

## Darwin Initiative/Darwin Plus Projects Half Year Report (due 31<sup>st</sup> October 2021)

<b>Project reference</b>	26-002
<b>Project title</b>	Integrating conservation and health in Papua New Guinea's vulnerable rainforests
<b>Country(ies)/territory(ies)</b>	Papua New Guinea
<b>Lead organisation</b>	University of Sussex (UoS)
<b>Partner(s)</b>	<ul style="list-style-type: none"> <li>• New Guinea Binatang Research Centre (BRC)</li> <li>• Wanang Conservation Area (WCA)</li> <li>• Institute of Medical Research (IMR)</li> <li>• International Institute of Environment &amp; Development (IIED)</li> </ul>
<b>Project leader</b>	Prof. Alan Stewart (Univ. Sussex)
<b>Report date and number (e.g. HYR3)</b>	HYR3
<b>Project website/blog/social media</b>	<a href="https://twitter.com/Surfaces_PNG">https://twitter.com/Surfaces_PNG</a>

**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).**

We report here only on those outputs and activities for which progress was expected in this half-year reporting period. Please refer to previous reports for details on activities already completed.

**Output 1: Community health and health service provision for Wanang and surrounding communities has been improved, managed by a new community committee with equal gender representation (workstream 1).**

*1.4 Construct Aid Post, equip it, stock it with medicine, and recruit a nurse.*

The Wanang aidpost has been in operation since its registration on 13/08/20 by the Provincial Health Authority (registration code 13060813), with a full stock of medical supplies, some of which were donated by the Rotary for Malaria, through the PNG Institute of Medical Research. The Aid Post is serving its purpose under the current nurse, who continues to do an excellent job to improve health in Wanang and neighbouring communities. Due to personal reasons, the current nurse has resigned her position, effective from 26/11/21. A replacement nurse has been appointed and is working alongside the current nurse and will continue to do so for at least one month to ensure a smooth handover. She has yet to be added to the government payroll but has submitted her application to the provincial health authority to be on a regular salary paid by them. A house for the nurse, her husband and family is currently being built in Wanang by the community.

*1.5 Establish and train community health committee.*

The health committee continues to support the nurse and make sure the Aid Post is operational without any issues, especially at the community level. They also continue to receive training from BRC on the conduct and recording of meetings. The committee has regular monthly meetings under the leadership of the chairman, who is young and very active in all matters of the Aid Post, including supporting the nurse on medical patrols to neighbouring communities.

*1.6 Nurse staffed Aid Post receives and treats patients, maintains patient records.*

The nurse continues to treat patients within Wanang and neighbouring communities, some patients walking for 1-2 days for treatment. This demonstrates that the source area from which patients are coming to the Aid Post is still expanding. Regular monthly checks are taken to ensure that the Aid Post is properly stocked with medicines. High quality data on patient presentations and treatments continue to be recorded by the nurse, although this takes a considerable amount of her time to log.

## **Output 2: Wanang conservation Area has been upgraded and expanded with improved attitudes to conservation in new partner communities (workstream 1)**

*2.5 Establish buffer zones of 3,000ha of selectively logged forests with indigenous landowners, map with GPS verified boundaries, and declare in operation by WCA.*

A total of four communities, Yawak, Wel, Kesala and Musak, have allocated portions of their forests as buffer areas for the Wanang Conservation Area. Previous land issues in these communities have been resolved and boundary surveys have been conducted for Yawak (426 ha), Wel (399 ha), Koromasarik (513 ha) and Musak (area tbc). This will increase the total area of the buffer zone to exceed the target of 3000 ha by a considerable margin. A few communities, including Tupsakang, Iran and Gesa, who had participated in the first attitudinal survey later decided not to participate in the biodiversity survey, but nevertheless are interested in conserving some of their forests as part of the buffer area. We will map the boundaries of their designated portion of forests in November.

*2.6 Record and analyse vegetation community composition yearly in the buffer zones.*

Buffer communities at Musak, Wel and Koromasarik were not surveyed and reported on in the annual report due to land disputes. However, consensus amongst the communities has been reached and surveys have now been conducted in their forests (Fig.1). Results for bird communities (extra information) at Musak, Wel and Koromasarik and botany data for Musak and Wel have been databased. Resurveys of vegetation in the buffer zones for all communities has now started with Yawak and Musak. Resurvey of vegetation and bird communities at Wel and Koromasarik are scheduled for January 2022.



Fig.1. Vegetation survey in the Koromasarik buffer area by BRC staff and locals.

*2.7. BRC staff carry out forest inspections every six months of new no-impact conservation area, two additional primary forest fragments, and 3,000ha buffer zone forests.*

The new no-impact conservation area, the two new primary forest fragments and the Yawak buffer zones were inspected in September as part of regular 6-monthly inspections. There were no signs of human disturbances within and around these areas, although there was evidence in the no-impact zone of disturbance gaps in forest cover due to natural tree fall. Forest inspections for other buffer communities, including Musak and Wel, are due to be done in early November and Koromasarik in March 2022.

*2.8 Collect and analyse household survey data on attitudes to conservation in buffer zone communities outside pre-existing WCA boundary and agreements, before and after health intervention.*

Data from the first survey has been databased and uploaded into the Sussex cloud folder ready for analysis. The resurvey on attitudes to conservation is planned for December 2021 and January 2022 to allow sufficient time for full analysis of the results before project end.

## **Output 3. Knowledge and understanding of the health and well-being benefits of forest conservation amongst school pupils and partner villagers has improved (workstream 2).**

*3.1 Produce curriculum and materials for school and community level educational programmes on health and well-being benefits of forest conservation.*

The curriculum has been finalized with the support of the Research and Conservation Foundation (RCF), an NGO specializing in conservation education.

