Darwin Initiative/Darwin Plus Projects
Half Year Report
(due 31st October 2021)

Project reference	28-015
Project title	Delivering public-private partnerships to benefit farmers and biodiversity in Sulawesi
Country(ies)/territory(ies)	North Sulawesi, Indonesia
Lead organisation	Wildlife Conservation Society (WCS)
Partner(s)	BNWNP - Bogani Nani Wartabone National Park Authority, PT Cargill, Forestry Agency of North Sulawesi Province, FMU II-Forest Management Unit II - Bolsel - Boltim, Bappelitbangda - Research and Development Agency of Bolaang Mongondow Selatan District, POLIMDO - Manado State Polytechnic
Project leader	Jeni Pareira
Report date and number (e.g. HYR1)	31 October, 2021; HYR1
Project website/blog/social media	*https://www.wcs.org/*

1. Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable (if your project has started less than 6 months ago, please report on the period since start up to end September).

Overall project progress

This program: Delivering public-private partnerships to benefit farmers and biodiversity in Sulawesi started in July 2021. This report covers activities from July until October.

Our focus during this reporting period has been on developing strong foundations for the programme, including through building the landscape team, conducting intensive stakeholder engagement at different levels (National Park, district, community-level) to socialise the project and further inform our implementation strategies, and developing internal coordination processes and work plans.

In August, WCS recruited a Sustainable Landscape (SL) Coordinator to manage the project . The SL Coordinator has been leading on stakeholder engagement and project implementation planning, and has been working with the broader WCS team to ensure strong coordination on the different components of the project. Through stakeholder engagement, landscape assessments and internal discussions, the SL Coordinator and Community Engagement Officer have identified five potential villages for implementation to achieve Output 2. These are four villages in Pinolosian Tengah sub-district and one in Bolaang Uki sub-district (in Bolaang Mongondow Selatan District; Bolsel): Mataindo, North Mataindo, Torosik, Adow and Molibagu.

In this period, following WCS's existing work in the landscape, WCS team continuing the analysis of 1) sedimentation modelling to create a baseline for flooding analysis to be monitored in this project, 2) land cover change and deforestation within BNWNP and the surrounding area, and 3) population of key species and its habitat condition, to determine the baseline to be monitored in the year 3 of this project (Output 2).

In addition, in September, the WCS team joined two workshops related to project communications and monitoring & evaluation held by the Darwin Initiative. These workshops were useful to connect with other programs that work in similar topics and landscapes and enabled the sharing of lessons learned on communications and M&E.

Output 1: An assessment framework and monitoring system is established across the landscape, enabling the BNWNP and FMU authorities and the multi-stakeholder partnership to implement and adapt approaches within a forest management strategy that integrates forest protection, restoration and sustainable agricultural production.

Activity 1.1. Develop biodiversity, farmer socio-economic, flooding and deforestation indicators in c*onsultation with project stakeholders*

We are currently focusing on the development of project baselines across these different areas (biodiversity, farmer socio-economic data, flooding, land use and deforestation). Once the baseline and key indicators are identified, we will discuss with relevant project stakeholders to get their input and agreement on how we will jointly conduct ongoing monitoring.

Activity 1.2. Develop a land-use monitoring system to establish farmland, forest and flooding risk baselines, identify priority areas, create deforestation alerts and monitoring project progress

As above, we have been focusing on establishing the baselines, from which we can consult with stakeholders and streamline or identify additional indicators for monitoring.

In this period we are finalising the analysis of forest cover change and deforestation in the BNWNP and the buffer zone area, built upon WCS existing work in this landscape. A land cover map for 2015 – 2020 for the BNW landscape, including the Bolsel area as the location for WCS intervention, has been developed and provides the baseline map for farmland and forest areas.

To develop the flooding risk baseline, in this period we commenced a spatial analysis using a remote sensing approach and geographical information system to calculate soil erosion and predict the amount of sedimentation in the downstream area of the watershed and in the coastal area near the estuary. To create the sedimentation model over time, we apply multi-time series modelling for the year of 2000, 2010, and 2019 with the prediction into 2030-2050 with 10 years interval, using resolution of 250x250 meter pixel.

Activity 1.3. Conduct biodiversity surveys and assess trends of priority species and their forest habitat across the landscape

At the end of 2019, WCS and BNWNP Authority conducted a biodiversity survey using camera traps within the park and the surrounding area on the southern part of the park. A total of 208 grids (each grid covers an area of 2 x 2 km) were surveyed, with 4,389 of days that cameras were active and produced 316,965 photo frames.

