnes of quality honey are processed and packaged by SumeBee by project end.</p> <p>4.3: The SumaBee products (2-4 SKUs 60g – 450g) and brand is developed and digitally marketed in line with the SumaBee business planning.</p> <p>4.4: SumaBee products are available through at least 3 online, direct to</p>	<p>This indicator is set for the future and so we will report on it in the next reporting period. For progress to date Reference section 3.1 for information and supporting evidence. In summary, 132 kg of honey has been harvested and 95 kg put out for sale into the local market with 100% of the 95 kg sold! Evidence provided in section 3.1.</p> <p>This indicator is set for the future and so we will report on it in the next reporting period.</p> <p>SumaBee brand development is well underway with designs established and social media marketing already underway. Evidence provided in section 3.1.</p>

	<p>consumer platforms by the end of September 2023.</p> <p>4.5: SumaBee realises a per item margin of \$3 USD per kg of honey, by project end.</p>	<p>Social media marketing has begun and will be fully developed in year 3 alongside presence on direct to consumer platforms. Evidence provided in section 3.1.</p> <p>We will report on this indicator at project end.</p>
<p>Activities</p> <p>4.1: The SumaBee business is established as a legal Indonesian entity</p> <p>4.2: Branding is established, and marketing implemented</p> <p>4.3: Target volumes of honey are processed (2nd stage) and packaged</p> <p>4.4: Product presence online is established</p>		<p>Completed, evidence provided in section 3.1.</p> <p>Brand development is well underway, evidence provided in 3.1.</p> <p>To begin in year 3.</p> <p>To begin in year 3.</p>
<p><b>Output 5</b> The six project communities are informed and engaged in actions to protect local forest biodiversity including Sumatran orangutans, through conservation educational and awareness-raising activities.</p>	<p>5.1: At least 3 community education modules are developed, including presentations and interactive digital media (videos, photos, etc) by end of September 2022. Topics include ecosystem services, conservation and sustainable use;</p> <p>5.2: At least 600 people (minimum 50% women) in 6 communities participate in 5.1 module delivery activities by end of project (End of September 2022: Target 100 people; End of September 2023: Target 500 people (cumulative); end of project: Target 600 people (cumulative);</p> <p>5.3: 100 local youths (across 6 villages neighbouring Jantho) are inspired and unified as forest protectors through “Kemah Konservasi” training by project end. Training topics include tropical rainforest, endangered species, sustainable use of natural resources, threats to biodiversity.</p>	<p>Module development continued throughout year 2 incorporating community knowledge baselines levels gleaned from the KAP survey and tailoring language to different community groups. We are off track with this indicator but aim to catch up in year 3.</p> <p>We have not yet begun delivery of community education in earnest (although opportunistic education delivery is taking place, Reference section 3.1). We are therefore off track with this indicator (Reference section 3.1 for justification) and will aim to catch up in year 3.</p> <p>Kemah Konservasi are scheduled for years 3 and 4.</p>

<p>Activities</p> <p>5.1 Baseline survey measures existing knowledge, attitudes and practices on forest, orangutan and biodiversity protection</p> <p>5.2 Module outline and structure developed</p> <p>5.3 Pre-and post-training surveys developed</p> <p>5.4 Education activities take place across all project communities</p> <p>5.5 Kemah Konservasi takes place</p>	<p>Completed in year 1</p> <p>Module development has continued in year 2</p> <p>Ongoing development in year 2, see evidence provided in section 3.1.</p> <p>Delivery of education will begin in year 3</p> <p>Kemah Konservasi are scheduled for years 3 and 4.</p>	<p>Module development will be completed in year 3.</p> <p>To be completed in year 3.</p> <p>To be undertaken in year 3</p> <p>To begin in year 3.</p>
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## Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

