



Darwin Initiative/Darwin Plus Projects Half Year Report (due 31st October 2020)

Project reference	25-001
Project title	Preventing Borneo's peatland fires to protect health, livelihoods and biodiversity.
Country(ies)/territory(ies)	Indonesia
Lead organisation	University of Exeter
Partner(s)	Borneo Nature Foundation
Project leader	Dr Frank Van Veen
Report date and number	HYR3
Project website/blog/social media	BNF Website ; BNF Facebook ; BNF Twitter

1. Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable.

During the last 6 months we continued to work towards achieving the project objectives, and we are on target to complete most of the original targets and achieve project objectives and outcomes. However the COVID-19 pandemic and government regulations in response will potentially impact meeting targets in the education, outreach, training, and community development activities.

A. PROGRAMME DEVELOPMENT

Monitoring and Evaluation:

We continued undertaking M&E activities in each project area; maintaining the evaluation standards established during Y1 and Y2. Each implementation team has internally assessed the project status, identifying project gaps and priorities, and planned implementation strategies, roadmaps and milestones for Y3. We continued assessing conservation change using existing monitoring tools and trialled new tools including passive acoustic monitoring devices and aerial drones fitted with thermal cameras.

Stakeholders and partnerships development:

Local collaborations have continued to mature, enabling us to meet Y3 project milestones. We have completed a stakeholders and partnerships assessment, reviewing the initial stakeholders' matrix and expectation of change against the baseline analysis; identifying gaps and priority areas for Y3.

BNF's new 5-year strategic plan with the Sebangau National Park has commenced by starting new joint activities including outreach, training sessions and conservation workshops), and enhancing habitat protection strategies by integrating community fire-fighting teams with Park protection activities. Because of the new challenges arising due to the COVID-19 pandemic, we hugely value the commitment and engagement shown by community members, especially the collaborations between community fire-fighting teams and community seedling nurseries, allowing core habitat protection activities to continue.

Team development and coordination:

To ensure the conservation project's sustainability and to achieve the proposed exit strategy after Y3, we have recruited two new roles at BNF: a Community Seedling Nurseries Coordinator, and an Integrated Fire Management Officer. These roles will ensure the long-term legacy of this project by enabling firefighting networks and community nurseries to run sustainably with minimum external input.

B. FOREST PROTECTION AND FIRE FIGHTING ACTIVITIES

BNF has continued to support the fire-fighting and patrol teams operating in the northern Sebangau area. These teams are self-managed but were mobilised under a coordinated network system led by BNF under the new Integrated Fire Management Strategy. This strategy follows the annual seasonal cycle, with four main areas included: fire prevention, preparedness, response, and recovery.

Supporting Community Fire-Fighting teams:

The community fire-fighting teams were mobilised to patrol and support community awareness activities when needed. An average of 35 patrols per month were undertaken, equating to 90 man-days and 520 km patrolled per month. BNF hosted a Drones for Conservation Training workshop for external partners, and provided safety equipment, and operational funds to support fire prevention and preparedness.

Fire-fighting interventions and coordination:

Similar to the interventions conducted in 2018 and 2019, BNF facilitated the coordination and integration of activities between the Community Fire-fighting teams, the Sebangau National Park authorities, and the Disaster and Fire Fighting Management Agency (BPBPK). Rainfall in 2020 was higher than average and as a result there was no seasonal drought in 2020 nor major fires occurring in the National Park and our target areas and therefore no major interventions have been required. The three fire fighting teams maintained readiness and conducted routine patrols, upgraded equipment, and attended training sessions, covering fire-fighting in peat-swamps and drone technology use, the practice of deep well drilling and refresher training on SMART patrol (online event). The training activities were attended by representatives from the Pahandut police, community fire-fighting teams, Manggala Agni – Sebangau National Park brigade, University of Palangkaraya Fire-fighting Task Force and CIMTROP patrol team.

Drones supporting fire-fighting activities:

As part of BNF's drones for conservation programme, we have developed research trials using thermal-camera technology, collecting data via controlled burns to learn more about peat-fire behavior and underground detectability. The drone team started mapping burned areas, for evaluation of natural regeneration and assisted restoration post-fire.

