

Progress report

HONKO Mangrove Conservation & Education Project in SW Madagascar

Alternative livelihood program

1- Aquaculture program

After the evaluation of the first three month trial period, it was decided to take a new approach and collaborate closely with the Institut Halieutique et des Sciences Marines (IH.SM) to develop and implement the tilapia farming project within the vondro wetland complex. With this additional technical support, the project should be more successful, as it was seen that the villagers and support staff didn't had the full technical knowledge to have good results. An action plan has been drafted by Honko and IH.SM that addresses the issues of species choice, food source, feeding regime and community involvement from the start.

The first objective that is being implemented at present is to assess the viability of two potential tilapia stocks. One will be obtained from a local source to the south of Ambondrolava and the other is a specially grown at IH.SM. This stage consists of 16 replications in total, eight for each species. Within each species they will be tested under two environmental conditions; either in floating 3mx3m mono-specific *cages* in a large pools (two pools containing four cages in each with a 50/50 species split) or in individual 3mx3m mono-specific *pools* (eight pools, four for each species). This stage began in November 2012 as there was a delay to obtain the required number of stock fish from the IH.SM.

The second stage has also started and studies the most efficient food product, in terms of quality of fish produced against cost of product. We are also in the process of gathering market data from both the first test and other reviews so as to achieve optimum size to value ratio of the tilapis.



2- Vannerie/apiculture program

The local artisanal craft shop is fully completed and operational, which allows the association to best sell their products. There is also continued support from Honko to help continually develop the vanneire skills of the women involved. This allows the creation of better quality bags and a larger selection of designs; so improving the chance of sales and increase the income from this alternative livelihood.

After initial success of this alternative income program there has been an expansion at the supply level through the establishment of three more bee hives. This will allow the supply to better meet the demand being experienced, as certain hotels have expressed serious interest only if we produce enough honey.

Furthermore the women association is now fully responsible for the whole value chain of the honey products being sold in the shop and to the surrounding hotels. This means that they are responsible for distribution into jars and labelling for sale, but benefit from the increase in the profit they now receive from the product. This will allow them to reinvest and in future further advance their business.

The women are also taking part in French lessons being taught by Paulette, one of Honko's socio-organisers. This skill is important to improve as it will help them communicate with the majority of tourists who visit the shop, as most are French speaking. The ability to provide more information and background on the products adds to the 'experience' tourists receive when visiting Honko, as it elevates a normal bag to an item that has a story behind it and so potentially increase sales for the women's association.



FIGURE 1: SHOWING INSIDE THE ARTISANAL SHOP WITH THEIR SELECTION OF BAGS MADE FROM THE LOCALLY GROWN VONDRO.



FIGURE 2: PHILMON AND JOSEPHA CHECKING THE BEEHIVES AT HONKO TO ASSESS IF READY TO HARVEST THE HONEY.

Mangrove reforestation program

At the beginning of March 2012, the regional day of reforestation in south-west Madagascar took place at Honko, during which 10,000 mangrove propagules from the family Rhizophoraceae were directly planted in one plantation. After this regional day there was the national day of reforestation (20th April) where students and officials visited the Honko site and were involved in planting workshops and introduced to the mangrove environment and the issues threatening them.

World mangrove celebration day

On the 26th July Honko hosted a day of mangrove orientated activities involving many people such as various officials including the director of DREF, the mayor of Belalanda, the president of the region and representatives from WWF, FAMARI, reef doctor and blue ventures, also of course, members of the VOI Mamelon Honko and people from the five villages involved in the project.

The day consisted of speeches from the authorities and the president of the VOI on the importance of mangroves and the development of sustainable livelihoods. This was followed by demonstrations of practical planting in the mangrove of the *Avicennia marina* and interactive planting of 100 plants.

There were also fun activities, including pirogue racing in the mangrove channel between three villages, *Ceriops* planting race between the women of different villages, dancing competitions and the final of a week-long football tournament.

Development of mangrove education centre

The education centre is devised to provide a designated area where any form of lessons can take place, be they for school groups, project students or for children from local villages. It gives a focus point for the delivery of education on the important issues associated with the project as a whole. This is much needed as without the basic education on and around the subjects of the environment, sustainable living, ecosystem services and the potential future of the forest it is much harder to gain peoples support for new (and perhaps bolder) projects.

The initial stage of construction started in April, during which the main structure was erected with the first wall level being built from sand bags and the roof a traditional vondro thatch.

Work on the final stages of the project began in September, with the fitting of the doors, levelling off the floor, application of render to the walls. Construction of the second wall level (built of a wooden frame and using bamboo laticing) is currently incomplete due to delay in obtaining materials and our builder being unavailable for a number of weeks (this will be finish as soon as is possible, dependent upon materials and worker).



FIGURE 3: EXAMPLES OF THE ACTIVITIES DURING THE CELEBRATIONS; LEFT IMAGE IS FROM THE DANCING COMPETITION AND RIGHT SHOWING A SOLDIER PLANTING A MANGROVE IN THE ENVIRONMENT.



