CEPF FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Centro Terra Viva – Estudos e Advocacia Ambiental									
Project Title:	Leatherback and Loggerhead Marine Turtle Conservation Programme, Southern Mozambique									
Date of Report:	30 October 2013									
Report Author and Contact Information	Cristina Louro cristinammlouro@gmail.com Raquel Fernandes rakelsf.mz@gmail.com									

CEPF Region: Maputaland-Pondoland-Albany Hotspot

Strategic Direction: 1. 1. Strengthen protection and management in under capacitated and emerging protected areas in 3 priority key biodiversity areas 1.2. Support public-private partnerships and civil society initiatives to enable effective management of marine protected areas in the Ponta d'Ouro Marine Partial Reserve in Mozambique.

Grant Amount: US\$49,329.00

Project Dates: 1 June, 2012 to 31 August, 2013

Implementation Partners for this Project (Please explain the level of involvement for each partner):

<u>Ponta do Ouro Marine Partial Reserve (POMPR)</u>: POMPR provided support by organizing preseason meetings with different field partners, distributing monitoring material, providing everyday logistical and technical support to field monitors, especially during nesting season, collecting of monitoring data from the different project partners, contributing in the payment of salaries to monitors, providing the use of vehicles for field patrols. Regarding the educational awareness activities, POMPR provided support through the establishment of direct contacts with all schools, provided transport to Ponta do Ouro, Ponta Malongane and Ponta Mamoli schools and was actively involved in educational awareness talks and beach coastal clean-ups.

<u>Dolphin Encounters, Parque de Malongane, White Pearl Resort and Machangulo</u> <u>SA</u> – these field partners were responsible to coordinate monitor's beach patrols for the sections allocated to them and beach coastal clean-up. Machangulo SA also assisted in the logistical aspects for the awareness talks in Machangulo schools. <u>Maputo Special Reserve</u> – provided support to coordinate with the local leader (Régulo) in the identification of 7 community members to participate in the marine debris-recycling course and to produce handicrafts.

<u>Kukula Association</u> - provided support for the 7 community members that participated in the training for an experience exchange visit to their association and was also involved in the beach coastal clean-up.

<u>Marine turtles monitors</u> – 46 members from the nearby local communities were involved in the 2012 - 2013 nesting season in Ponta do Ouro Marine Partial Reserve.

<u>Community members</u> – As mentioned 7 community members from Ponta do Ouro and Ponta Malongane received training on reutilizing solid marine debris to produce handicrafts. Children from 8 schools within the POMPR were involved in the programme through awareness talks, drawings and articrats.

<u>Museum of Natural History and Eduardo Mondlane University</u> – The NHM and UEM were involved in the programme through volunteer students that helped by spreading educational messages about marine turtle conservation, photos, organization of an exposition of the materials produced by school children.

Conservation Impacts

Please explain/describe how your project has contributed to the implementation of the CEPF ecosystem profile.

The project focused on the conservation of marine turtles, *Dermochelys coriacea* and *Caretta caretta*, classified has endangered marine species. As a result, the project contributed to strengthen the protection and management of marine turtles at the Ponta do Ouro Marine Partial Reserve (POMPR). More precisely, the marine turtle monitoring beach patrols have allowed for greater enforcement in the area. For example, to stop driving on the beach or using fishing nets. The success of this effort for conservation was only possible by partnerships made along the coast. One such partnership was with private sector, mainly tourism lodges and public in general that whenever necessary, communicate any irregularities to the POMPR authority.

Please summarize the overall results/impact of your project.

As mentioned earlier, the project contributed to strengthen the protection of marine turtles and its nesting grounds through the consolidation of the marine turtle monitoring and conservation programme at POMPR. For the 2012/13

nesting season, the project enabled the continuous collection of monitoring data (e.g. tagging, biometrics, number of tracks and nests). The data was introduced in the new and improved marine turtle database to allow the exchange of information between sites at a national and regional level. Another expected result was the elaboration of the sixth Mozambique Marine Turtle National Report.

