

Program Title:	Kenya Integrated Sea Turtle Conservation (KIST-Con) Program
International Program Number:	623-A-00-08-00004-00
Reporting Period:	October 2008 - July 2009

Semi-Annual Progress Report

July 15, 2009

The Lamu Archipelago is situated along the northern part of the east coast of Kenya. It stretches from the Somalia border in the North to the Tana River delta, which makes a natural border with the South. Lamu town was recently declared a World Heritage site under the UNESCO - administered convention on the World's Natural and Cultural Heritage. Furthermore, the marine parts of the Northern archipelago were designated a Biosphere Reserve (Kiunga and Kiwaiyu) under UNESCO's Man and Biosphere (MAB) concept, whereas the forested areas (Dodori and Boni) have been designated as National Reserves by the Kenya Government. The Lamu Archipelago is a vital part of the Eastern African Marine Ecoregion (WWF's Ecoregion Programme, Global 200). It is known to have extensive mangrove formations in the delta, creeks and basins of which 160 km² is considered in pristine or near pristine condition. The area has breeding populations of green sea turtles and dugong, as well as the occasional olive ridley and hawksbill turtles that come to feed in the area. It is also has the most northerly coral reefs in the Ecoregion, in addition to unique sea birds like Osprey, Pelicans and Roseate terns that sometimes make up a breeding colony of more than 10,000 birds.

The mandated natural resource management organizations have inadequate resources to manage and protect biodiversity, educate the community and enforce the law. Key to these is the lack of essential management guidelines for joint approaches to protected area management, leading to a lack of a coordinated approach in marine ecosystem conservation. The relevant government departments/authorities have major challenges in terms of operational tools and facilities. In addition, the local communities have little formal education and knowledge of scientific principles for assessing marine resources although they do possess goodwill and indigenous knowledge on resource conservation practices. Regardless of the above issues, the natural resources, habitats and biodiversity of Lamu Archipelago are of pristine character and encompass a great number of species, some of which are endemic to the area.

The Lamu Archipelago is one of the most important marine turtle nesting grounds in Kenya. Five of the seven sea turtle species that range in the Western Indian Ocean are found within

the Lamu Seascape. Three among these species - Green turtle (*Chelonia mydas*), Hawksbill (*Eretmochelys imbricata*) and Olive ridley (*Lepidochelys olivacea*) nest and the other two - Loggerhead (*Caretta caretta*) and Leatherback (*Dermochelys choriacea*) have been reported to feed within the Lamu Archipelago. The main areas of concentration are Kiunga, Manda Island and Shela. Over the years, WWF has mobilized the communities to protect the marine turtles both at sea and on the beaches.

WWF, in partnership with the Kenya Wildlife Service (KWS) has been running a successful conservation and development project in Kiunga Marine National Reserve (KMNR). Among the key components of the project is species protection, under which the green turtle is a flagship species. The main threats endangering turtles in the Lamu Archipelago are:

1. By catch by local fishermen as well as semi-industrial fisheries;
2. Poaching of turtle meat and eggs;
3. Marine pollution;
4. Disturbance from new tourism developments;
5. Targeted catching (turtling culture) by coastal communities;
6. International trade in turtle products;
7. Alteration and destruction of nesting beaches and habitats; and
8. Naturally slow rate of recovery of various populations under different levels of exploitation and stress.

To strengthen on-going efforts in community based protection of turtle nests and their habitats, the Kenya Integrated Sea Turtle Conservation (KIST-Con) Program was established to provide relevant ecological information on turtles in the area. The following progress has been made in implementing each of the program objectives:

Objective 1: Improve management and conservation of natural resources along the Kenyan Coast through strategic use of scientific monitoring.

An additional Kiwi SAT 101 PTTs (platform transmitter terminals) were secured. Five are planned to be installed on nesting green turtles in Kiunga and the rest in other breeding sites supported by the project in the Lamu Archipelago. This will enable real time monitoring of sea turtles, mapping of migratory routes, foraging grounds and habitat range of sea turtles. In the previous year 25 key staff people were trained in turtle satellite tagging techniques (7 from WWF, 10 from KWS, 4 community members, 3 from the Fisheries Department, and 1 from KEMFRI) and will be engaged as trainers. This project will attract new trainers from all turtle conservation groups.

