



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

Semi-Annual Progress Report

July 15, 2008

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. Bycatch 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.

- 5 KiwiSAT 101 PTTs (platform transmitter terminals) have been secured and are ready for installation.
- The initial training of key staff (WWF, KWS, community members, Kescom, FID, and KEMFRI) is slated for 26th July 2008 and the launch and the satellite tagging of green turtles are planned for early August 2008.
- It is expected that information on the turtle foraging grounds, inter-nesting habitats, nesting colonies will be gathered following the launch.
- 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 proposed new 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.
- The Geo-referenced database continues to be updated in the current turtle nesting period. Turtle team members patrolled all KMNR turtle nesting beaches. Night patrol teams managed to tag eleven nesting females over the six month reporting period. Volunteers also conducted day patrols to monitor, verify and protect nests. One hundred and seventy four (174) nests were reported with 57% of the total reported by community members. Over eight thousand (8000) hatchlings emerged and successfully swam to the sea during this period. Seven (7) sea turtles (*Chelonia mydas*) tagged in previous years ranging from 2001 to 2005 returned to nest in 2008. Twenty six (26) mortalities were reported and the main cause

of death was incidental catch by gill nets. Mortality due to diseases – *Fibropapilloma* increased during this reporting period. GIS maps of turtle nesting beaches and foraging grounds have been developed.

- Data on turtle diseases continues to be collected though not conclusive at the moment. Climate change studies have been conducted in KMNR and the results are due by December along with reports from other MPAs within the Lamu Archipelago where similar studies have been conducted.

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 tremendous especially in view that turtling is a culture amongst the Bajuni community and turtles are slaughtered indiscriminately across the border in Somalia.
- The incentive programme continues to complement the dedication and commitment of the youth and community in general. 18 new youths and community members from the Kipini area now comprise three TCGs (Turtle Conservation Groups), who have actively participated in and recently been incorporated into the turtle volunteer programme.
- Entrenching eco-tourism amongst TCGs has been challenging as tourism has been slow after the post election crisis that had a huge effect on the industry. Kipini and Mkokoni Turtle Conservation Groups are gradually embracing the eco-tourism concept though still in its infancy stage. However youths trained in nest handling are getting employed as tour guides or are offering their services independently to visitors.
- The Adopt-A-Turtle initiative will begin following the launch of satellite tagging. Behind the scene efforts are ongoing as the idea and its potential is being introduced to corporate organizations and selected individuals.

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.

- The Beach Management Units (BMUs) are playing an integral role in the management of the beaches in their jurisdiction. WWF, the Fisheries Department and the BMUs are working together to ensure fisheries resources are sustainably utilized. This includes reduction of by-catch (turtles, dolphins and dugongs) and reducing turtle poaching activities through the community policing initiative.
- At the moment no youth groups or youth group members have been trained. There are plans to expose the various groups to successful and well managed youth groups along the Kenyan coast. Selected members will be trained on tour guiding, hospitality, and leadership skills.
- Enhancing the capacity of law enforcement agencies to effectively undertake their activities as they pertain to turtle poaching is being conducted in phases. KWS rangers are actively involved in turtle species protection and monitoring activities.
- WWF has registered several cases of poaching within the Lamu Archipelago. KWS, as a partner in the implementation of KIST-Con, is sending its elite intelligence and enforcement team to areas that have been identified to have rampant turtle poaching activities.
- The WWF – Kiunga model of community turtle conservation is gradually being replicated in Kipini. 10 members of Kipini have visited the Mwongo Shariff turtle camp to gain further insight and skills on turtle monitoring as well as experience community turtle conservation

first hand in April 2008. The WWF turtle team makes regular visits to Kipini to follow up on the progress as well as mentor the TCGs.

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:

- Training of Key staff and community on satellite tagging and P.I.T has been slated for 26th July 2008.
- Key staff in KWS and WWF has been trained in GIS. However this is not adequate (only 2 staff) and avenues are being explored to enhance their already acquired skills and train the other staff that may not be conversant with GIS and remote sensing technology.

Conclusion

The project is expected to be implemented within the set out timeframe despite initial delays in delivering the key equipment required. Communities are also eager to participate and share their knowledge in improving management of turtles. KWS and the Fisheries Department have been very supportive, responding to all concerns raised in regards to the enforcement of laws that protect turtle species.

Report Completed By:	
Name	Ali Mwachui
Position/Title	Project Executant, Kiunga Marine National Reserve (KMNR)
Organization	WWF Eastern Africa Regional Programme Office (EARPO)
Date	July 2008