



Darwin Initiative Main/Post/D+ Project Half Year Report (due 31 October 2016)

Project Ref No	21-018
Project Title	Conservation and sustainable use of marine turtles, Southwest Madagascar
Country(ies)/Territory(ies)	Madagascar
Lead Organisation	ReefDoctor
Partner(s)	Turtle Protection Association (FIMPAMIFA), Marine Science Institute (<i>Institut Halieutique et des Sciences Marines, IH.SM</i>)
Project Leader	<i>Emma Gibbons</i>
Report date and number (e.g., HYR3)	31st October 2016 HYR3
Project website/ Twitter/ Blog/ Instagram etc	www.reefdoctor.org https://instagram.com/_reefdoctor/ https://twitter.com/ReefDoctor
Funder (DFID/Defra)	DIFID

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).

ReefDoctor's innovative holistic approach to conservation provides rural communities that are reliant on the exploitation of marine resources a long-term and sustainable development strategy. This is aimed at reducing poverty, providing food security and empowering rural populations whilst securing biodiversity through the protection of marine turtles.

Rural communities in the Bay of Ranobe are provided access to education and cross-sector training in alternative livelihood opportunities as a long-term sustainable solution to extreme poverty and an alternative to destructive fishing practices and turtle hunting.

Output-1. 50% decline in total annual turtle mortality associated with the targeted fishery, relative to the baseline of 655 turtles / year (average total catch of the village of Ifaty in 2012 and 2013).

Activities

1.2 Marine turtle protection 'team training' on dina management and enforcement.

1.4 Biological monitoring of the marine turtle fishery in the 6-targeted villages of the BRB: 1) fisheries exit surveys, 2) landing surveys, 3) market surveys, and 4) record number of turtles tagged/released.

Activities undertaken during reporting period:

- 50% decline in total annual turtle mortality associated with the targeted fishery, relative to the baseline of 655 turtles / year (average total catch of the village of Ifaty in 2012 and 2013) – **On target**
- Continuous support is provided to the thirteen Miaro Fano teams (65 fishers) involved in implementing the indigenous law (dina) to protect juvenile marine turtles – **On target**
- Evaluation of landing surveys in Ifaty; number and size (CCL) of marine turtle captured in the fishery (fig 1, appendix 1).
- Bay-wide communication protocol was developed and implemented for these rural

communities to facilitate the rapid response of the turtle tagging team. Mobile phones are available to MF teams at strategic 'drop-off' points to contact the turtle tagging team as well as cared for rescued turtles in preparation for release.

- Increased the number of villages recording information on the marine turtle fishery by 50% to include Ambolamailakie and Andrevo (sea cucumber and seaweed zones of intervention).
- **277 juvenile marine turtles have been tagged and released in the last 6 months** April to September 2016. Landing surveys suggest that turtles captured in the fishery number 713 during this period (table 1, appendix 1).
- **Increased adherence to the local <DINA> law protecting juvenile marine turtles** exhibited through a significant decrease in the number of turtles captured in the fishery since January 2016 (fig 2, appendix 1).
- **Economic evaluation of the marine turtle fishery** over the past 6 months values the fishery at £9,840 (38,262,500MGA) among four villages in the Bay of Ranobe (table 1, 2, appendix 1).

Output-2. Protection of essential seagrass habitat that is critical to the long-term survival of marine turtles and the productivity of sea cucumbers, with a minimum areal target of 10% total cover.

Activities

2.4 Periodic stakeholder meetings to facilitate a smooth social transition from capture fisheries to sea cucumber/seaweed farming and resolve any minor conflicts.

2.5 Seagrass surveys: data collection on species composition/diversity and density to monitor effects of sea cucumber/seaweed farming infrastructure/activities, and protection status (fig 1, appendix 2).

Activities undertaken during reporting period:

- Frequent stakeholder meetings have been conducted in all communities participating in the sea cucumber/seaweed project – **On target**
- Seagrass surveys have been completed within the area designated for seaweed farming and seagrass protected area – **On target** (fig 1 and 2, appendix 2).
- Seagrass protected zone 945ha implemented (fig 3, appendix 2).
- Expansion of seagrass protected area to include; **100ha restricted zone** in Andrevo through the development of ReefDoctor and IOT's **conservation and community development strategy** for the Bay of Ranobe (fig 4, appendix 2).

Output 3. Selection of 120 households per year from 6 coastal villages to participate in the DI project, with 90% of the households benefiting from stable revenue of at least 2.00 USD/day.

Activities

3.2 Selection of 10 community groups (1 group/enclosure) per year per target village; training of 4 elected group members in sea cucumber/seaweed farming techniques – **On target**

3.3 Seaweed farming workshops held; management of seaweed farm, maintaining health of seaweed in each farming village.

3.4 Sea cucumber farming workshops held; reparation and stocking of sea cucumber enclosures in sea cucumber farming villages.

3.5 Socio-economic surveys: changes in poverty level resulting from Darwin Initiative.

Activities undertaken during reporting period:

- 120 new groups/households have been identified in target villages, training has commenced for those selected – **On target**
- Households in the project will be supported until they reach a maximum of 16 lines per household in-line with project revenue projections – **On target**
- Sea cucumber and seaweed workshops on-going, initial training provided to each new farming household, further training provided to group leaders.

