



## Darwin Initiative Main/Post/D+ Project Half Year Report (due 31<sup>st</sup> October 2018)

<b>Project reference</b>	23-020
<b>Project title</b>	Sustaining biodiversity, livelihoods and culture in PNG's montane forests
<b>Country(ies)/territory(ies)</b>	Papua New Guinea
<b>Lead organisation</b>	Wildlife Conservation Society
<b>Partner(s)</b>	Oxfam International, IRRM, KGWan, NARI, Miruma community (WAM U5), Man on Earth Nursery
<b>Project leader</b>	Ambroise Brenier
<b>Report date and number (e.g., HYR3)</b>	HYR3
<b>Project website/blog/social media etc.</b>	<a href="http://www.wcspng.org">www.wcspng.org</a> @WCSMelanesiaSci <a href="https://www.facebook.com/wcspng">www.facebook.com/wcspng</a>

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

Of the 14 project activities as of 30 September 2018, six have been achieved (equalling or bettering their output indicators), and the remaining eight are on track to be achieved by project end.

A Change Request form accompanies this report to formally request changes to two activities first outlined in the second annual report, and raised by the review. The rationale for these changes is outlined below.

#### **Objective 1: The introduction and uptake of improved gardening practices in three communities and an increase in the duration and life of garden areas**

*Activity 1.1: Increase the number of new gardening techniques that are taken up by communities in the project area*

**Underway:** The National Agriculture Research Institute (NARI) with support from WCS have introduced two new gardening techniques. One involves using tree marigold (*Tithonia diversifolia*) to mark the boundaries of crops. Doing so decreases soil erosion and increases soil fertility by raising phosphorus, nitrogen and potassium levels in the soil. This is particularly valuable as potassium deficiencies in the soil have been identified as the leading cause of low crop yields for sweet potato (the staple crop of the Highlands). The other new method increases sweet potato yields through sowing the crop horizontally rather than vertically. These methods have been demonstrated in each community.

*Activity 1.2: Ensure activities are established in >300 households using new gardening techniques by March 2018*

**Underway:** Over the last six months NARI, with assistance from WCS, have run a series of demonstration and training events in new gardening techniques such as composting to increase yield and soil moisture, planting tree marigold to control soil erosion as previously described and organic pest control methods. So far over 300 people have attended these events. Continued training in food production technologies is planned for early November. WCS

will organise follow up training to ensure activities become established in a minimum of 300 households by project end. A subsection of these households will be surveyed at the end of the project to provide evidence of the uptake of new gardening techniques.

*Activity 1.3: Promote new techniques to ensure the duration of active garden areas is increased by 30% by March 2019 in comparison to baseline information from past practise*

**Underway:** As described above techniques to limit soil erosion, increase soil nutrient levels and conserve soil moisture have been introduced to each community by NARi and WCS. WCS will work to extend the use of these practices over the next 6 months.

**Change request:** We have noted that the baseline duration of active garden areas is longer than the project lifespan. We therefore request that Activity1.3 be changed to '*Introduction of new techniques to a minimum of 150 households to ensure the duration of active garden areas will increase by project end*'. We will submit a separate change request.

## **Objective 2. Introduction of new market crops for income generation, and introduction of pest and drought resistant varieties for subsistence use within all three communities**

*Activity 2.1: Work with Oxfam and local partners to promote a 50% increase in the number of marketable crops in gardens*

**Achieved:** Four varieties of fast growing, blight and drought resistant potatoes have been introduced to the communities. As the communities had between 0 and 1 cash crops (Danbagl and Womkama grow bulb onion as a cash crop) as a baseline, this activity has ensured a 50% increase in the number of marketable cash crops in each community.

*Activity 2.2: With the support of NARI introduce least 2 new pest and/or drought tolerant crop varieties*

**Achieved:** NARI have introduced 3-4 varieties of pest and/or drought tolerant potato in each community, as well as early maturing sweet potato and drought resistant cassava.

## **Objective 3. Nursery practices for native tree species tested and established in two communities and active planting of areas with native species by the project end**

*Activity 3.1: Develop propagation methods for at least four native tree species in nurseries*

**Achieved.** WCS has successfully devised and implemented propagation methods for 7 timber trees species: *Fragraea berteriana*, *Fagraea salticola*, *Dacrycarpus cinctus*, *Casuarina oligodon*, *Araucaria cunninghami*, *A. hunsteinii* and *Castanopsis acuminatissima*. Three tree crop species have also been successfully propagated: *Ficus damaropsis*, *Ficus copiosa* and *Pandanus julianetti*.