Regarding the environmental education awareness component, marine turtle talks and essays with pupils were done in 8 schools from the Matutuíne District. Marine Turtle World Day and the International Coastal Cleanup were also celebrated by raising awareness on the needs of conservation of protected species and coastal ecosystems. Posters and flyers were printed and distributed within POMPR to raise more awareness. The training on reutilizing solid marine debris to produce handicrafts for community members of Ponta do Ouro and Ponta Malongane aimed to show that people can create souvenirs and useful home decorations with marine waste materials. A craft fair was organized in the village of Ponta do Ouro where several people, residents and tourists came. These fair showed that art crafts is attractive and can have a small market in the region. For that, it is required to guarantee product quality and create messages with a link to POMPR or for species conservation.

Planned Long-term Impacts - 3+ years (as stated in the approved proposal):

- 1. Loggerhead and leatherback marine turtle females, nests and habitats fully protected and monitored in the POMPR;
- 2. Increase of economic benefits for local communities within the POMPR through a well organized and planned nature-based tourism industry;

Actual Progress Toward Long-term Impacts at Completion:

Planned Short-term Impacts - 1 to 3 years (as stated in the approved proposal):

- 1. At least, 200 loggerheads and 20 leatherback marine turtles monitored and tagged;
- 2. Marine turtle mortality reduced by 10% when compared to the 2011/2012 nesting season;
- At least 200 members of local communities living within and in adjacent areas more actively involved in the conservation of marine turtles through monitoring, informing about females and nests sightings to authorities and monitors and creating alternative sources of income through marine turtle based tourism;

Actual Progress Toward Short-term Impacts at Completion:

Please provide the following information where relevant:

Hectares Protected: 67800 Species Conserved: Leatherback (*Dermochelys coriacea*) and Loggerheads (*Caretta caretta*) Corridors Created: -

Describe the success or challenges of the project toward achieving its short-term and long-term impact objectives.

Short-term Impacts

1. At least, 200 loggerheads and 20 leatherback marine turtles monitored and tagged;

As mentioned earlier, the project contributed to strengthen the monitoring and conservation activities of marine turtles in 90 km of the POMPR coastline. In relation to the 2012/13 monitoring season the following were recorded: 1273 loggerhead and 53 leatherback tracks; 1905 loggerhead and 38 leatherback nests; 173 loggerheads and 6 leatherbacks tagged. The number of turtles tagged was below the expected, but the difference may be due to the normal fluctuation.

2. Marine turtle mortality reduced by 10% when compared to the 2011/2012 nesting season;

Although great effort was made during the beach monitoring patrols and daily routine enforcement by the POMPR authorities, local fishermen, between Ponta Malongane and Ponta Dobela, killed a loggerhead turtle. The POMPR authorities have identified the people involved and have arrested them.

 At least 200 members of local communities living within and in adjacent areas more actively involved in the conservation of marine turtles through monitoring, informing about females and nests sightings to authorities and monitors and creating alternative sources of income through marine turtle based tourism;

Marine turtle monitors are part of the communities living within the POMPR. Through the project, 16 monitors received a salary during the period of 6 months. For the marine turtle community monitors being part of the marine turtle program, under the umbrella of the POMPR, as resulted in greater recognition by community members and tourists. The marine turtles educational activities were an attraction to the children, specially the drawings and the interactions in smaller groups. Through the educational programs made in 8 schools, from coastal areas of Matutuíne, 363 pupils and 24 teachers participated in awareness talks and received flyers and materials for drawing to keep on transmitting the conservation message.

It is unambiguous that local people need to find alternatives to raise income. The increase of marine solid debris in the area plus the lack of a waste management is of great concern. So, it was organized a training course to teach how to create art-crafts from solid marine debris, that could be sold as souvenirs in the local market. The course counted with the presence of 7 community members from Ponta do Ouro and Ponta Malongane. To evaluate the potential market, it was organized a crafts fair in Ponta do Ouro village. The visitors enjoyed the exposition but also provided recommendations for improvement.

Long-term Impacts

3. Loggerhead and leatherback marine turtle females, nests and habitats fully protected and monitored in the POMPR;

The long term impact is still a everyday challenge because in order to guarantee that marine turtles and their habitats are fully protected, the POMPR as well as the marine turtle programme need to have long – term financial sustainability. These financial sustainability needs to come, not only from donors and private sector, but above all, from Government. And however, the resources are yet scarce. Another aspect that is a greater challenge, are the continuous pressures marine turtles face both in land and at sea from costal development and fishing pressures from both the illegal and commercial fishing fleets.