Project summary	SMART Indicators	Means of verification	Important Assumptions
<b>Impact: Multiple, viable Sumatran orangutan populations safely thrive in protected, sustainably-managed forest habitat across Sumatra, stewarded by local communities enriched by sustainable, eco-friendly livelihoods, with biodiversity conservation highly-prioritised across Indonesia.</b>			
<b>Outcome: The Jantho orangutan population is viable, with Jantho Nature Reserve protected and illegal activities reduced; aided by strengthened local environmental stewardship and enhanced livelihoods through profitable, sustainable honey enterprises.</b>	<p>0.1 Jantho orangutan population increased by at least 17% (from 138 to 162 individuals), reaching and exceeding the minimum viable orangutan population size, by project end</p> <p>0.2 (i) 25% reduction in annual snares/traps encounter rate per kilometre patrolled across the entire Jantho Nature Reserve from the baseline 0.04/km (2017 - 2019 average); by project end; (ii) 75% reduction in annual snares/traps encounter rate per kilometre patrolled within the critical central river valley area of Jantho from baseline of 0.04/km (2017 - 2019 average) by project end.</p> <p>0.3 (i) The average annual number of VIIRS Fire Hotspots across the entire Jantho Reserve over the three-year project timeframe is at least 25% lower (10.8 or fewer) than baseline (14.4; 2012-2020 average) (measured at project end). ii) The average annual number of VIIRS Fire Hotspots within the critical central river valley area of Jantho over the three-year project timeframe is at least 75% lower (3.6 or fewer) than baseline (14.4; 2012-2020 average) (measured at project end).</p> <p>0.4 (i) 25% reduction in canopy cover disturbance across the entire Jantho Reserve from a baseline of 1.8 hectares/year (baseline 1.8; 2002-2019) by project end.</p>	<p>0.1: Orangutan Release Records</p> <p>0.2: JRF Patrol Records, Annual Reports</p> <p>0.3: Visible Infrared Imaging Radiometer Suite (VIIRS) active fire data, Global forest watch</p> <p>0.4: GLAD Forest Alerts, Global Forest Watch</p>	<p>PanEco will continue to have permission to rescue and release orangutans in Jantho Pine Forest Nature Reserve (this relationship has existed for 10 years, is part of ongoing agreements for collaboration and we see no reason why this should cease).</p> <p>COVID-19 circumstances or government restrictions do not impede the release of orangutans into Jantho (there are current restrictions in place but we anticipate these lifting by July 2021).</p> <p>Jantho will continue to receive protection under Indonesian law, and our partnerships with BKSDA and the Indonesian Government's Directorate General of Natural Resource and Ecosystem Conservation will continue (we see no reason why this should cease and have provided a Government support letter). Fires within Jantho and their severity, although ignited by people, can be impacted by the weather and if we have particularly wet or dry years then this indicator could be skewed. However, we have opted to measure two other additional indicators of conservation outcomes in Jantho (frequency of 'threat signs' and deforestation rate) and therefore we will be able to robustly</p>

	<p>(ii) 75% reduction in canopy cover disturbance within the critical central river valley area of Jantho from a baseline of 1.8 hectares/year (baseline 1.8; 2002-2019) by project end.</p> <p>0.5 Average household income of 120 honey cooperative members increases by at least 18% (Baseline: \$1,967) % by project end.</p> <p>0.6 Knowledge, attitudes and practices show increased support for biodiversity conservation</p>	<p>0.5: (i) Honey enterprise records, Endline Survey (Final Evaluation) (ii) Baseline Survey, Endline Survey (Final Evaluation)</p> <p>0.6 Endline KAP Survey (Final Evaluation)</p>	<p>track project impact even in the case of weather skewed fire data.</p> <p>The impact of the COVID-19 pandemic on livelihoods does not outweigh the desired project impacts; we have made conservative targets as part of the project to mitigate against this risk.</p>
<p><b>Output 1.</b> Rehabilitated Sumatran orangutans are released and monitored in Jantho Nature Reserve</p>	<p>1.1 24 rehabilitated or translocated Sumatran orangutans successfully released into Jantho forest by project end.</p> <p>1.2 Daily post-release orangutan monitoring conducted for 3 months (aligned to IUCN guidelines) for each orangutan released.</p> <p>1.3 100% of found far-ranging (previously released) orangutans are monitored as part of JRF missions throughout the project term.</p>	<p>1.1 Jantho reintroduction records, quarterly reporting</p> <p>1.2 Monitoring records, Annual Reports</p> <p>1.3 Monthly monitoring records, annual reports</p>	<p>Operational permissions maintained and considerations around COVID-19 (see above).</p> <p>COVID-19 restrictions or safety concerns do not impede monitoring or patrols in Jantho. Most of 2020 was disrupted due to COVID-19 and necessary biosecurity measures related to the resident orangutan population. However, we expect to be functioning normally again by July 2021.</p>
<p><b>Output 2</b> Jantho Nature Reserve (16,000 ha) is protected by the JRF, throughout the project term and JRF capacity is increased.</p>	<p>2.1: At least 66 JRF missions (22 per [calendar] year; average 10 days per mission) take place including SMART patrols, habitat monitoring, and biodiversity surveys are completed by project completion.</p> <p>2.2: 100% of threats reported to BKSDA Aceh between (July 2021 – June 2024).</p> <p>2.3: At least 6 JRF training events take place (2/calendar year) within the project period and Community Rangers</p>	<p>2.1: JRF mission records, SMART patrol data, monitoring records, biodiversity survey records.</p> <p>2.2: JRF threats referral records.</p>	<p>COVID-19 restrictions or safety concerns do not impede monitoring or patrol plans in Jantho. Most of 2020 was disrupted due to COVID-19 and necessary biosecurity measures related to the resident orangutan population. However, we expect to be functioning normally again by July 2021.</p> <p>The total mission numbers are calculated by an average 2 missions per month taking into account</p>

