Project Update: January 2015

In brief since our last update:

August 2014: presented first preliminary results of the photo ID project at the second biennial Australian Sea Turtle Symposium. Analysis of photo identified re-sighted turtles allowed us to generate first ever residency models for foraging turtles in Mozambique and indicate population estimates for study sites. The collection of photo ID data is ongoing and expansion of participants has increased to cover much further scope of Mozambican coast than previously anticipated. Whilst the results presented at the Australian conference were preliminary, once the comprehensive analysis is complete these will be the first detailed residency information of the foraging population in Mozambique. This newly ascertained knowledge on residency and population size/ structure is invaluable for quantitatively understanding the impact of poaching against the resident populations.

October 2014: I participated in the IAIA resettlement and alternative livelihoods 2-day workshop. This 2-day workshop saw over 300 delegates converge, most working within the Southern Africa region to discuss income generating activities and alternative livelihood options for communities.

Locally, I was also part of a 2-day workshop for the COAST project. COAST is a 5-year project based around The Collaborative Actions for Sustainable Tourism (COAST), which recently concluded. The workshop focused on gathering all major stakeholders from the designated project area (TBT- tofo-barra- tofinho) to discuss the finding and future steps. Once of the most productive features of this workshop was the broad attendance of both government representatives from environmental, fisheries and maritime agencies along with marine researchers, tourism operators and local students. Several smaller side meetings were held to discuss current issues related to the marine turtle nesting season.

November 2014: In November, I was invited to travel down to the Ponta D'Ouro Marine Partial Reserve to participate in the celebrations for achieving 20 years of marine turtle monitoring in the reserve. This also involved a networking session with other turtle conservationists and stakeholders working in the south and a nesting turtle patrol session. On patrol, nine nesting loggerhead turtles were encountered and in total in a single night over 35 nesting turtles came ashore. The 2nd day of the meeting provided an opportunity to draw together members of the GTT groupo de trabalha de tartaruga- the Mozambican marine turtle working group. The GTT had not convened since late 2010 and it was immensely beneficial to the majority of active GTT members converge to discuss recent research, conservation and management issues. A priority plan was drafted in addition to informal presentations to recap the state of current activities and issues from northernmost project through to the country's southern border. (A focused blog I wrote up on this trip can be found here: http://mozturtles.com/2014/12/09/the-flagship-site/)

Measuring carapace length of loggerhead sea turtle at Ponta Do Ouro.

December 2014: December was focused conducting field trips to survey for nesting and poaching events. Both to two new project sites (Travessia, a few hours north of Morrumbene and Linga Linga a bit further south). Poaching surveys were also conducted between Zavora and Dunes de dovela- our busiest nesting turtle beach. Each survey between these two locations consists of a 10 km foot patrol.

Mature green turtle carapace found at Travessia Beach.

January 2014: In January we made site visits down to Manhame Beach to confirm four nesting activities. One was poached, one was a false crawl, and two others safely incubating (a detailed trip report on this can be accessed here: http://mozturtles.com/2015/01/20/the-unfortunate-nest/)

Fresh nesting tracks of loggerhead turtle at Manhame Beach.

A meeting was held with the village chief of Chume, the nearest village to the poached nest. The issue of poaching nests was discussed with the chief and he has recognised that this is not a sustainable activity for his area. From this a community workshop being planned to directly engage with Chume fishers and their families to encourage more fishers to conserve local turtle populations, how to identify the different turtle species they are likely to encounter and protocols for reporting any turtle activity. We will also be preparing some visual materials to aid these planned community engagement events.

At this stage we are continuing to develop the network of fishers that report turtle nesting events and poaching. This seems to be the most effective tool trialed thus far for preserving turtle nests.

Leatherback nest at Manhame Beach, marked out with marine debris washed ashore to show local Chume villagers this nest location is known and under watch by the fishers reporting network.

Work is also planned to continuing interviews documenting the livelihoods and fishing effort around the communities of Dovela and Zavora. We plan to use these interviews to compare with the samples we have already collected from the Tofo/Barra area. We hypothesise that there is a stark contrast in poaching rates, attitudes and likelihood to support conservation efforts between fishers from these isolated smaller communities and larger more diverse areas of fishers such as the Tofo/ Barra region.

Presently we are also conducting data analysis and drafting a manuscript on an expert opinion survey we have been collecting responses on. The purpose of this survey was to document the current state of knowledge on threats to and management and conservation actions of Mozambican and broader Western Indian Ocean sea turtle populations. This was also designed to illicit expert knowledge on current population status as little published information exists for Mozambique.

In addition to this a new collaboration has been created between Kelonia and IFREMER for the use of TORSOOI a dedicated database management system and photo identification tool they created for use within the Western Indian Ocean. We will now begin the tremendous task of importing, re-cataloguing and photo identifying our existing database, which will allow for residency models and individual movements to be assessed. Subsequently, knowledge of turtle's movements will help us identify areas of high overlap between poaching area with the movement corridors, key foraging areas of turtles.

Upcoming work

Field surveys:
More field surveys for poaching and nesting events are planned for February and March 2015. Particularly to evaluate the success of nests that are expected to hatch.

In April 2015, we will be presenting a project overview at the Rufford Grantees Conference in South Africa and will then present the results from our photo-identification programme, which will indicate first residency patterns of foraging turtles in Mozambique at the International Sea Turtle Symposium.

Outstanding field surveys and interviews are scheduled for May, June and July 2015.

Analysis of results, synthesis and writing will commence post conclusion of data collection and fieldwork. Whilst this work is currently underway, our primary focus for this is planned for August and September 2015.

Finally, I would like to draw your attention to our most recent scientific article from the project, recently published in the Endangered Species Research. We conducted this work to evaluate if we could make effective use of recreational divers as a way to collect information on Mozambique's turtle population in-water. The reason for this is because given a preexisting baseline to reflect population status, as there is currently no way to understand the scale of these individual poaching events we have been documenting. Thus, through a citizen science project, coupled with our photo-identification database we will be able to assess the impact artisanal-scale poaching is having on the population.

Williams J.L., Pierce S.J., Fuentes M.M.P.B. and Hamann M. (2015). Effectiveness of recreational divers for monitoring sea turtles. Endangered Species Research 26: 209-219. (Accessible online http://www.int-res.com/articles/esr2015/26/n026p209.pdf).