4. Increase of economic benefits for local communities within the POMPR through a well organized and planned nature-based tourism industry;

Although, and as mentioned above, communities are involved in the marine turtle program, through the hiring of approximately of 50 monitors (payments are made by the POMPR, field partners and CEPF), through awareness talks and through trainings on alternative sources of income, we tend to believe that this component in the program still as a long way to go. Because, although these community members are involved and understand the ecological, economical and social value of marine turtles, another greater majority of the community members or are not interested or simply have other priorities, and don't see the long term benefits or simply do not agree with the fact that marine turtles are protected and that they are not allowed to eat it. So it is a continuous work that needs to be addressed with total care and dedication through ongoing education programs for local communities and tourists, the creation of incentives for the community to establish fair market in tourism (restoration, houses, diving etc) and to raise of alternative sources of income for local communities.

Were there any unexpected impacts (positive or negative)?

Overall, we tend to believe that there were no unexpected impacts.

Project Components

Project Components: Please report on results by project component. Reporting should reference specific products/deliverables from the approved project design and other relevant information.

Component 1 Planned: Refresher Training Course Component 1 Actual at Completion:

1. Marine turtle monitors informed about the results of last season: With regards to disseminating previous monitoring data, POMPR authority highlighted the concern that some community members might misunderstand the high numbers presented which could, if not well made, jeopardize six years of work.

2. Approximately 30 marine turtle monitors trained: POMPR authority recommended, that instead of the two day refresher training course at the beginning of the season, as previously planned, training sessions should be given during the nesting season beach patrols. For this project, the refreshmenttraining course integrated a theory session for marine turtle biology and behavior, spatial distribution, monitored numbers of tracks, nests and tagged turtles. The practical session was more a hands on approach and refreshment of the monitoring techniques applied. But because most monitors have basic elementary schooling, it would be difficult to have them listen and assimilate all there is during the theory sessions. As a more practical alternative, that the training be made during the beach patrols with monitors. This approach was also to guarantee the guality of the data collected. Therefore, the training sessions, occurred in the the following beaches: Ponta do Ouro, Ponta Malongane, Ponta Mamoli, Ponta Dobela, Ponta Milibangala, Ponta Matonde and Ponta Mucombo. Several monitoring techniques were explained and clarified such as: the appropriate time to tag a nesting female, when to use lights, how to approach a marine turtle, and how to guarantee proper tagging. A field report was produced (See attachment)

3. Monitoring material distributed: Monitoring material such as tags, notebooks, pencils, lights, batteries, raining coats, t-shirts and caps were bought and handed to the POMPR authority that made the respective distribution to the field partners and marine turtle monitors.

Component 2 Planned: Marine Turtle Monitoring and Tagging Component 2 Actual at Completion:

1. At least 200 loggerhead and 20 leatherback marine turtles tagged;

2. At least 1500 loggerhead and 100 leatherback tracks registered;3. At least 800 loggerhead and 100 leatherback nests registered;

The project supported the 2012/13 nesting season, enabling to collect data from tagging and biometrics (173 Loggerheads and 6 Leatherbacks), number of tracks (1273 Loggerheads and 53 leatherbacks) and nests (632 loggerheads and 38 leatherbacks). The numbers were bellow the estimates made for the product deliverables, that were made based on last season results. Unfortunately its too early to present the reasons behind this decline as it is too early to predict trends and these fluctuations can be normal and a related to the fact that inter-nesting periods can vary from 2 to 3 years.

5. Marine turtle data compiled and entered into the database;

6. Proposals for the upgrade of the database prepared and submitted;

A contract was made with a consultant to prepare the new marine turtle database in easy to use Access. The database has been prepared and is currently under use and in a testing phase (See attachment).

4. Nesting season marine turtle data collected and organized;7. Nesting season report produced and disseminated;

Data from the 2012/13 season from the different programmes occurring along the coastline of Mozambique was requested and compiled. And resulted in the production and dissemination of the national report: Monitoring, Tagging and Conservation of Marine Turtles in Mozambique: Annual Report Report 2012/13 (See attachment bellow).