*Activity 3.2: Planting of native tree species in place of exotic species incorporated into land use plans by March 2018 with community nursery output exceeding 3,000 weather hardened native seedlings per community per year by project end.*

**Underway:** Native tree planting in place of exotics has been incorporated into land use plans. Based on numbers of seedlings in nurseries, we are on track to exceed 3,000 weather hardened seedling per community per year by project end.

#### **Objective 4. Sustainable use of existing forest stands within remaining areas of native forests and planted areas of exotic trees**

*Activity 4.1: Work with local CBOs to reduce the number of native trees harvested compared to number of exotic trees harvested from already existing forest stands (Note: the aim is to shift stand diversity towards native trees by removing exotics.)*

**Underway:** Reforestation projects have been supported with enthusiasm in each community. This has seen the removal of introduced vegetation communities and its replacement with native trees. WCS is working with the KGWan community to institute a ban on growing introduced species in their intact forest area. At present, some members of the community have been planting *Eucalyptus* spp. in this area.

**Change request:** Due to the slow growth of trees and because enumerating trees felled on a daily basis is not feasible (given the extensive areas and large number of subsistence households), we suggest changing indicator 4.1. Through working with the communities we have also realised that the focus on incentivising the harvesting of introduced trees is unnecessary, as the communities are already strongly incentivised to harvest introduced trees given their higher market value and utility for house building. Therefore, while there is not a need to incentivize the harvest of introduced trees, there is a need to place limits on the growing of introduced trees so that they do not colonise intact forest areas. We therefore suggest the following change to indicator 4.1: "Through the land-use planning process the planting of invasive species in intact forest areas is banned in at least 1 community"

*Activity 4.2 Secure more than 500 hectares under sustainable forestry practices as compared to baseline by March 2019*

**Underway:** We have begun discussions to secure an area in excess of 500 hectares where sustainable forestry practices are ensured (minimum width of trees which can be taken, all trees of a certain species in one area cannot be taken, invasive species cannot be grown).

*Activity 5.1: Produce school curricula capturing local ecological knowledge in 3 primary schools in the project area by September 2017*

**Achieved.** Supplementary curriculum support materials (7 posters combined with teachers guide and lesson plans) have been developed and printed for the Upper Primary "Making a living" syllabus.

*Activity 5.2: Measure an increase in the number of school children that learn about their local culture and traditional ecological knowledge by March 2019*

**Underway.** Baseline monitoring of student knowledge has been undertaken at a school in each community. The supplementary curriculum has been distributed and follow-up surveying will occur before the end of the year.

#### **Objective 6. Minimizing impacts on hunted species by preserving local costumes and reviving traditional tambu (no hunting) areas.**

*Activity 6.1: Promote the uptake of improved preservation methods for fur and feathers in traditional costumes (termed bilas in tok pisin)*

**Achieved.** A total of 1129 bilas protection kits consisting of heavy duty plastic, butcher papers, camphor mothballs, and Tok Pisin instructions have been distributed.

*Activity 6.2: Work to increase the area or number of tambu sites created or re-established in the project area by March 2019, or other compatible traditional management methods*

**Underway.** Surveying has revealed that tambu areas, as defined in other PNG communities, were not used customarily in the project communities. However, in the past, certain areas have had restrictions on them which limit or prevent trees from being harvested. We are working with KGWan to re-establish these laws before the project ends.

*Activity 6.3: Conduct baseline and end threshold surveys for key biodiversity indicator species, and establish monitoring procedures for birds of paradise.*

**Achieved.** Baseline and end monitoring completed at Danbagl, Womkama and Miruma. GIS database set up to store sightings established. Each site received two weeks of monitoring incorporating: 1) distance sampling transects for birds, 2) camera trapping transects, 3) mist netting for birds, 4) village threshold surveys, and 5) hunter interceptions.

**2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

In June 2018, Topyy Sundu, the founder and CBO leader of IRRM, was attacked by members of his community. The resulting community tensions have limited WCS' ability to work in the community. Nonetheless, the IRRM silviculture and agricultural assistants continued to consult with WCS and advance their work. Community tensions appear to be easing, with a new board elected to oversee IRRM and Topyy Sundu voluntarily resigning as CBO leader. WCS has visited the site and expects to be able to resume regular visits with to the community from November. If this occurs we will be able to continue our program without having suffered a substantive setback.

**2b. 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:	Yes (submitted in separate email)
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  Estimated underspend: £

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

As outlined above WCS will submit a change request at the same time as this report to change activities 1.3 and 4.1.

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. Additionally, if you were funded under R24 and asked to provide further information by your first half year report, please attach your response as a separate 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 send your **completed report by email** to Eilidh Young at [Darwin-Projects@ltsi.co.uk](mailto: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: 22-035 Darwin Half Year Report**