The camera traps survey recorded 47 taxa of animals, including the key species such as Anoa (*Bubalus depressicornis*), Babirusa and Maleo (*Macrocephalon maleo*), which also are national priority species. The survey also confirmed the existence of Sulawesi weasel (*Macrogalidia musschenbroekii*) and the distribution limit of two Sulawesi endemic species, *Macara nigra and Macaca nigresens,* in this landscape.

WCS team applied Ecological Niche Mode (ENM) and Maxent in software R with 'dismo' package in analysing the result of this camera trip especially to determine the monitoring location of two key species, Anoa and Babirusa. The conclusion is that the distribution of these two species overlaps with the niche around 0,91. Based on this, the BNWNP Authority and WCS team selected 50 grids as the monitoring site for these two species.

Our analysis found that Anoa is more easily detected in locations or areas that are far from human presence, such as from the road. Meanwhile, elevation is a factor that affects the occupancy rate of anoa in BNWNP. Anoa's occupancy rate is higher in the higher altitude area, which is difficult to be accessed by humans.

Similar to Anoa, the road is the key factor affecting the occupancy rate and probability for detection of Babirusa. Our analysis found that Babirusa is more easily detected in locations that far from human presence and tend to use forest areas that far from the road as its habitat.

Following the analysis, from June to October 2021, BNWNP Authority and WCS team continued the surveys in the same 50 grids applied the same method, and now we are in the process of entering and analysing data collected

Activity 1.4. Conduct farmer surveys to assess socio-economic conditions of farmers across the landscape

We have started to develop the design of the farmer socio-economic survey, which will use open source KOBO toolbox, and are in the process of preparing documents to obtain the relevant research permits from the National Research and Innovation Agency (BRIN).

WCS has another project targeting fishermen in the landscape. In general, many of the coconut farmers in this landscape are also fishermen. As the target communities are the same, except for one village in Batu Menangis, to increase efficiency, and ensure streamlined engagement with (and ultimately support for) communities we have combined the socio economic survey for both fishermen and coconut farmers, to avoid confusion and double surveys at the community level. The WCS team took the initiative to identify coconut farmers in the Binerean corridor and five priority villages and conduct a rapid assessment while waiting to conduct a more comprehensive socio-economic survey. Through this, we have aimed to obtain initial

information to inform our strategies and the development of the monitoring system. This has included data on the number of coconut farmers, total area of coconut farms (linked to 1.2), the location of farms, the number of trees, and other existing plants. This ensures that the targets and activities are appropriate to the needs and interests of coconut farmers in the Binerean corridor. This activity has just started with implementation in three hamlets in Mataindo village. The plan will continue in hamlets 2 and 1, then to other villages (Torosik, North Mataindo, Adow, and Molibagu).

Output 2: >500 smallholder farmers in Bolsel are committed to forest protection and restoration, and have viable livelihoods from sustainable agriculture practices, supported by a multi-stakeholder partnership

Activity 2.1. Engage government, private sector and community stakeholders to establish a multi-stakeholder forum that develops a strategy for integrated forest protection, restoration and sustainable agricultural production

The WCS team has engaged with stakeholders in key government agencies, such as Regent of Bolsel, Assistant II of the Regent on Economy Development Affairs, Head of Research and Development Agency, Head of Tourism Agency, Head of Environmental Agency and Head of Development Planning , Secretary of Bolsel District, Head of Planning of FMU II Bolsel Boltim, TNBNW authorities and extension officer SPTN II Doloduo.

Through this, to support coordination and inform the development of an integrated forest protection, restoration and sustainable agricultural production strategy, WCS has begun to get information on issues, programs, and activities carried out by relevant parties. WCS has also attended a meeting held by the Regional Government of Bolsel regarding land use planning (KLHS RTRWP) in Bolsel and Forestry Development Research Studies.

In a meeting with FMU II Bolsel and Boltim, we discussed that there are farmer groups under social forestry schemes in several of the priority pilot villages (Mataindo, Mataindo Utara, Torosik and Adow).These farmer groups are being assisted by FMU II. These activities will be important to align with in the development of an integrated strategy

WCS has been coordinating with village authorities in Pinolosian Tengah subdistrict, including the Head of Mataindo Village and the Head of Hamlets 1, 2, 3 in this village. The WCS team also engaged the Head of Mataindo Utara Village, the secretary of Torosik Village and the Head of Hamlet in this village, two community leaders in Deaga village, and community members of Modaga in Molibagu Village.