Component 3 Planned: Awareness Talks Component 3 Actual at Completion:

1. Local community members informed about the results of the last nesting season: With regards to disseminating previous monitoring data, POMPR authority highlighted the concern that some community members might misunderstand the high numbers presented which could, if not well made, jeopardize six years of work.

3. Community members and tourists more involved and supporting the marine turtle monitoring and tagging programme (e.g. trough the greenline or directly contacting marine turtle monitors or POMPR officials): The project tends to believe that this delivery was achieved indirectly by all the work done through awareness talks in schools, with school children and teachers, field monitors, reserve rangers, and with the educational and awareness material distributed and with the training made, that, in the long-term, communities and tourists will start supporting the marine turtle programme. However, with regards to the greenline number, and although the green line number is on the leaflets distributed, almost no call were received informing of tagged or stranded marine turtles.

4. Educational material produced and distributed (e.g. 15 posters, 60 t-shirts, 60 caps, and 150 educational leaflets) among community members, tourists and monitors;

The educational material produced was, and because funds allowed: 20 posters, 100 t-shirts and 970 leaflets. The posters addressed information on the biology and ecology of marine turtles, threats and conservation measures. The t-shirts showed the logos of the partners involved in the marine turtle monitoring and conservation programme and the leaflets on the lighting issues (See attachment).

5. Report on the awareness talks and meetings produced;

Three reports on awareness talks and meetings (Report 1: Ponta do Ouro, Ponta Malongane, Ponta Mamoli; Report 2: Ponta Milibangalala; Report 3: Machangulo) were produced (See attachment).

6. At least 50 volunteers involved in the coastal clean-up, 800 kg of debris collected and report produced

This planned activity did not occur as planned due to weather conditions. However, at least 10 community members participated. No data was collected.

7. School children involved in the Marine Turtle World Day Activities (e.g. talks, marine turtle show room in the museum completed and visited): Marine turtles educational activities involved 8 schools in the Matutuíne District, namely: Ponta do Ouro (51 pupils), Ponta Malongane (53 pupils), Ponta Mamoli (40 pupils), Ponta Milibangalala (13 pupils), Ndelane (46 pupils), Engomeni, (50 pupils) Machangulo (54 pupils) and Nhogoane (56 pupils). The activities included talks, movies (e.g. IOSEA Sea turtles: Our Oceans Ambassadors and the animation "The extraordinary adventure of Sammy"), craft production and essay contests. Marine Turtle World Day was celebrated with an exhibition of photos from previous nesting season's educational materials (e.g. poster and flyers) and crafts produced by school pupils from Maputo City, Ponta do Ouro and Zavala in the NHM. During the exhibition period, from the 16th of June to 7th of July, the NHM received 466 visits. Power-point presentations and report were produced (See attachment).

8. At least 4 marine turtle groups identified and established; Unfortunately this product/deliverable was not achieved as planned due to time constraints.

Component 4 Planned: Other Actions to involve Local Communities and Tourism Operators **Component 4 Actual at Completion:**

1. Lighting and tourism operators codes of conduct developed approved and implemented.

The lighting and tourism operator's codes of conduct product/deliverable did not occur as planned because, and as expected, the overall process would take longer than the project period. However, an alternative activity was developed, leaflets on the principles for lighting were prepared, printed and distributed to tourism operators and local communities (See attachment).

2. At least 10 members of the local communities trained on recycling techniques to produce crafts based on recycling material.

The training course on reutilizing solid marine debris to produce handicrafts was prepared for 10 community members of Ponta do Ouro, Ponta Malongane and Ponta Mamoli. However, 3 members of Ponta Mamoli were not able to participate. During the two sessions of the training course, an experienced artisan taught how to use plastic bottles, cans, iron wire, capulanas, cardboard, bottle caps, damaged compact discs and other waste, as well as natural materials (e.g. leafs, massala fruit, coconut shells) to produce pots, photo frames, cardboard closets, marine turtle miniatures, artisanal boats and houses. In order to evaluate the success of the course a minicrafts fair was prepared in the village of Ponta do Ouro, where the residents and tourists nicely gave their opinion and suggestions on how to improve the art crafts made. Two reports were produced (See attachment).