- Resolution was achieved quickly concerning the issues with supply of juveniles by IOT, Stocking of community pens **resumed and stabilised over the past 6 months**.
- In-line with the proposed expansion plan, **IOT has increased and secured high quality production of juvenile sea cucumbers**.
- Community aquaculture farmers that have completed training assisted in the implementation of new farms and co-managed the development of new projects in the area.
- Completed the building of a watch tower in Andrevo providing guardians a secure and safe place to protect sea cucumber pens from damage and theft (fig 1, appendix 3).
- **Increased the number of villages (07) participating** in the alternative livelihoods project.
- Successfully employed seven **(07) COPEFRITO trained seaweed technicians** to provide additional support to community farmers.
- Integration of ReefDoctor's seaweed technicians into COPEFRITO's **technician evaluation and monitoring program**. Aimed at increasing production, addressing community conflict, and providing farmer support for a coordinated regional aquaculture development strategy (fig 2, appendix 3).
- Signed a Memorandum of Understanding (MoU) with Copefrito and IOT – **in progress**.
- **Expansion of the sea cucumber farming project with IOT**: Over the last 6 months the Darwin initiative funded sea cucumber project developed and implemented by ReefDoctor has attained significant success in the region. We are currently regarded as one of the most successful **independent community-farming project** in the south. This achievement has attracted the attention of investors from the local commercial enterprise society IOT. The initial concept formed by IOT is to expand the sea cucumber project in Ambolamailakie and Andrevo with the assistance of ReefDoctor, to a) expand the intervention zone in Andrevo to encompass over 100ha of intertidal zone for the commercial exploitation of sea cucumbers, b) expand the community-farming project in Ambolamailakie (fig 4, appendix 2).
- Initial assessment of the multidimensional poverty measurement for the zone of intervention; *Oxford Poverty and Human Development Initiative (OPHI)* – **On target** (fig 3, 4, 5 appendix 3).
- Partnership with the Ministry of Fisheries; ReefDoctor has been successfully granted the lease for the management and operation of the 'Fisheries Landing' building in Ifaty and Andrevo. This will be in coordination with the administrative management for the Department of Fisheries Resources. The Fisheries Landing buildings will be integrated into the aquaculture program to support the local community and used to store and process seaweed in Ifaty, sea cucumbers in Andrevo. (fig 6 appendix 3).

Output 4. Local optimisation of aquaculture production and creation of expansion strategy by year-3; research objectives are to increase aquaculture production, in terms of growth rate, in experimental plots by at least 15% versus control plots using repeatable, cost-effective methods.

Activities

4.2 Continuous biological and environmental assessment of productivity

Activities undertaken during reporting period:

- Continuous monitoring of biological and environmental parameters to assess productivity – **On target**

Community technicians have been trained in simple techniques to monitor growth and record productivity of their seaweed and sea cucumber farms. COPEFRITO technicians have been trained to collect and record extensive information, entered into the regional database and used to **evaluate and monitor** production and highlight issues such as parasitic algae (EFA) effecting quality and quantity of seaweed production and limiting farmer income.

APPENDIX

Appendix 1

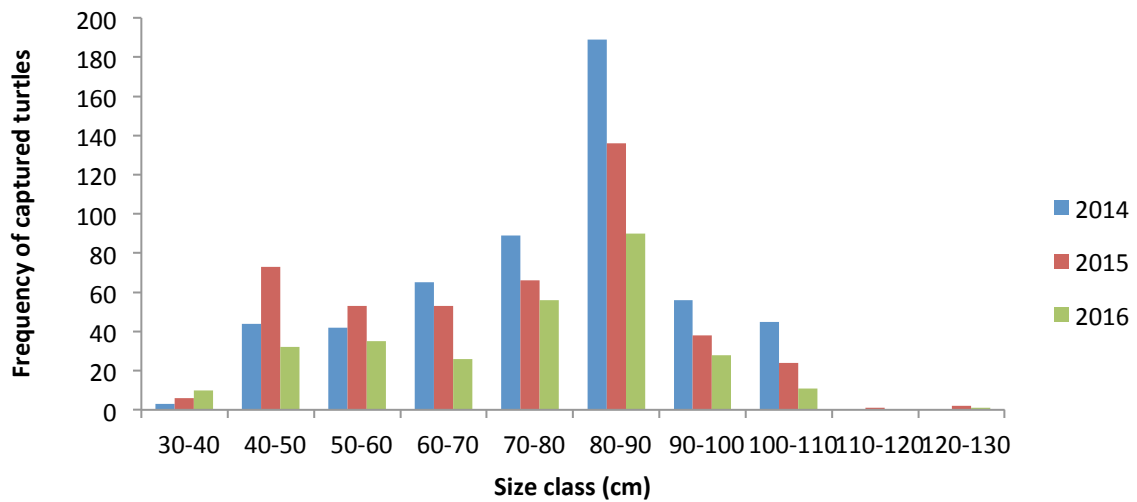


Figure 1. Histogram of Curved Carapace Length (CCL) of marine turtles captured in the fishery in the village of Ifaty over the Darwin Initiative project period (2014 – September 2016).

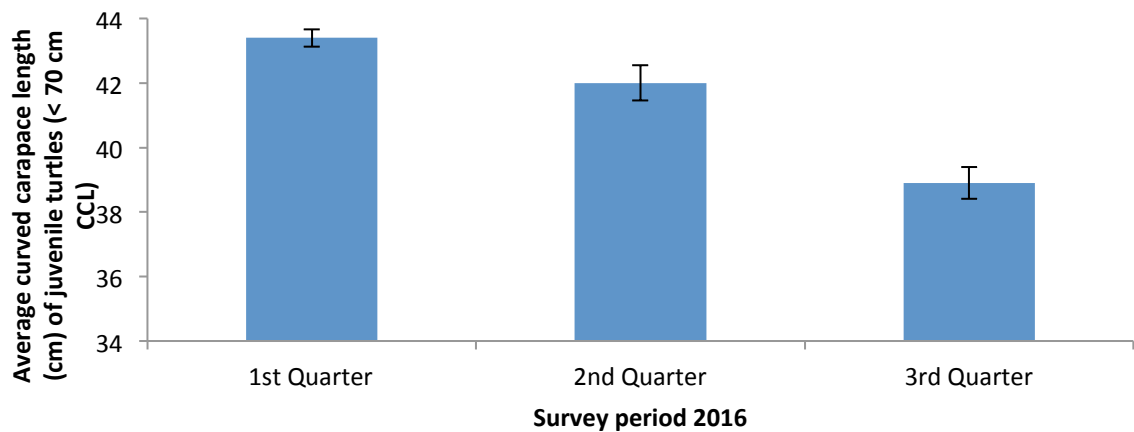


Figure 2. Average curved carapace length of juvenile turtles decreased during the second quarter (April -June) and markedly during the third quarter (July – September).