Few among the five satellite transmitters installed previously lasted over six months. This was attributed to adhesive available in the local market was not strong enough to hold the transmitters. It is however expected that information on the turtle foraging grounds and inter-nesting habitats on tagged nesting females gathered for almost one year of monitoring will improve with the new tags. An initial map on turtle migratory routes and foraging grounds in KMNR and Kenyan coast was shared with partners by end of February 2009. All information has been posted on the www.seaturtle.org website which hosts a number of other satellite tracking projects for public access. The WWF collaborative sea turtle project has made two oral presentations and a poster developed for the 6th WIOMSA scientific symposium to be held in La' Reunion from 24th – 29th August 2009.

Knowledge sharing with other organizations in turtle conservation has also been increased through the KWS coordination of the turtle conservation group's network. A WWF member has been appointed as one of the key advisors in the turtle conservation advisory panel instituted by KWS. The WWF collaborative sea turtle project underlined its importance in sea turtle conservation in Kenya through its contribution and involvement in the formulation of the Kenya Sea turtle conservation strategic plan.

The Geo-referenced database continues to be updated in the current turtle nesting period. Data is being collated on the likely effects of rising sea levels on nesting turtles from the WWF database on nest translocations laid within the high water mark for the past 5 years.

Various thematic maps of turtles and their nesting beaches were developed and shared with the District Environment Committee (DEC) to enable informed decision making in accepting or rejecting any new proposed developments within KMNR catchments with potential effects on these biologically valuable areas. It is mandatory for all types of development to be cleared by the DEC under the Environment Management and Co-ordination Act of 1999 laws of Kenya.

The project in collaboration with communities and other partners was able to protect nests sites in Kiunga Marine National Reserve (KMNR) and beyond. A total of 138 nests were protected averaging 16,560 eggs. Current trends indicate a success rate of 88%. We expect to release approximately 14,500 hatchlings. Community contribution in this achievement stands at 60%. This is attributed to the close collaboration between WWF and its partnering communities. Data on turtle diseases continues to be collected though is not conclusive at the moment.

Objective 2: Increase awareness and incentives for communities and private sector to monitor and safeguard turtles.

The participation of the local community in turtle conservation remains the key milestone to the overall success of the implementation of the KIST-Con Program. The support and active participation of the community is essential especially in the view that turtling is a culture amongst the Bajuni community and turtles are slaughtered indiscriminately just across the border in neighboring Somalia.

The incentive program continues to complement the dedication and commitment of the youth and community in general and includes the following:

Local Youth Volunteer Program – 67 new youth volunteers were involved in the turtle youth volunteer program during this period.

Co-ordination with other TCGs (Turtle Conservation Groups) - WWF–Kiunga WWF has been endorsed as the co-ordinating agency for turtle conservation work in Lamu. This is a direct response to supporting the most successful turtle protection initiative along the Kenyan coastline. Data collection, analysis and community involvement have been the strength of the programme. It has also embraced and shared satellite tracking technology to understand and improve management of the species.

State of the World's Sea Turtles (SWOT) – This year the WWF Turtle team contributed data and information to the global SWOT database and information base.

Support to Kipini TCG – WWF has supported Kipini Beach Management Unit (BMU) and Tana Friends of Marine Environment (TAFMEN) with training on sea turtle habitat and nest protection, combating poaching and trade in turtle products as well as effective patrolling of turtle nesting beaches. This was done through exchange visits and staff/skills exchange with an aim of replicating KMNR turtle conservation successes. Kipini reported 22 nests where all were laid by green turtles except 4 which were laid by Hawksbill.

Recovery in the tourism sector prompted TCG's in Kiunga, Kipini and Shela to gradually embrace eco-tourism as an alternative livelihood. This is a direct result of a symposium with 40 participants held on 16th June 2009 on ***“Sustainable Livelihood Opportunities from Turtle Conservation”*** organized for youths networking from all three WWF supported sites. Dialogue with the private tourism investors to develop partnerships with TCG's is being spearheaded by KWS Wardens and facilitated by WWF.