Were any components unrealized? If so, how has this affected the overall impact of the project?

The only component worth mentioning, and this was addressed above, was the product/deliverable on the lighting and tourism operator's codes of conduct. However, we tend to believe that this had no major impact on the overall project.

Please describe and submit (electronically if possible) any tools, products, or methodologies that resulted from this project or contributed to the results.

The following products/deliverables are:

Component 1 Planned: Refresher Training Course

- Field trip report;

Component 2 Planned: Marine Turtle Monitoring and Tagging

- Print Screen of the Marine Turtle DataBase;
- Monitoring, Tagging and Conservation of Marine Turtles in Mozambique: Annual Report Report 2011/12;
- Monitoring, Tagging and Conservation of Marine Turtles in Mozambique: Annual Report Report 2012/13;
- T-shirts;
- Field trip report;

Component 3 Planned: Awareness Talks

- Power point presentation;
- Awareness and field trip reports;
- Poster and leaflets;

Component 4 Planned: Other Actions to involve Local Communities and Tourism Operators

- Lighting leaflet;
- Training and field trip reports;

Lessons Learned

Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building. Consider lessons that would inform projects designed or implemented by your organization or others, as well as lessons that might be considered by the global conservation community.

During the planning and elaboration of this project one of the major challenges was to identify alternatives to greatly involve local communities and sources of income that are sustainable, in the long term. One valuable alternative identified was to actively involve school children during talks in schools. The involvement was so simple and yet so beautiful, when you saw these school children becoming alive with a simple piece of paper with a marine turtle drawing and coloring pencils. Not to mention the images and the movies ... and that is it! A lesson learned is that through marine turtles, the programme can support these school children by providing them with a decent or reasonable school chair or table, or even to have the school roof arranged and the walls painted. The lesson is that we could involve community members by providing the means to help

maintain the schools and providing these little community members with a little comfort while learning the mysteries of nature.

Project Design Process: (aspects of the project design that contributed to its success/shortcomings)

The aspects that contributed to the design of the project were the experience the organization has in the implementation of monitoring and conservation activities, since 2007, through its challenges and necessities. One of the examples was the design of the field trips to follow the monitoring routine and assist the monitors in data collection.

Project Implementation: (aspects of the project execution that contributed to its success/shortcomings)

The aspects that contributed to the project execution are in a way the same that contributed to the project design, more precisely the experience that CTV has since the establishment of the programme in 2007. One other very important aspect, was the continuous support of field partners, such as the POMPR authority, during the execution, which not only provided support during monitoring, but also, in the identification of alternatives to achieve project specific and overall objectives.

Other lessons learned relevant to conservation community:

Other very important lessons learned were:

- Although you can plan your patrol walks and walk for 10 km or more each night, but you cannot control Mother Nature and marine turtle emergence.

- The most valuable lesson was to see that community members that participated in the crafts training have plenty of creativity. We believe that if the opportunity arises, communities will more clearly understand the value and the sustainability of creating arts and crafts. Another valuable lesson was that although it was clear that the confidence increased as they were working with the materials, it is still necessary to improve the finishing touches on the artcrafts so that they gain more commercial and trade value. This is our principal concern, so we hope we have inspired them to keep on creating new things and giving maximum attention to the details!

Additional Funding

Provide details of any additional funding that supported this project and any funding secured for the project, organization, or the region, as a result of the CEPF investment in this project.

Donor	Type of Funding*	Amount	Notes
Swedish Cooperative Centre (CCS)	Project co-financing	41.424,00	
Swiss Cooperation	Project co-financing	40.920,00	

*Additional funding should be reported using the following categories:

- **A** *Project co-financing* (Other donors or your organization contribute to the direct costs of this project)
- **B** Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF funded project.)
- **C** Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)

Sustainability/Replicability

Summarize the success or challenge in achieving planned sustainability or replicability of project components or results.

Overall, the organization continuously faces a sustainability challenge to continuously support the programme. However, field partners have managed to secure funding for the 2013/14nesting season. The POMPR has secured funding and support from Peace Parks Foundation (PPF) and Petromoc (petrol for the nesting season). Machangulo, SA as confirmed funding to pay for the 2013/14 monitoring t-shirts. All other field partners will continue securing 6 month salaries to field monitors from their respective beach monitoring sites.