Table 1. Total value of the marine turtle fishery increased to 19.5 million MGA (£5,000) in the third quarter of 2016, despite fewer turtles reaching the market place (2nd and 3rd quarter represent April – September 2016; highlighted in red).

	1 st Quarter	2 nd Quarter	3 rd Quarter
Turtles caught	460	351	362
Turtles killed/sold	211	227	209
Turtles released	249	124	153
Turtles under 70 cm CCL released (%)	80.1	67.8	74.3
% female	88.2	87.2	81.3
Market value of fishery (Ariary)	14,085,500	16,508,500	16,829,000
Value of tag-and-release (Ariary)	3,863,500	2,177,000	2,748,000
Total value of fishery (Ariary)	17,949,000	18,685,500	19,577,000

Appendix 2

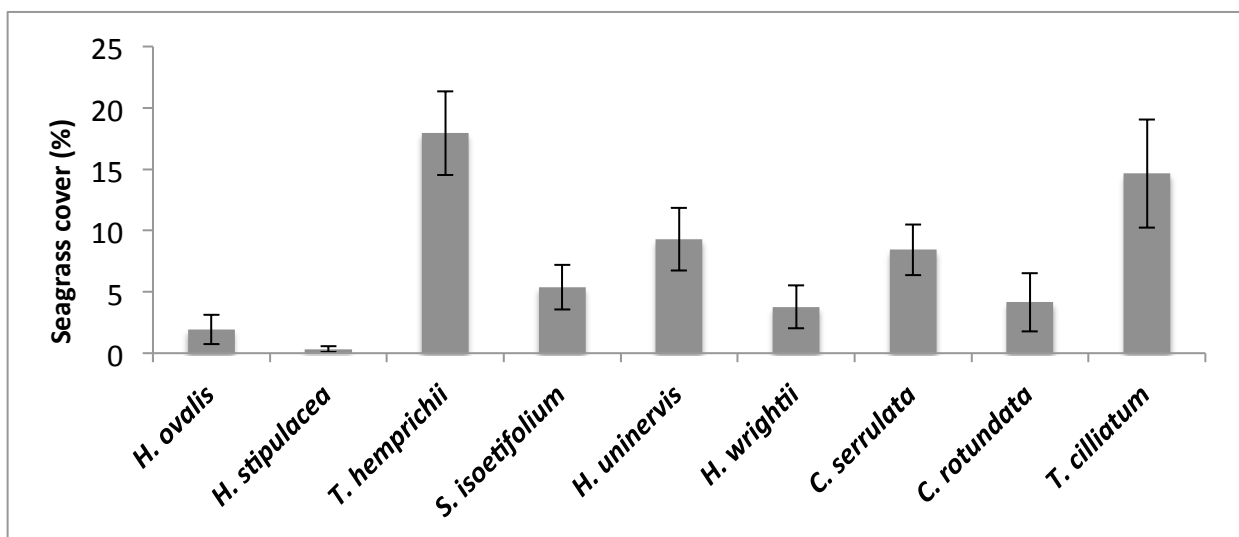


Figure 1: Species composition of seagrass cover in the Bay of Ranobe. Error bars indicate standard error.