	are confident and using new skills as part of patrol missions.	2.3: Training records, annual reports, Community Ranger feedback.	occasions such as Ramadan necessary adjustments to schedules will need to be made.
<b>Output 3</b> The six project communities have strengthened livelihoods opportunities, capacities and collaboration through newly established, functioning and profitable honey cooperatives.	<p>3.1: (i) At least 4 community members (from two communities) are trained in professional, certified beekeeping by end of September 2022; (ii) a further 8 community members (from a further four communities) are trained in professional certified beekeeping by the end of September 2023.</p> <p>3.2: At least 100 beehives are provided to each of the two Y1 communities by the end of September 2022; and a further 100 beehives per community are provided to each of the additional four Y2 communities by end of September 2023.</p> <p>3.3: Two honey cooperatives (minimum 20 households/cooperative) are established, and training provided in business management and operations by end of September 2022; and a further four honey cooperatives (minimum 20 households per cooperative) are established, and training provided in business management and operations by the end of September 2023.</p> <p>3.4: (i) Cooperative rules and processes are established, (iii) conservation contracts signed between YEL and each cooperative by the end of September 2023 (2 initial communities) and project end (4 further communities).</p> <p>3.5: Each honey cooperative produces a minimum of 1 tonne of quality honey annually, by project end.</p>	<p>3.1: YEL Training records.</p> <p>3.2: Equipment and distribution records, monitoring records.</p> <p>3.3: Cooperative records and agreements, YEL training records; conservation contracts signed between YEL and two cooperatives by the end of year 1 and four further cooperatives by the end of year 2.</p> <p>3.4: Cooperative agreements, cooperative rules, conservation contracts</p> <p>3.5: Honey cooperative records, YEL product volume and quality records</p>	<p>Households continue to maintain interest and willingness to participate in honey-enterprise activities, including willingness to support and agree to rules and contracts developed through a participatory process with communities.</p> <p>PanEco maintains honey specialist consultants (who has supported SOCP in business planning). Market research conducted by the specialist consultant is accurate of the current market situation.</p>

<p><b>Output 4</b> YEL-owned conservation enterprise 'SumaBee' is established, the brand developed and marketed.</p>	<p>4.1: At least 2 tonnes of quality honey are purchased (by SumaBee) from the honey cooperatives by the end September 2023; at least 6 tonnes of quality honey are purchased (by SumaBee) from the honey cooperatives by project end.</p> <p>4.2: At least 2 tonnes of quality honey are processed and packaged by SumaBee by the end of September 2023; at least 6 tonnes of quality honey are processed and packaged by SumeBee by project end.</p> <p>4.3: The SumaBee products (2-4 SKUs 60g – 450g) and brand is developed and digitally marketed in line with the SumaBee business planning.</p> <p>4.4: SumaBee products are available through at least 3 online, direct to consumer platforms by the end of September 2023.</p> <p>4.5: SumaBee realises a per item margin of \$3 USD per kg of honey, by project end.</p>	<p>4.1: YEL purchasing records, community cooperative records</p> <p>4.2: YEL records</p> <p>4.3: Marketing plans, Business plan</p> <p>4.4: Online platforms, marketing plan, consumer outlets.</p> <p>4.5: SumaBee financial records, including sales, cooperative records.</p>	<p>600 beehives (100 in each of the six project communities) are producing at least 6 tonnes of honey annually by the end of year 3 - yhis assumes 9 kilograms per beehive, which is a modest, achievable amount based on our bee-keeping research and technical expert input.</p> <p>We assume that we will be able to draw on YEL's existing business expertise, including supply chain networks for processing and packaging developed through its other successful enterprise initiatives, this is in combination with the expertise of Stefan Mai, the specialist honey business consultant we are working with for this project.</p>
<p><b>Output 5</b> The six project communities are informed and engaged in actions to protect local forest biodiversity including Sumatran orangutans, through conservation educational and awareness-raising activities.</p>	<p>5.1: At least 3 community education modules are developed, including presentations and interactive digital media (videos, photos, etc) by end of September 2022. Topics include ecosystem services, conservation and sustainable use;</p> <p>5.2: At least 600 people (minimum 50% women) in 6 communities participate in 5.1 module delivery activities by end of project (End of September 2022: Target 100 people; End of September 2023: Target 500 people (cumulative); end of project: Target 600 people (cumulative);</p>	<p>5.1 Completed community education modules.</p> <p>5.2 Communication education records, including pre- and post-training survey measuring changes in knowledge and attitudes, final evaluation.</p>	<p>Communities (including youth) are willing and able to participate in our conservation activities. SOCP maintains existing relationships with communities and we are confident there will be significant interest, particularly in conjunction with cooperative activities.</p>