CTV was currently part of the 8th Scientific WIOMSA Symposium. In this symposium, CTV had the opportunity to discuss with regional scientists as well as the IOSEA task force to support regional funding for marine turtles in Mozambique.

Safeguard Policy Assessment

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

No additional comments

Additional Comments/Recommendations

No additional comments

Information Sharing and CEPF Policy

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, www.cepf.net, and publicized in our newsletter and other communications.

Please include your full contact details below:

Name: Cristina Louro Organization name: Centro Terra Viva – Estudos e Advocacia Ambiental Mailing address: Av. Marien Ngouabi nr 90, Maputo-Mozambique Tel: 823002496 Fax: E-mail: cmmlouro@gmail.com

If your grant has an end date other than JUNE 30, please complete the tables on the following pages

Performa	ance Trad	cking Repo	ort Adden	dum
	C	EPF Global	Targets	
	(Er	nter Gran	nt Term	1)
				sults achieved by your grant. levant to your project.
Project Results	Is this question relevant?	If yes, provide your numerical response for results achieved during the annual period.	Provide your numerical response for project from inception of CEPF support to date.	Describe the principal results achieved from July 1, 2013 to June 30, 2014. (Attach annexes if necessary)
 Did your project strengthen management of a protected area guided by a sustainable management plan? Please indicate number of hectares improved. How many hectares of new 	Yes	Partial Marine Reserve of Ponta do Ouro intended to preserve and protect coastal and marine species and their habitats with a total surface 67800 ha.	This project enabled to directly protect marine turtles in an extension of 18000 ha.	The project supports the Ponta do Ouro Marine Partial Reserve. More precisely, the project is implemented along 90 km of coastline. We would like to highlight that the project supports the activities in this area and therefore its management.
2. How many hectares of new and/or expanded protected areas did your project help establish through a legal declaration or community agreement?	No			
3. Did your project strengthen biodiversity conservation and/or natural resources management inside a key biodiversity area identified in the CEPF ecosystem profile? If so, please indicate how many hectares.	Yes		Trough the beach patrols enforceme nt (education and fines) has been applied along 90 km of coastline	The project supports the Ponta do Ouro Marine Partial Reserve. More precisely, the project is implemented along 90 km of coastline. We would like to highlight that the project supports the activities in this area and therefore its management.
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	No			
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1below.	Yes			The project and its field partners payed direct salaries, during 6 months, to 46 field monitors. Provided tools and knowledge to 7 community members to produced arts and crafts from marine debris and natural resources. At least, 300 school children and 20 teachers were involved in awareness talks.

If you answered yes to question 5, please complete the following table:

Name of Community		Community Characteristics								Nature of Socioeconomic Benefit											
							the		Increased Income due to:				ue ole or	ter	r other titling, etc.	es,	of	olic on,	nal Ital	ed -	
	Small landowners	Subsistence economy	Indigenous/ ethnic peoples	Pastoralists/nomadic peoples	Recent migrants	Urban communities	Communities falling below poverty rate	Other	Adoption of sustainable natural resources management practices	Ecotourism revenues	Park management activities	Payment for environmental services	Increased food security due to the adoption of sustainable fishing, hunting, or agricultural practices	More secure access to water resources	Improved tenure in land or othe natural resource due to titling reduction of colonization, etc.	Reduced risk of natural disasters (fires, landslides, flooding, etc)	More secure sources energy	Increased access to public services, such as education, health, or credit	Improved use of traditional knowledge for environmental management	More participatory decision- making due to strengthened civil society and governance.	Other
Ponta do Ouro	Х	X					Х		Х												Х
Ponta Malongane	Х	Х					Х		Х												Х
Ponta Mamoli	Х	Х					Х		Х												Х
Ponta Milibangalala	Х	Х					Х		Х												Х
Ndelane	Х	Х					Х		Х												Х
Engomeni	Х	Х					Х		Х												Х
Machangulo	Х	Х					Х		Х												Х
Nhonguane	Х	Х					Х		Х												X X
Total	8	8					8		8												^ 8

alternative source of income, in the near future;