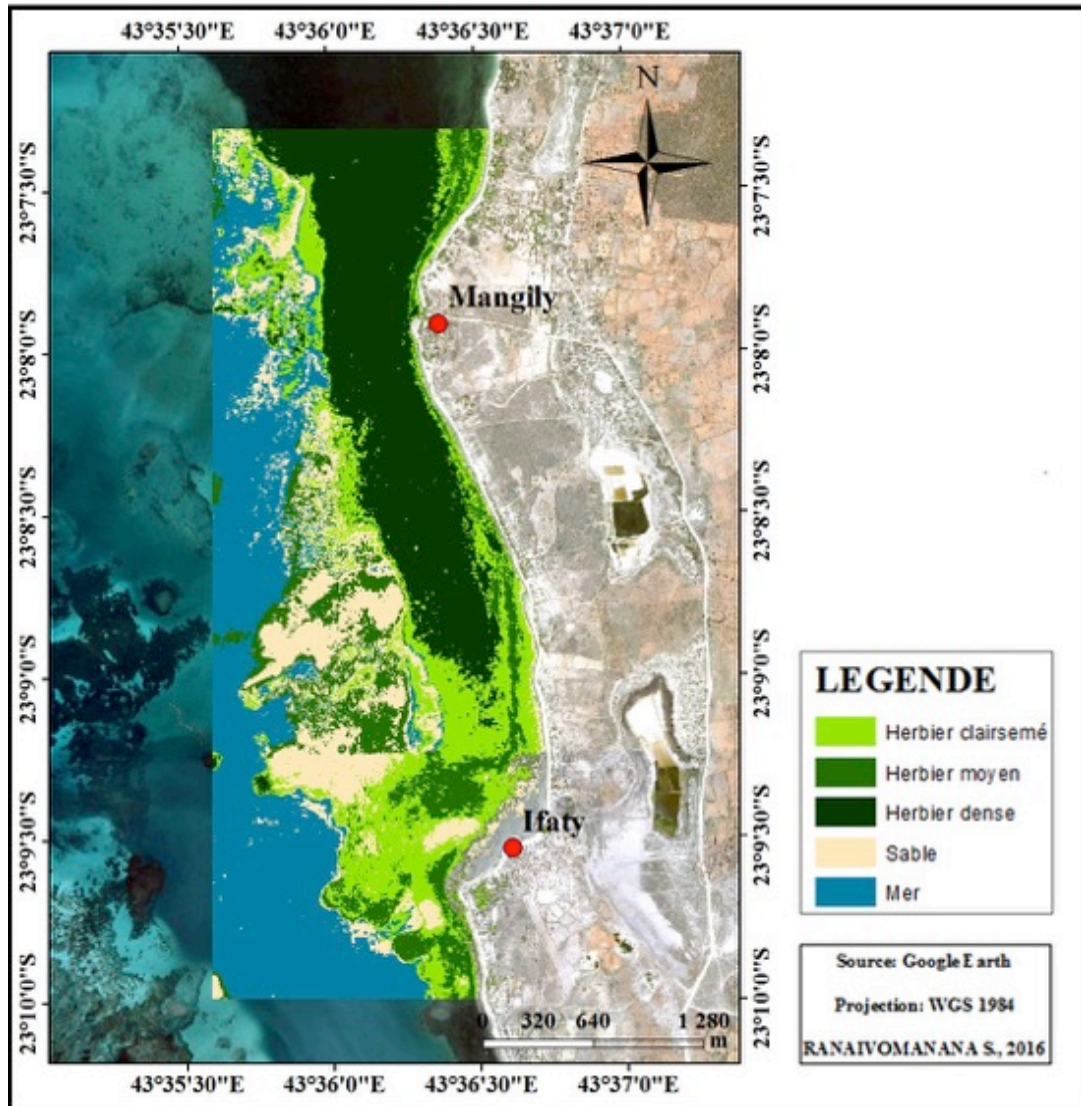


Figure 2: Seagrass distribution between the villages of Ifaty and Mangily in the Bay of Ranobe. Light green areas indicate cover of 0–40%, medium green areas indicate cover of 40–80%, and dark green areas cover of 80–100%.

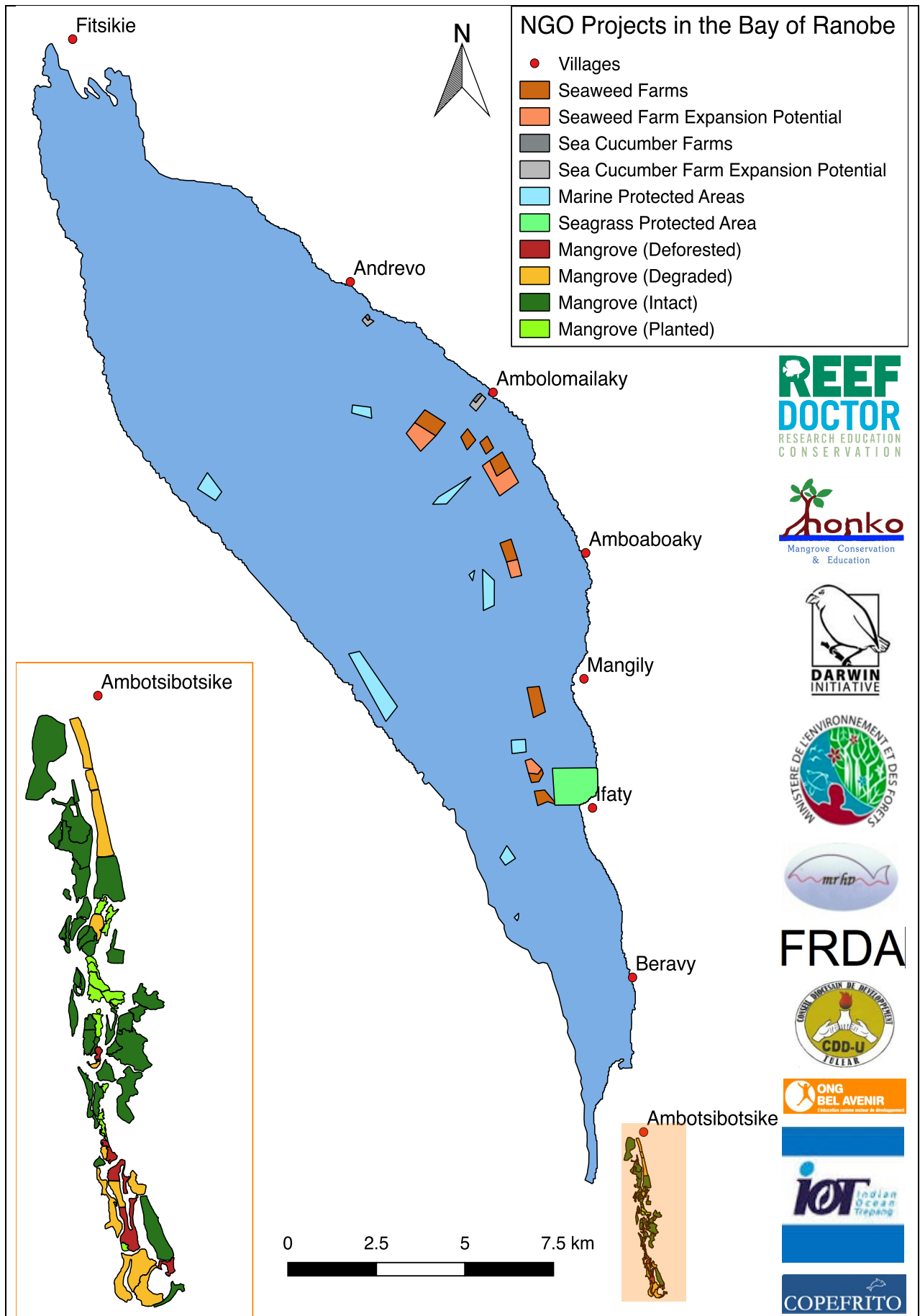


Figure 3: Spatial planning of protected zones, seaweed farms, and sea cucumber farms in the Bay of Ranobe.

SYNTHESE PROJET ENCLOS DE GROSSISSEMENT – NORD ANDREVO (Confidentiel)

Plan de l'espace, Baie de Ranobe :



Figure 4: Confidential document from IOT providing the boundary area highlighted for the expansion of the sea cucumber pens in Andrevo (blue polygon).