C. HABITAT RESTORATION**Community nurseries:**

Currently, we support a total of four nurseries in Kereng Bangkirai and two in Sabaru village, comprising 42 families involved. Three new nurseries have been established in Y3 to date and 22 additional families have joined the scheme. Two nurseries in Sabaru village decided to re-structure the group composition and change the seedling nursery location. The two groups experienced internal disagreements due to lack of commitment by some of the participants. BNF provided mediation and agreed to support the restructuring whereby four families established a new nursery group. By May 2020, the community seedling nurseries reached a total stock of 22,174 seedlings, which were transplanted to the restoration site and replaced by an additional 44,234 seedlings collected and grown.

Women's group:

The women's groups continued their activities by crafting organic bags in which to grow the seedlings, crafting 3,000 more bags during this period.

Planting and seedling monitoring activities:

Replanting took place once groundwater levels dropped sufficiently. 23,236 seedlings from seven native tree species were planted over 25 ha. Seedling monitoring activities for previously planted stems is underway, completed for 4,250 trees in the monitoring cohort to date. Preliminary data analysis indicates an average annual mortality rates of 10.9%, within target values.

Permaculture and aquaculture development:

In June we began the implementation phase of the permaculture and aquaculture training sessions, aiming to support the local community to adopt more "peat-friendly" farming and fishing practices which reduce peat drainage and reliance on fire. Several permaculture trial plots have been established following a coordination meeting, planting vegetables including tomato, chili, eggplant, kale, celery and turmeric. The first harvest was made in August and the programme has been received positively. A fishpond has been created on BNF's land to develop an aquaculture trial programme.

Canal Blocking:

Four additional canals in the Bakung River were blocked by constructing 50 double-walled dams from natural materials by community members from Kereng Bangkerai, increasing the number of dams built during the current project to 145 on nine canals, reaching 75% of the initial target.

Hydrology monitoring:

Monthly surveys at six long-term monitored canals and 40 groundwater-table (GWT) monitoring stations, continued, supplemented by pre and post-dam building data from the newly-blocked canals. Ten new manual groundwater level monitoring stations were added alongside two automatic GWT monitoring stations to provide more refined measurements and assess finer-scale variations.

D. ENVIRONMENTAL EDUCATION AND CONSERVATION AWARENESS**Environmental Schools Modules:**

Schools in Indonesia have been closed since March 2020 and therefore we have been unable to deliver conservation modules as planned. In response to this we have re-designed education activities and methods to enable modules to be delivered online where possible, and are assessing alternative ways to reach children from schools with no or limited internet connection and computer resources.

Sebangau Children's Group:

The Sebangau Children (*Anak Sebangau*) program was suspended between March and June due to the COVID-19 pandemic. In July face-to-face activities resumed with introduction of new protocols: testing of education staff; temperature checking, maintaining safe distance between participants, hand washing, wearing face masks and limiting the duration of the activities to 30 minutes. We carried out 42 sessions for 33 children in total. We gave weekly packs with environmental education resources and healthy food to children who were unable to attend activities or access online resources. A series of podcasts was created for the Sebangau Rangers group to ensure continuation of sessions whilst schools are closed.

E. RESEARCH

The Sebangau research team continued biodiversity monitoring activities throughout this period, adhering to strict COVID-19 protocols. Data were collected on fire hotspots, fisheries, primate populations, forest structure, phenology and growth, air quality and water-levels.

F. OUTREACH**Outreach events:**

All in-person events have been cancelled and replaced as far as possible via alternative online sessions, including webinars, online workshops and online discussions.

Online communications and outreach:

During this period, the BNF Communications team promoted Darwin Initiative-related activities by sharing and posting stories and information on BNF's social media and website.

New [Community nurseries and reforestation project video](#) produced by BPI for BNF.

Conservation: [Replacing plastic polybags](#), [Reforestation for a better future](#), [The fire front guard](#), [Testing thermal drones](#), [Behind the forest guards](#), [Build dams trim fire chain](#), [Fire fighting training](#), [Women fighting for conservation](#), [Hydrology monitoring](#)

Environmental Education and Outreach: [Pleasant day in Sebangau Forest](#), [Sebangau Rangers new normal](#), [National Nature Conservation day](#), [International Orangutan day](#)

COVID-19: [BNF donated N95 masks](#), [Sebangau Rangers learned about safety during covid pandemic](#)

2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months (for Covid-19 specific delays/problems, please use 2b). Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

No notable or unexpected developments have arisen, apart from the ones triggered by the COVID-19 pandemic.