	<p>5.3: 100 local youths (across 6 villages neighbouring Jantho) are inspired and unified as forest protectors through “Kemah Konservasi” training by project end. Training topics include tropical rainforest, endangered species, sustainable use of natural resources, threats to biodiversity.</p>	<p>5.3. Kemah Konservasi training records, including pre- and post-training survey measuring changes in knowledge and attitudes, final evaluation.</p>	
<p><b>Activities</b></p> <p>Activities</p> <p>1.1 Orangutan release (this is based on the readiness of specific individuals in our rehabilitation centre for release)</p> <p>1.2 Daily post-release monitoring</p> <p>1.3 Orangutan surveys (JRF)2.1 Monthly patrol missions take place (average 2 missions/month @ 10 days/mission)</p> <p>2.1 Monthly patrol missions take place (average 2 missions/month @ 10 days/mission)</p> <p>2.2 Identified threats reported to BKSDA Aceh</p> <p>2.3: Community Ranger training takes place, at least 2 events per (calendar) year3.1 Participatory training of at least 12 community members (four community members in by end of September 2022; a further 8 by September 2023) in certified, professional beekeeping including cultivation and post-harvest processing (1st stage)</p> <p>3.1 Participatory training of at least 12 community members (four community members in by end of September 2022; a further 8 by September 2023) in certified, professional beekeeping including cultivation and post-harvest processing (1st stage)</p> <p>3.2 Local procurement of beehives and supply to community (200 overall, 100 in by end of September 2022; a further 100 by September 2023)</p> <p>3.3 Participatory training in business management and operations</p> <p>3.4 Facilitation of cooperative model establishment, equitable benefit sharing mechanisms and signing of community conservation contracts</p> <p>3.5 Cooperatives are supported with everyday operations, management and technical issues4.1: The SumaBee business is established as a legal Indonesian entity</p> <p>4.1: The SumaBee business is established as a legal Indonesian entity</p> <p>4.2: Branding is established, and marketing implemented</p> <p>4.3: Target volumes of honey are processed (2nd stage) and packaged</p> <p>4.4: Product presence online is established5.1 Baseline survey measures existing knowledge, attitudes and practices on forest, orangutan and biodiversity protection</p> <p>5.1 Baseline survey measures existing knowledge, attitudes and practices on forest, orangutan and biodiversity protection</p> <p>5.2 Module outline and structure developed</p> <p>5.3 Pre-and post-training surveys developed</p> <p>5.4 Education activities take place across all project communities</p> <p>5.5 Kemah Konservasi takes place</p>			

## Annex 3: Standard Indicators

Table 1 Project Standard Indicators

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
DI-A01	(i) At least 4 community members (from two communities) are trained in professional, certified beekeeping by end of September 2022; (ii) a further 8 community members (from a further four communities) are trained in professional certified beekeeping by the end of September 2023.	Number of people from key national and local stakeholders completing structured and relevant training	4 people	4 Male (year 2) Local people Livelihood training	0	4		4	12
DI-A01	Two honey cooperatives (minimum 20 households/cooperative) are established, and training provided in business management and operations by end of September 2022; and a further four honey cooperatives (minimum 20 households per cooperative) are established, and training provided in business management and operations by the end of September 2023.	Number of people from key national and local stakeholders completing structured and relevant training	84 people	46 Female & 38 Male (year 2) Local people Livelihood training	48	84		84	
DI-B10	Two honey cooperatives (minimum 20 households/cooperative) are established, and training provided in business management and operations by end of September 2022; and a further four honey cooperatives (minimum 20 households per cooperative) are established, and training provided in business management and	Number of individuals / households reporting an adoption of livelihood improvement practices as a result of project activities.	84 people	84 Local people Adopting sustainable beekeeping activities		84		84	

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
	operations by the end of September 2023.								
DI-D04	0.1 Jantho orangutan population increased by at least 17% (from 138 to 162 individuals), reaching and exceeding the minimum viable orangutan population size, by project end	Stabilised/ improved species population (relative abundance/ distribution) within the project area.	Orangutans released (increased population)		2 = 1.45% increase	10 = 7.14% increase	8	12	24

**Table 2 Publications**

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)

## Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the <b>correct template</b> (checking fund, type of report (i.e. Annual or Final), and year) and <b>deleted the blue guidance text</b> before submission?	Yes
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:BCF-Reports@niras.com">BCF-Reports@niras.com</a> putting the project number in the Subject line.	
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:BCF-Reports@niras.com">BCF-Reports@niras.com</a> about the best way to deliver the report, putting the project number in the Subject line.	
<b>Have you included means of verification?</b> You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes
<b>Do you have hard copies of material you need to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	No
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 16)?	N/a
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	