Appendix 3



Figure 1: Watch tower Andrevo

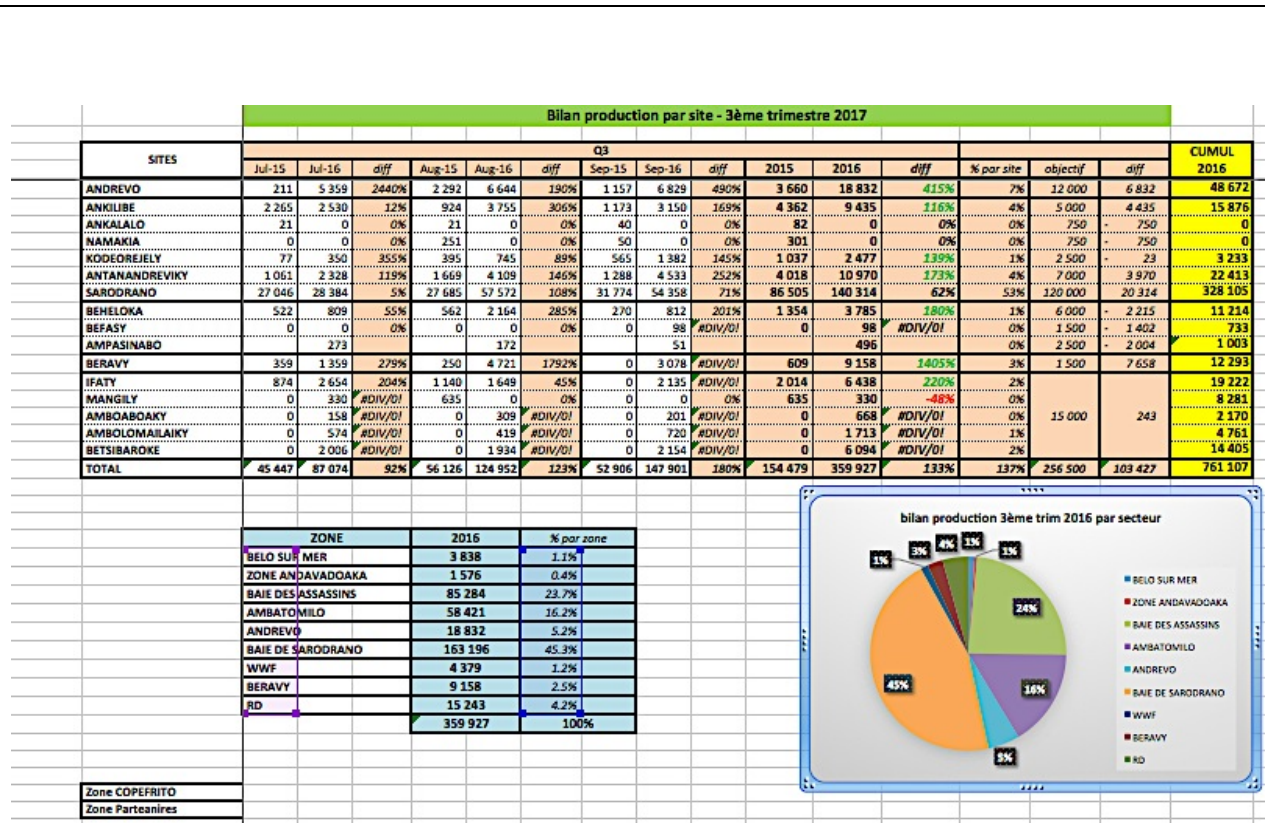


Figure 2: Production of seaweed in southwest Madagascar for the 3rd trimester (July – September) developed through the integrated COPEFRITO and ReefDoctor technician evaluation and monitoring program.

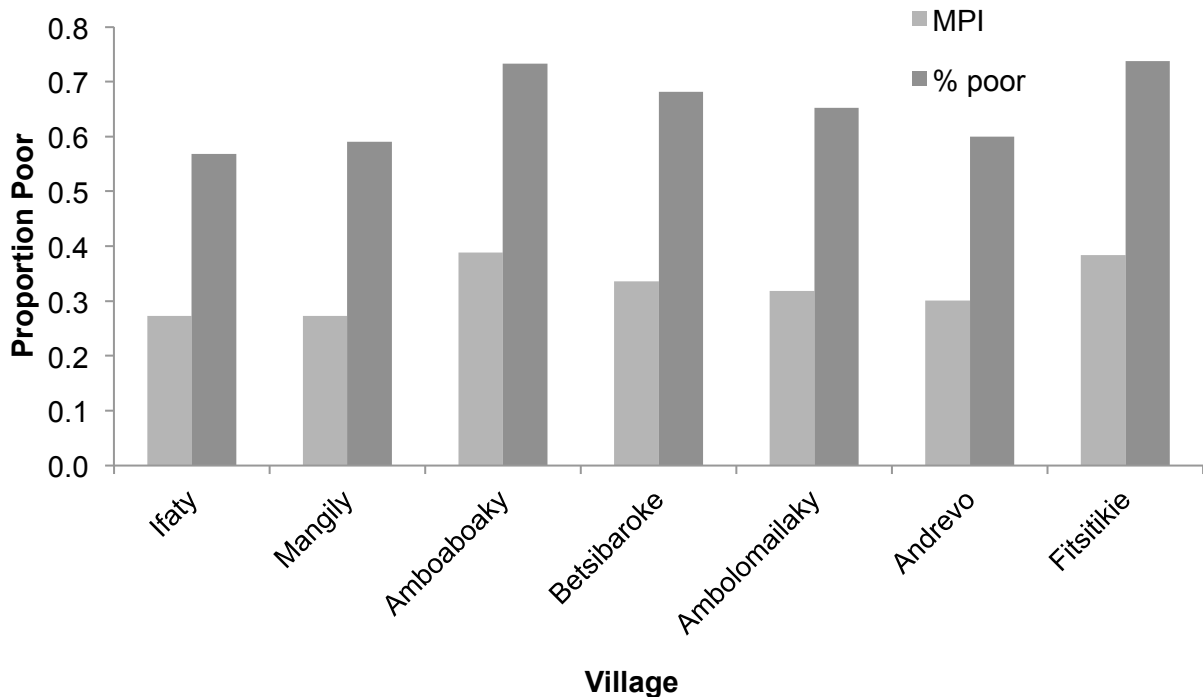


Figure 3: percentage of poor as described by the Oxford Poverty and Human Development Initiative (OPHI) multidimensional Poverty Index (MPI) per village in ReefDoctor's zone of intervention