*3.2 Provide educational programme in Wanang School (c250 pupils, 35% female), making any necessary improvements to programme following delivery.*

Pre-tests have been given to students in Wanang (Fig.2), followed by the teaching of the education material. The post-test has been scheduled for November. There was slow progress in producing the curriculum at the beginning of the project as well as disruption to the schooling years by Covid-19, both of which have caused delays in the curriculum roll-out. Consequently, we have advised the schools to teach the curriculum to Grade 7 students and not the Grade 8 students as originally planned, because any continued teaching or post-teaching tests would be done in 2022, by which time the students will be in their 8<sup>th</sup> grade anyway.

Many primary school teachers were keen on the educational programme that we provided because it provides them with teaching materials that they currently lack. A meeting with the provincial education department to discuss the educational activity is planned for the end of November, by which time we will have some feedback on the curriculum after the teachers have taught it in class.



Fig.2. Wanang pupils taking the pre-test before the delivery of the education material.

*3.3 Provide educational programme in BRC network of 5 village schools (c750 pupils, not in the new buffer zone), making any final necessary improvements to programme following delivery.*

Teachers from all partner schools, including in the villages of Ambarina, Malmal, Ohu, Baiteta and Sinopass, have shown tremendous support and interest in teaching the curriculum material to their students. Pre-tests have been sat by the students, or will be sat in early November, after which the teachers will teach the material.

*3.4 Provide educational programme in BRC partner communities across PNG (c5000 pupils), making any necessary improvements to programme following delivery. See 3.3*

On the basis of our experiences with delivery of the educational project in schools in the BRC network of villages, we will assess what the best strategy would be to roll out the curriculum in other schools in Madang province, and then subsequently to other provinces in PNG although the latter is unlikely to be possible within the timeframe of the project.

#### **Output 4. New evidence has been produced on the interlinkages between logging, forest conservation, health, well-being, and livelihoods in PNG, and tropical rainforests globally (work stream 3)**

*4.1 Collect and analyse health, well-being, and livelihood data from 10 villages with forests that are either (i) intact, (ii) logged, or (iii) with ongoing logging*

Masters student Ben Ruli has collected livelihood data from 11 remote villages, involving a total of 438 interviews and taking ten weeks to complete. Selection of some of the focal villages had to change due to local disputes, but relations with the current participating communities are now very good. Health and wellbeing data will be collected in the same communities by the end of 2021; this work will be done by the Wanang nurse in collaboration with an external clinician.

*4.2 Collect and analyse biodiversity data from 10 sites also visited for 4.1.*

Collection of biodiversity data (on birds, butterflies and plants) at these sites will commence in November.

*4.3 Systematic review of efficacy of integrating health services into tropical forest conservation projects worldwide.*

We have completed a global mapping of projects that integrate health service provision and biodiversity conservation, collecting and synthesizing data on where they are/were, what they have been doing, and what data are available about them. We expect the results to be published Open Access in *The Lancet Planetary Health*.

#### **Output 5: Capacity has been expanded, and gender balance improved, in PNG environmental and health research (workstream 4)**

*5.1 Train 14 para-ecologists over 3 years in biodiversity survey methods. Total 280 person- days of training.*

Ongoing training of para-ecologists at BRC continues.

*5.2 Train 25 BRC staff and students in 'Wilderness First Aid - Advanced'. Two courses at BRC HQ and field sites for a total of 25 BRC staff and students (all PNG nationals, 25% female).*

Training of a further 15 BRC staff and students had been postponed due to the COVID-19 pandemic that prevented Jo Middleton (trainer) from travelling to PNG, but this activity is now planned for early 2022.

5.3 Train 5 BRC & 1 IMR research staff in UK. 1-month intensive training in: biodiversity survey; conservation project evaluation; ecology; microbiology; evidence synthesis and meta-analysis; rapid anthropological assessments; health research. Visits to partner institutions.

The visits by one BRC para-ecologist and one clinician (lead IMR contact) for training in the UK had been planned for Sept/Oct 2021. However, due to the considerable extra expense and quarantine time imposed by government rules at the time, we decided to postpone the visits to early 2022.

5.4 Supervise research projects by 1 MSc student for 2 years and 1 BSc Hons student for 1 year based at the University of PNG.

Masters students Daniel Okena and Gabriel Petuel submitted their dissertations to their university (PNG University of Technology) in July and expect to graduate in March/April 2022. Ben Ruli has completed the field survey of health, wellbeing and livelihoods in a total of 11 remote communities (Activity 4.1) and is contributing to the systematic review (Activity 4.3), as well as working on data entry and processing.

**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.**

None

**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.**

The COVID-19 pandemic has continued to prevent us from bringing two visitors (1 BRC paraecologist and 1 IMR clinician and lead IMR contact) to the UK for advanced training in 2021. We have rescheduled these visits for early 2022, although dependent upon any new developments with the pandemic both in PNG and the UK. Jo Middleton has been unable to travel to PNG for the same reason to complete the training in Wilderness First Aid that was planned for the remaining 15 people, but he plans to do so in early 2022. Finally, widespread disruptions to schools have affected our plans to roll out the new educational programme. The effect of this will most likely be that, whilst we will be able to complete our plans at Wanang school and partner schools in the Madang area, it is unlikely that we will be able to expand the programme in the remaining time left to other parts of PNG as originally planned.

**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: Yes/No

Formal change request submitted: Yes/No

Received confirmation of change acceptance Yes/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: £

**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?**

No.