FIGURE 4: THE EDUCATION CENTRE DURING ITS CONSTRUCTION PHASE, AWAITING MATERIALS FOR THE FINAL SECOND STAGE OF THE WALL BEFORE IT IS COMPLETE. THE TOP IMAGE SHOWS THE MAIN CONSTRUCTION WORK COMPLETE WITH DOORS, THE LOWER IMAGE IS AFTER RENDER HAS BEEN APPLIED TO THE BAGS THAT WERE USED IN THE BUILDING.

Bioenergy nursery created

In August/September 2012 the nursery underwent a renovation to increase the efficiency of the space and create of an area for an alternative wood plantation. This project is implemented with a view to reduce the strain on mangrove wood resources by providing a fast growing viable alternative. Initial plans were to use *Casuarina epuissetifolia*, however first pilot tests showed low survival rate of small seedlings and investigations into obtaining larger (more viable) individuals showed few nurseries locally and proved too expensive.

The final species were chosen due to their success in the environment of the SW region of Madagascar; *Acacia mangium* (advised by the fuel wood project of WWF on its suitability and obtained seeds from them directly) and the other is of the genus *Albizia* (selected based on local knowledge and its established use in construction and fuel). For each species 400 bags have been planted, with three seeds in each to increase the germination success of each individual bag. These 400 were split into two groups of different soil compositions:

- Red sand, white sand and fertiliser (zebu excrement) in equal parts.
- White sand and fertiliser (zebu excrement) in the ratio of 2:1 respectively.

These were chosen to reflect the local occurrence of substrate composition and so better reflect the natural conditions the plants will be subject to upon transplanting. If no difference is noted between the two then it is advisable in the future to use solely white sand with fertiliser as it will remove the cost and effort induced with obtaining the red sand. It is important that the nursery has been started now (September) as best results for growth and transplantation success are closely linked with the start of the wet season; with a recommend (Fuel wood WWF) minimum 4 month growth period in the nursery and optimum transplanting at the start of the wet season it is an ideal time.

The mixing of soil, preparation of bags and planting of seeds was carried out with help from various people from Ambondrolava. During this there was exchange of ideas with input from Honko and local knowledge on the best techniques for each stage.

The project is monitored mainly by the designated local guides who water every morning and evening with the determined amount of water. They will also be responsible for record keeping of germination, growth and mortality in the nursery, data which will be used to increase success and efficiency in the next cycle.



FIGURE 1: EARLY GERMINATION IN OUR ACACIA NURSERY, THAT WILL USED AS AN ALTERNATIVE WOOD SUPPLY TO THE



FIGURE 3: MIXING OF THE THREE COMPONENTS USED IN THE SOIL CONTAINING RED SAND; READY TO BE PUT INTO THE PLANTING BAGS THAT ARE USED IN THE NURSERY.



FIGURE 2: ARRANGING OF THE PLANTED BAGS INTO A GRID FOR EACH SPECIES (WITH SEPARATE RED AND WHITE SAND COMPOSITIONS) TO ALLOW FOR EASY AND ACCURATE RECORD KEEPING.

blue ventures
discovery through research



Plan Vivo (Plan for Life)

This initiative is focused around local communities in developing countries and them taking advantage of payments for ecosystem services; namely carbon sequestration, and so promoting the protection of the often fragile and abused ecosystems around them.

This project is being carried out in collaboration with Blue Ventures Conservation who are providing technical guidance and acting as Project Co-ordinators for the implementation of Plan Vivo.

The first step of this project is to get the community involved and this begins with a meeting of the VOI bureau. This took place at the end of September with members of Honko, Blue Ventures Conservation, VOI bureau and representatives of the women's association (these were invited to try and obtain a more representative view; as the VOI bureau is predominantly men).

At the meeting discussions began with what the land use of the area was before the arrival of Honko and what it is like at present (this includes all the projects that have been implemented). This was done interactively with the people at the meeting through smaller group discussion and the production of maps from each showing their view on the past and present. After this a larger discussion was held in regards to the benefits, challenges (possible solutions) and the introduction of Plan vivo. Following this once again we used



FIGURE 4: EXAMPLE OF ONE GROUP FILLING OUT LAND USE INFORMATION ONTO A MAP.

smaller groups to produce maps of what *they* would like to see happen/projects to implement around *their* resources (this is a crucial standard in the plan vivo).

At each stage there was a great response, with all attendees being involved and contributing. The maps produced are invaluable as an information source of the past and as an insight into the way in which the community want to manage their resources. This is a great start to this project and paves the way for plan vivo projects to exist at Honko.



FIGURE 5: GROUP DISCUSSIONS ON THE DIFFERENT LAND USES BEING FILLED IN ON THE BLANK MAPS. THE MEETING IS TAKING PLACE IN THE SOON TO BE FULLY COMPLETED EDUCATION CENTRE AT HONKO.

From this first step many more need to be taken including the involvement of the whole community of the Honko region through a series of workshops, data collection on the amount of carbon stored within the system and talks with local authorities, to name a few. Although this is still in the very early stages it is a very important step towards changing the way local people think and how they view the mangrove ecosystem, hopefully it will help to improve both the environment of the area and the lives of the people that depend upon it.

A comic and an adapted presentation has been developed demonstrating the benefits of sustainably managing the mangrove ecosystems and these will be utilized during village discussions and awareness campaigns.