Objective 3: Scale-up monitoring and enforcement activities to priority areas (high threat, high potential), especially those areas where turtle protection groups are not yet functional.

Kipini and Shela turtle conservation groups are being supported by the project through monthly outreaches to supervise their handling on turtle protection and monitoring by the WWF turtle team. They were trained prior to this reporting period on turtle conservation protocols including, nest handling, translocation etc. In Kiunga, a new outpost at Mvundeni was revived to ensure monitoring and protection of important turtle breeding beaches of Kitanga, Kikuu, and Mongoni. This step was undertaken with full cooperation of KWS as a deterrent for migratory fishermen who pose a threat to nesting females when they set temporary landing site in the vicinity.

Joint Sea Patrols – In collaboration with the Kiunga Beach Management Unit, the turtle team conducted several joint sea patrols every week around the fishing grounds and turtle foraging grounds. This is intended to monitor compliance, and act as a deterrence measure towards turtling. Over 43 joint sea patrols (youth volunteers, fisher folk and the WWF turtle team) were carried out at Mwongo Shariff, Kui, Sudhi, Kiunga Mwini, Kiunga and Ishakani fishing grounds. WWF has registered several cases of poaching within Lamu. KWS, as a partner in the implementation of KIST-Con, sent its elite intelligence and enforcement team to areas that have been identified to have rampant turtle poaching activities. Four turtle poaching cases were prosecuted in the Lamu Law courts after being reported by WWF community youth volunteers.

Turtle & GIS database – WWF – Kiunga continues to share and disseminate turtle data and share crucial turtle conservation information to relevant partners and government agencies. KWS tapped into WWF's extensive turtle database to inform its formulation of the Kenya Sea Turtle Conservation Strategic plan. Efforts are being made to embed information on satellite tracking of sea turtles in the database.

Sensitization and dialogue between WWF turtle conservation and Fisher folk – Forty two discussions sessions on turtle conservation were held between WWF/KWS and fisher folk during the reporting period. Women who were involved in the discussions providing eye opening information especially on community beliefs associated with turtle products, including:

- turtle oil cures asthma;
- turtle oil when mixed with porridge reduces strokes and high blood pressure;
- turtle meat improves fertility and is an aphrodisiac;

- turtle oil is good for hair growth in women; and
- turtle meat improves the appetite for sick people.

Capacity Building

WWF has also undertaken the following through the KIST-Con program to build and enhance capacity for the communities involved and key WWF and KWS staff:

- Key WWF and KWS staff trained in GIS were able to share their knowledge and skills by training 3 youths groups in basic mapping skills.
- In addition to the 25 key staff trained in turtle satellite tagging techniques, all turtle conservation groups in Lamu were trained in satellite tagging and its significance in managing turtle populations.
- WWF supported outreaches to Lamu schools to build capacity of school going children on the significance of turtle conservation to the region, country and even globally.
- TCGs were trained on using available knowledge to develop strong educational messages on the importance of conserving turtles for all target groups, most importantly fishermen.
- WWF trained all KWS rangers in scientific monitoring of turtles and enforcement efforts towards protecting turtles.

Conclusion

An upsurge in poaching incidents reported by youths from TCG's motivated through skills and incentives has produced good responses from enforcement agencies – KWS and Fisheries Department apprehended four poachers during this reporting period. This is a significant deterrent and has resulted in a decline in poaching incidents. A significant increase of ownership by TCG's is readily noticeable, along with prospects for earning ecotourism income by the youth groups involved. The personnel from government partner agencies and other stakeholders are also excited by the satellite tracking of nesting turtles, rejuvenating their energies and interest in turtle conservation.

Report Completed By:	
Name	Ali Mwachui
Position/Title	Project Executant, Kiunga Marine National Reserve (KMNR)
Organization	WWF Eastern Africa Regional Programme Office (EARPO)
Date	14 th July 2009