WCS has also held two coordination meetings with Cargill through online and offline meetings, with representatives from their regional and local offices. Through the online meeting, WCS and Cargill agreed to share an initial work plan for co-development and agreed to have regular coordination calls every two months. As a follow up, WCS and Cargill then held the offline meeting with the Cargill CSR coordinator in Amurang. Cargill has a processing facility in Amurang. In this area, Cargill has collaborated with Yayasan Sandar Batuna, a local NGO, including to train 350 smallholder coconut farmers from 32 farmer groups in Amurang Barat, Kumelembuai, Tatapaan, Sinonsayang, Tenga, Amurang Timur, and Pinapalangkow in good agricultural practices. In this meeting, we agreed to develop a joint work plan with Cargill, to be carried out in the village in the near future.

In addition, in support of wider sectoral engagement, in August, WCS participated in the 49th International Cocotech Conference, which was held online. The aim of this webinar was to promote smart farming and eco-friendly and innovative technologies for sustainable coconut development, and as part of strategic efforts of building the coconut industry that will focus on optimizing economic growth and considering long-term impacts on social and environmental factors. This conference involved various stakeholders, such as government, research institutions, and the private sector that have concerns and work related to coconut commodities.

Activity 2.2. Conduct farmer needs assessment, including knowledge and application of GAP, farmer organisation, assessment of access to inputs, markets and finance

As described in activity 1.4, in this period WCS team took the initiative to identify coconut farmers in the five priority villages and conduct a rapid assessment while waiting to conduct a more comprehensive socio-economic survey. This activity has just started with implementation in three hamlets in Mataindo village. The plan will continue in hamlets 2 and 1, then to other villages (Torosik, North Mataindo, Adow, and Molibagu).

Activity 2.3. Conduct Participatory Rural Appraisals with communities to develop conservation agreements and identify challenges, needs and opportunities

[Not applicable in this reporting period]

Activity 2.4. Assess landscape agricultural, value chain and alternative livelihood opportunities

[Not applicable in this reporting period]

Activity 2.5. Design and deliver a farmer training programme on GAP, institutional strengthening, support for rehabilitation, agroforestry or intercropping

[Not applicable in this reporting period]

Activity 2.6. Conduct a feasibility assessment for value addition in the coconut supply chain and other potential additional sources of income, and develop draft business plan

[Not applicable in this reporting period]

Output 3: A co-management model for protecting biodiversity, forest and ecosystem services is designed and implemented across the landscape

Activity 3.1. Conduct multi-stakeholder meetings to jointly develop and support implementation of co-management plan in high conservation value forests

A coordination meeting with the Regional Government of Bolsel, then the Government of Central Pinolosian and Bolaang Uki subdistrict, which will then be in the villages that will be assisted by WCS.

Activity 3.2. Train and support community-government ranger teams to patrol BNWNP and FMU and conduct community outreach

[Not applicable in this reporting period]

Activity 3.3. Establish restoration, supported by government and with active participation of communities, in degraded watershed forests

[Not applicable in this reporting period]

Activity 3.4. Conduct applied conservation and agroforestry research in the landscape

[Not applicable in this reporting period]

Activity 3.5. Hold government-led stakeholder consultation workshops to compile and then disseminate project results and lessons learned to village, district, provincial and national level partners

[Not applicable in this reporting period]

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.

1. Currently the Government of Indonesia is applying new regulations, that all research conducted by NGOs should secure ethical clearance from verified institutions in Indonesia and permit from the BRIN. This process slows down the implementation of socio-economic surveys and currently we are in process to secure the ethical clearance.
2. Whilst not an expected issue, there is limited communications infrastructure at the project location due to its remote area. Pinolosian Tengah sub-district still has poor internet networks, signals, and electricity, making communications and therefore program work in terms of planning, implementation and reporting more complex, especially as with limited travel, much of this has to occur online. We therefore must adapt to longer time periods between group coordination calls and plan ahead. In terms of mobility in the field, the central Pinolosian sub-district is also fairly high risk because the area is quite prone to flooding and landslides, especially during the rainy season. We ensure that the field team regularly updates the central WCS team on these risks.
3. Communication with farmers to ensure they fully understand the proposed purpose of the activities requires sufficient time. It is better to build this in at the start of the project rather than expedite any activities. We will continue to engage with communities in a way that fosters their understanding and ensures a proper FPIC process is followed before we proceed with any direct implementation.

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.

1. As expected, the Covid-19 pandemic continues to mean that meetings or discussions are often carried out online. Some discussions and issues, including to develop detailed and technical plans require offline meetings and field visits. We continue to meet in person where in line with existing guidance and undertaking healthy protocols.
2. Implementation of activities in the field, such as face-to-face meetings are still limited in number of participants, including meetings in the hamlet to identify coconut farmers, and so affect project implementation. This means there will be a delay in these early stages of the project where we will have to conduct a greater number of meetings with fewer participants.

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	**No**

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

Yes ☐ **No** **x** Estimated underspend: £

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 to 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?

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**