2b. Please outline any specific issues which your project has encountered as a result of Covid-19. Where you have adapted your project activities in response to the pandemic, please briefly outline how you have done so here. Explain what residual impact there may be on your project and whether the changes will affect the budget and timetable of project activities.

Indonesia's forests are under an increased threat owing to COVID-19's impacts on law enforcement, protected area management and monitoring. The rate of forest loss in Indonesia is estimated to have increased by 50% during the first half of 2020 (Greenpeace analysis; based on forest loss GLAD data analysed by University of Maryland) and forest clearance in Indonesia was up 130% compared to the three-year average for March 2017 to 2019 ([WWF 2020; Forest loss in times of corona pandemic](#)). Reports also indicate alarming new health impacts in Indonesia linking forest-fire haze to COVID-19 ([Greenpeace 2020; Burning up report](#)) and livelihood shifts due to impacts on travel and tourism ([D.Helm 2020; The Environmental Impacts of the Coronavirus](#)) resulting in increased hunting and logging in rural areas, with higher forest-use increasing the risk of peat-forest fires.

Local travel, social-distancing, and gathering size restrictions have impacted our delivery of education, awareness, training, and community development activities, but have increased forest patrols, fire-fighting preparedness and socially-distanced community outreach in response to threats. Through this crisis we have been committed to supporting all existing staff members to ensure their security, retention of skills and knowledge, and to continue essential research and conservation activities within the parameters of local restrictions. To help facilitate a wider understanding of the impacts and challenges of COVID-19 in Central Kalimantan, we are planning a series of online workshops and seminars for stakeholders to address the consequences of COVID-19 on habitat conservation and land management in the region, with the aim to identify required support and promote coordination.

Schools have closed and training sessions and events with large numbers of people are not permitted. We are delivering activities online where possible, attempting to overcome issues of ensuring equal access to all, and meetings and workshops have been scaled down or postponed in most cases. We have adjusted education and community development activities by developing new protocols, delivery methods, resources and alternative participatory approaches. Our teams responded quickly to the emerging barriers and proactively developed new ideas, such as online modules for schools, weekly resource packs, podcasts and information brochures. Understandably, the number of participants across all outreach activities has reduced substantially and several targets in these areas may not be reached.

Specifically we have identified the following potential impacts against the Project's Logical Framework:

- Output 1. Activity 1.3 Forty (40) families involved in 8 community nurseries: potential delay on the achievement of the total target of 8 community nurseries established and number of training sessions on permaculture and aquaculture techniques due to the difficulties to run Community Development socialisation events; currently 75% achieved.
- Output 2. Activity 2.1 Two new community fire-fighting teams will be established: potential delay or difficulties to achieve 100% of this target due to the existing limitations to run Community Development socialisation and time-loss due to imposed lockdown.
- Output 2. Activity 2.4 Network of community fire-fighting teams established with two multi-stakeholder workshops held in yr 2 and 3: potentially unable to achieve 100% of this goal due to difficulties to run large multi-stakeholder workshops or due to coordination difficulties.
- Output 3. Activity 3.1 Fact-finding research with local fishing and farming groups to identify current practices: expected delays or limitations to achieve the target of conservation awareness and sustainable alternatives workshops due to the difficulties of running socialisation events.
- Output 3. Activity 3.2 240 education modules/sessions held with 20 schools: potential delay or difficulties to achieve the target of 20 schools and 240 modules as schools remain closed.
- Output 4. Activity 4.1 Multi-stakeholder workshops in years 2 and 3 to discuss and agree on effective and realisable long-term strategies for peatland restoration and fire prevention in the Sebangau National Park: currently assessing the viability to implement the yearly multi-stakeholder workshop which will likely need to be scaled down or implemented online.

2c. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

Discussed with LTS: **No**

Formal change request submitted: **No**

Received confirmation of change acceptance

3a. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this year?

Yes No Estimated underspend: £ 8000

3b. If yes, then you need to consider your project budget needs carefully. Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project, please submit a rebudget Change Request as soon as possible. There is no guarantee that Defra will agree a rebudget so please ensure you have enough time to make appropriate changes if necessary. Please DO NOT send these in the same email as your report.

4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

N/A

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with LTS International through a Change Request. **Please DO NOT send these in the same email.**

Please send your **completed report by email** to Darwin-Projects@ltsi.co.uk. The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g. Subject: 25-001 Darwin Half Year Report**