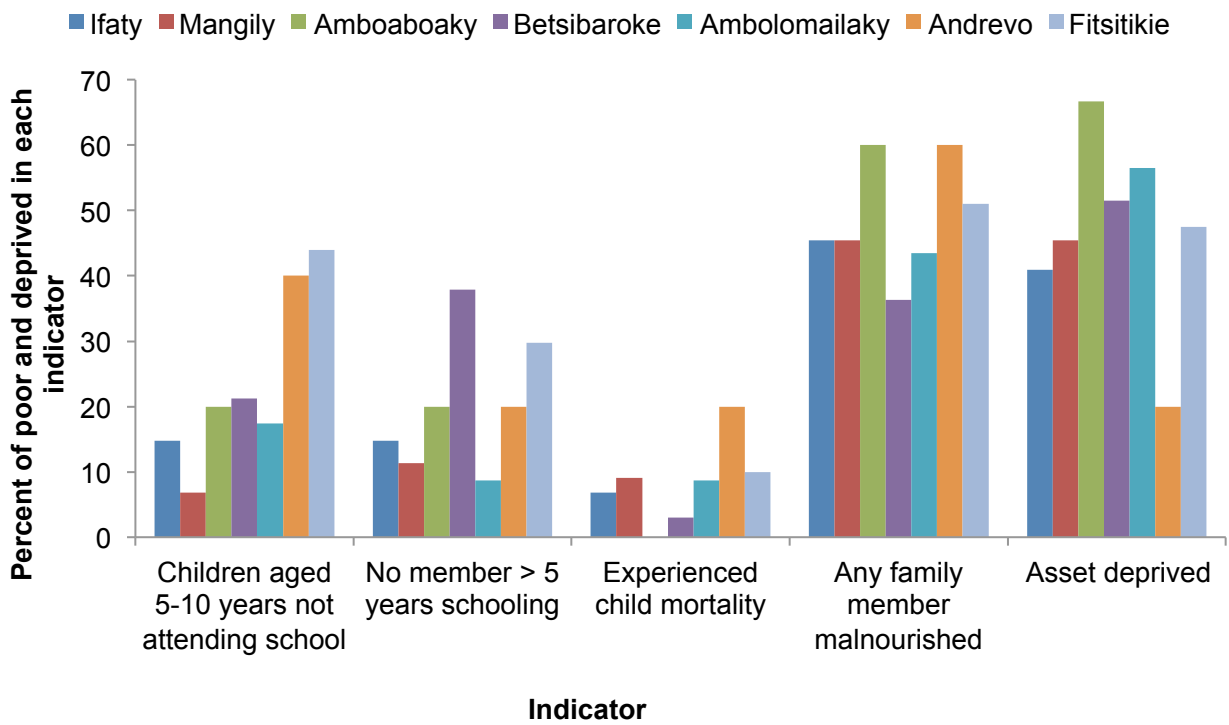


Figure 4: percentage of poor and deprived per indicator as described by the Oxford Poverty and Human Development Initiative (OPHI) multidimensional Poverty Index (MPI) per village in ReefDoctor's zone of intervention

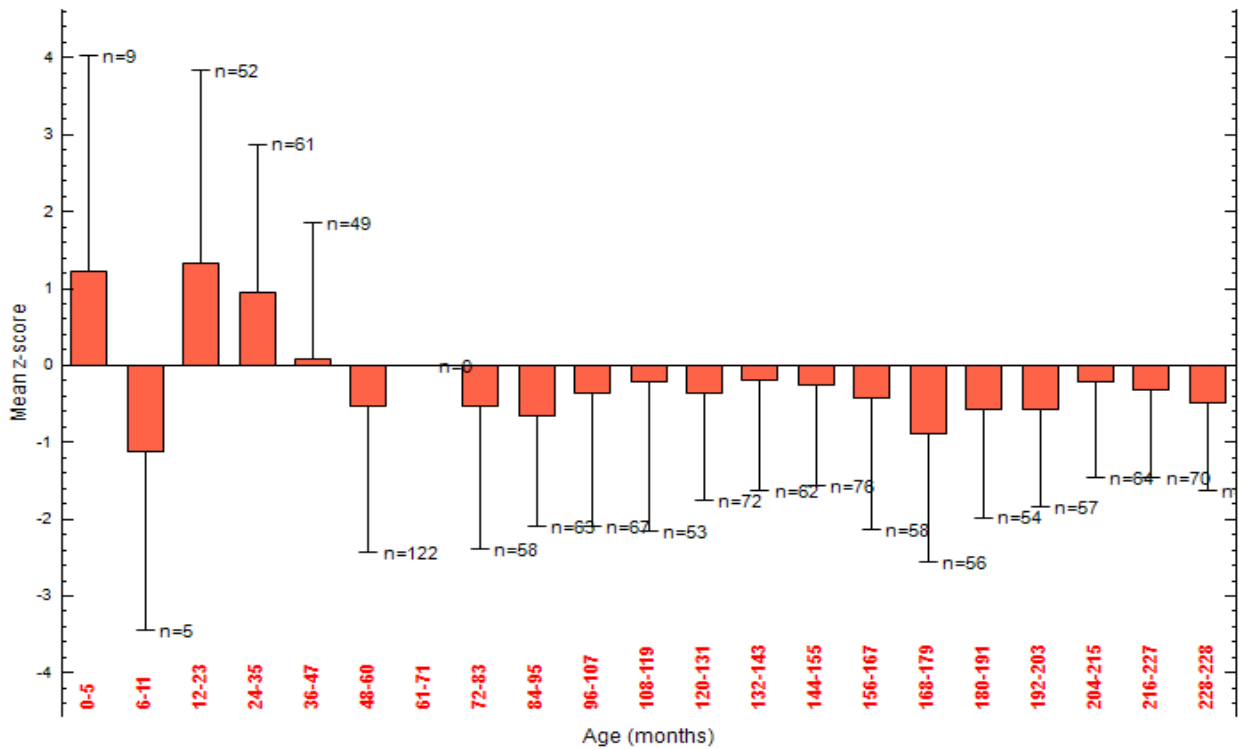



Figure 5: Body Mass Index (BMI) recorded for children surveyed <19 years of age (598 boys and 631 girls) showing 20% of children are malnourished, while 10% are severely malnourished.

Figure 6: Partnership agreement with the Ministry of Fisheries for the co-management of the landing station in Ifaty.


REPOBLIKAN'I MADAGASIKARA
Fivavaha - Tanindrazana - Fandrosoana

MINISTÈRE DES RESSOURCES HALIEUTIQUES ET DE LA PÊCHE

SECRETARIAT GENERAL

DIRECTION GENERALE DES RESSOURCES HALIEUTIQUES ET DE LA PÊCHE

DIRECTION REGIONALE DES RESSOURCES HALIEUTIQUES ET DE LA PÊCHE
ATSIMO ANDREFANA

N° 214/16-MRHP/SG/DGRHP/DRRHP.61

**CONVENTION
DE LOCATION GERANCE DU DEBARCADERE IFATY**

Entre : Le Ministère des Ressources Halieutiques et de la Pêche ci-après dénommé « MRHP » d'une part, représenté par le Directeur Régional des Ressources Halieutiques et de la Pêche Atsimo Andrefana (DRRHP)

Et : L'ONG REEF DOCTOR, représenté par son Directeur, Madame Emma Gibbons, demeurant à Ifaty Commune Rurale de Belaïanda District de Toliara II, ci-après dénommé le titulaire, d'autre part


Documents joints :

- Cahier des charges de location gérance du débarcadère d'Ifaty
- Proposition de l'ONG REEF DOCTOR pour la gestion du débarcadère d'Ifaty

IL A ETE CONVENU CE QUI SUIT

Article 1 : Objet de la convention

La présente convention a pour objet de définir les conditions générales de la mise en location gérance en vue de la gestion et l'exploitation du Débarcadère Ifaty, appartenant à l'Etat et sous la gestion administrative du Ministère des Ressources Halieutiques de la Pêche.

 MINISTÈRE DES RESSOURCES HALIEUTIQUES ET DE LA PÊCHE

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Article 5 : Durée de la convention et reconduction

La présente convention est conclue pour une durée de 3 ans à compter de sa date d'entrée en vigueur telle que stipulé dans le cahier des charges. Elle est tacitement reconduite pour une durée similaire sauf dénonciation par l'une des parties moyennant un préavis de 3 mois avant expiration. Dans le cas d'une reconduction du présent contrat, la redevance annuelle sera inchangée sauf accord préalable entre les parties.

Article 6 : Réhabilitation et modification

L'ONG REEF DOCTOR s'engage à prendre en charge la réhabilitation de l'infrastructure existante si nécessaire, conformément au cahier des charges en annexe de la présente convention. L'AUTORITE CONCEDEANTE autorise l'ONG REEF DOCTOR à effectuer les modifications nécessaires pour l'optimisation de la gestion de l'infrastructure.

Article 7 : Objet du Débarcadère

Conformément à ses statuts, l'ONG REEF DOCTOR exploite le Débarcadère d'Ifaty au service de développement de l'aquaculture (Aigue de mer et concombre de mer), la petite pêche, l'exploitation des ressources halieutiques et mènera les activités suivantes :

- L'utilisation du débarcadère et des matériels pour l'amélioration des conditionnements des produits halieutiques, aquaculture et de la pêche de la littorale d'Ifaty
- L'attraction et la persuasion des communautés de pêcheur à utiliser l'infrastructure comme un lieu de débarquement, de transit et de traitement des produits halieutiques, d'aquaculture et de la pêche des fokotany de la littorale d'Ifaty
- L'augmentation des disponibilités des produits halieutiques, d'aquacultures et de pêches, que ce soit frais ou transformés pour le marché local et extérieur
- Le transfert de compétence vers les communautés qui seront les gestionnaires dans le futur du débarcadère d'Ifaty
- Le perfectionnement et la pérennisation des actions en cours et le soutien des efforts pour entreprendre la promotion de la pêche à Madagascar

Article 8 : information et suivi des activités

Le MRHP et la DRRHP Atsimo Andrefana peuvent à tout moment visiter et pénétrer dans l'enceinte du débarcadère Ifaty tout en informant le Gérant vingt-quatre heures (24) au préalable.

L'ONG REEF DOCTOR est tenue de transmettre au MRHP et à la DRRHP AtsimoAndrefana un rapport trimestriel et un récapitulatif annuel sur les activités menées dans le débarcadère et ce par filière. Un plan de travail trimestriel et annuel sera fourni pour l'année suivante.



Article 9 : Résiliation

La convention peut être résiliée par l'une des parties en cas de non-exécution par l'autre partie d'une ou plusieurs des obligations dans la mesure où la partie fautive n'a pas remédié à son manquement dans un délai de un mois à compter de la notification de son manquement. Par conséquent, le Gérant ne pourra prétendre à aucun dédommagement ni remboursement.

Article 10 : Litige

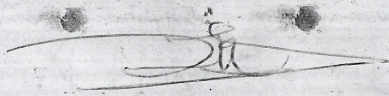
En cas de litige relatif à la présente convention qui pourrait survenir entre les 2 parties, celles-ci s'efforceront de trouver un règlement à l'amiable.
Tout litige qui ne pourrait être réglé à l'amiable entre les deux parties sera tranché par le tribunal territorialement compétant.

Article 12 : Entrée en vigueur

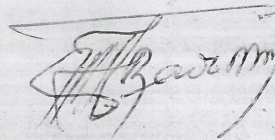
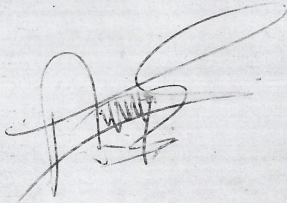
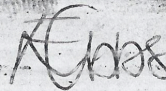
La présente convention entre en vigueur à la date de la signature par les parties contractantes.

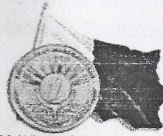
Paraphé, Tamponné et Signé en quatre exemplaires, à Toliara 29 OCT 2016

LE MINISTRE DES RESSOURCES
HALIEUTIQUES ET DE LA PECHE



LE DIRECTEUR DE L'ONG
REEF DOCTOR





REPUBLIKAN'I MADAGASIKARA
Fiteavana - Tanandrazana - Fandrosoana

MINISTRE DES RESSOURCES HALIEUTIQUES ET DE LA PECHE

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DIRECTION GENERALE DES RESSOURCES HALIEUTIQUES ET DE LA PECHE

DIRECTION REGIONALE DES RESSOURCES HALIEUTIQUES ET DE LA PECHE
ATSIMO ANDREFANA

N° 215/16-MRHP/SG/DGRHP/DRRHP.61

CAHIER DE CHARGE DE LOCATION GERANCE DU DEBARCADERE D'IFATY

Ce cahier des charges fixe les clauses et conditions de location-gérance pour la gestion et l'exploitation du Débarcadère d'Ifaty, domaine de l'Etat se trouvant dans la Région Atsimo Andrefana, District de Toliara II et Commune Rurale de Belalanda.

Ce cahier des charges constitue l'annexe de la convention de location gérance signée le entre « le Ministère des Ressources Halieutiques et de la Pêche » et « l'ONG REEF DOCTOR ».

Documents joints :

- Convention de location gérance du débarcadère d'Ifaty
- Proposition de l'ONG REEF DOCTOR pour la gestion du débarcadère d'Ifaty

Article 1 : Le Ministère des Ressources Halieutiques et de la Pêche (MRHP), représenté par le Ministre des Ressources Halieutiques et de la Pêche met à disposition de l'ONG REEF DOCTOR ci-après dénommé « le Gérant », le Débarcadère Ifaty

Un état des lieux des infrastructures, des équipements et matériels sera établi avant la prise de gestion du Débarcadère par le gérant.

Article 2 : Le gérant s'engage à une gestion de « bon père de famille ». Il peut effectuer sans aucune restriction les aménagements nécessaires pour le développement du site dans le domaine de l'aquaculture, le développement de la petite pêche et l'exploitation des ressources halieutiques.



Article 3 : Toute modification par le gérant de la nature du matériel, des équipements, des infrastructures ou des installations fixes devra recueillir l'accord préalable de l'autorité concédante.

Article 4 : Le gérant s'engage à pratiquer une bonne gestion des infrastructures, des matériels et équipements et à assurer leur maintenance. Il doit en outre prendre les dispositions nécessaires pour remplacer, réparer ou remettre du matériel ou des équipements rendus inutilisables ou perdus durant la période de location.

Article 5 : Les travaux d'aménagements ou de réhabilitation nécessaires seront intégralement pris en charge par le Gérant. Il pourra mobiliser différents partenaires nationaux et internationaux en cas de besoin. Dans le cas de dommages causés sur la structure du bâtiment par une « force majeure » ou un tiers, les coûts de réparation seront à la charge de l'autorité concédante dans le cas de « force majeure » ou d'un tiers ayant causé les dommages.

Article 6 : Le Débarcadère d'Ifaty doit mener les activités d'aquacultures et de pêches marines, sans que cette énumération soit limitative.

- La réalisation de formation pour les techniciens et exploitants des ressources halieutiques et/ou d'aquacultures
- Le lieu de débarquement des produits halieutiques et/ou d'aquacultures et de suivi des captures
- Le lieu de premier traitement des produits halieutiques et/ou d'aquacultures
- Le lieu de conservation des produits halieutiques et/ou d'aquacultures
- Le lieu d'échange et de vente des produits entre pêcheurs, mareyeurs et collecteurs

Article 7 : Le gérant est tenu de fournir les renseignements techniques demandés et un rapport trimestriel et une récapitulation d'activités annuelle circonstanciée à la Direction Régionale des Ressources Halieutiques et de la Pêche Atsimo Andrefana et ainsi qu'au Ministère des Ressources Halieutiques et de la Pêche.

Article 8 : La Direction Régionale des Ressources Halieutiques Atsimo Andrefana peut intervenir à tout moment, notamment sur le suivi technique de l'exploitation

Par ailleurs, elle peut visiter et pénétrer dans le domaine tout en informant le Gérant vingt-quatre heures (24) au préalable.

Article 9 : Tout acte de violation de ces règles peut annuler purement et simplement la convention, sans dommage intérêts de part et d'autre.

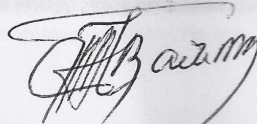
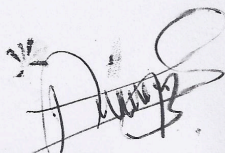
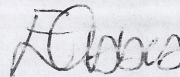
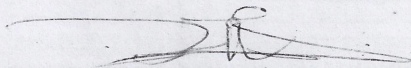
En cas de résiliation de contrat, le gérant doit remettre les installations en son état à la DRRHP Atsimo Andrefana ou tout au moins en leur état de prise en main et ce dans un délai de un (01) mois.

La désaffectation n'entraîne aucune indemnité au profit du gérant pour les dépenses antérieures engagées (réhabilitation, réaménagement, ...)

Paraphé, Tamponné et Signé en quatre exemplaires, à Toliara 28 OCT 2016

LE MINISTRE DES RESSOURCES
HALIEUTIQUES ET DE LA PÊCHE

LE DIRECTEUR DE L'ONG
REEF DOCTOR



MINISTRE DES RESSOURCES HALIEUTIQUES ET DE LA PÊCHE

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.

Since the UK exited the EU the value of the Malagasy currency (MGA) has continued to decline. Prices for aquaculture materials and turtle tags thus increased, particularly for imported materials. Current exchange rates have dropped around 12% from an average of 5,000 MGA to 3800 MGA per 1GBP.

Evaluating poverty of rural communities in Africa is a difficult and problematic task when asking people questions concerning wealth; considered a sensitive issue by many communities. Social and cultural rights must to be respected and observed by implementers to achieve successful results. Considering these limitations, ReefDoctor opted to use the noninvasive Oxford Poverty and Human Development Initiative (OPHI) multidimensional Poverty Index (MPI). The MPI has three dimensions and 10 indicators which assess '*a person's inability to meet simultaneously minimum international standards in indicators related to the Sustainable Development Goals and to core functioning's*'. **It constitutes the first implementation of the direct method to measure poverty in ReefDoctor's zone of intervention. The MPI also offers a reliable framework that can complement national income poverty estimates.**

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: 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.

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 send your **completed report by email** to Eilidh Young at 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**