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Advances in sea turtle conservation in Kenya

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Introduction

Five of the seven extant sea turtle species are reported to occur within Kenyan waters: green, hawksbill, olive ridley, loggerhead and the leatherback turtles. The green turtle (*Chelonia mydas*), hawksbill turtle (*Eretmochelys imbricata*) and olive ridley (*Lepidochelys olivacea*) are the most commonly encountered species in Kenya (Wamukoya et al., 1997). However, the loggerhead (*Caretta caretta*), and the leatherback (*Dermochelys coriacea*) are rarely sighted though past records indicate that they used to occur within Kenyan waters: with the first ever-confirmed leatherback stranding reported in 2007 (Wamukota, 2007).

Sea turtle populations in Kenya have been facing several threats, which have ranged from direct subsistence harvesting for meat and eggs, commercial harvesting for meat, oil and shells (Wamukoya et al., 1997; Church & Palin, 2003), incidental capture in both artisanal and commercial fishing activities to habitat alteration, degradation and loss. The status of sea turtle exploitation in Kenya spells a major challenge to conservation and management efforts especially given that a large

percentage of mortalities are human caused and mitigation measures partly involve major socio-cultural as well as socio-economic shifts.

Despite sea turtles being classified as 'protected animals' under the Wildlife Act (Cap 376) and Fisheries Industry Act (Cap 378); legislation that prohibits and makes it an offence for any form of direct exploitation of the animal or its products under Kenyan laws, illegal harvesting and exploitation of the species still thrives unchecked. This trend is compounded by the lack of resources such as equipment, personnel and finances to implement the already established legislations. Furthermore, no legislation exist at present to protect key sea turtle habitats such as foraging or nesting grounds except for those falling within designated marine protected areas.

Sea turtle conservation in Kenya

Sea turtle conservation efforts in Kenya are coordinated by the Kenya Sea Turtle Conservation Committee (KESCOM) Secretariat. The secretariat was founded in 1993 to fulfill the need for a national multi-sector partnership that aimed at bringing together all stakeholders from local

communities, government institutions and private agencies in support of the conservation and management of sea turtles in Kenya.

KESCOM has, and continues to strive to promote a national and regional integrated approach that contributes towards global efforts in sea turtle conservation. This approach is guided by the following four broad objectives; development and implementation of awareness and research programmes, capacity building of turtle conservation groups and local communities, encouraging and enhancing community participation and liaising with conservation partners at the national, regional and international level to promote the conservation of sea turtles. The establishment of the committee followed increased reports of sea turtle mortality mainly occasioned by fishing activities, poaching, and trade in sea turtle products and a regional acknowledgement that populations were declining not only within the Western Indian Ocean region but also globally.

One of the major daunting tasks that KESCOM had to overcome upon its inception was trying to encourage the local communities to support sea turtle conservation initiatives against a backdrop of limited livelihood options. However, due to an increase in advocacy and awareness campaigns, there was increased support not only from the local community, but also cooperation from government institutions and NGOs as well as private interests and volunteers.

Sea turtle conservation efforts in Kenya have focused more on local coastal communities for two key reasons. Firstly, local communities remain the most intimately linked with the sea turtles and their involvement in sea turtle conservation initiatives has been identified as one of the major recurrent themes in the global strategy for the conservation of sea turtles (IUCN, 1995). Secondly, there is a general recognition that whether local, regional, and even global efforts to protect sea turtles and their habitats succeed or fail depends to a larger extent on the active involvement of informed and empowered local coastal communities (Renard, 1991; Limpus, 1995; Humphrey & Salm, 1996).

To date, KESCOM has supported the establishment of a total of eighteen community based Turtle Conservation Groups (TCGs) who are involved in sea turtle conservation work. This has been based on the recognition that successful conservation programmes must have the support of local communities. Through these groups, KESCOM has been able to conduct the following activities, which have contributed directly to the fulfillment of objectives related to the recovery of sea turtle populations locally and regionally:

Habitat protection and restoration

Community Turtle Conservation Groups (TCGs) have been involved in habitat protection and rehabilitation activities, which have included mangrove reforestation and habitat surveys. Communities have also been educated on wise use of coastal resources and better fishing practices to minimise human impact on sea turtle habitats. KESCOM has liaised with TCGs to provide advice to hotels and other private interests regarding appropriate methods of beach protection (alternatives to seawalls and beach lighting).

Coastal clean-ups

Coastal pollution and especially poorly disposed plastics continue to pose a major threat to the survival of sea turtles, especially in their foraging and nesting grounds. KESCOM has, and continues to organise and hold together with TCGs members regular beach clean-up exercises. The garbage/trash collected is weighed and categorised to determine major ocean polluters. This exercise has ensured that the local people take part in reducing threats to sea turtles posed by pollution and serves as an awareness tool on the importance of pollution control. Hotels are also involved in beach clean-ups and other pollution control measures especially with regard to sewage disposal. This activity contributes directly to global efforts aimed at restoring the value of coastal environments through the annual International Coastal Clean-ups organised by the Ocean Conservancy. Some of the garbage collected is recycled and utilised to make handicrafts such as earrings, key holders, penholders, etc. that provide

an additional source of income to local community members.

Beach patrol/monitoring activities

KESCOM has, and continues to support the implementation of beach patrols and monitoring programmes. This has been through training local people on techniques of standard beach patrols, surveys, and monitoring activities for the purpose of improving the quality of reported data and information. These programmes have promoted collaboration with local fishermen who have ensured and supported the success of sea turtle release programmes for turtles caught accidentally in fishing gear. Another output of these programmes has been the support for the establishment of community groups to promote conservation of marine resources in newly characterised nesting areas and adjacent waters.

The programme has reduced incidents of poaching (of nesting females, and eggs) due to increased surveillance, and has contributed to higher recruitment rates through nest and nesting females protection programmes.

Capacity building

Capacity building for TCG members has been in the provision of basic and quality environmental leadership training in sea turtle biology, habitat rehabilitation and project management to influence conservation at the local grassroots level.

Public education and awareness

KESCOM has always recognised that the implementation of resource conservation and management initiatives requires education and awareness in order to enhance local action/community participation in the conservation process. This has been guided by global realization that the inclusion of environmental concerns in the consciousness of the average citizen is crucial to the sustained survival of both human residents and wildlife. Conducting awareness and education programmes has been core to the success of KESCOM's objectives. Sea turtles have served as good candidates for public education campaigns since they are flagship species (Frazier, 2005),

whose populations are affected by the health of coastal ecosystems, both marine (coral reefs, sea grass) and terrestrial (sandy beaches, littoral zones). KESCOM has developed and implemented a targeted (schools and local communities based) mobile public awareness and education campaign to accompany conservation action, targeting relevant stakeholders (specifically or collectively) and embraced all available avenues of communication, including print and electronic media, school curricula, extension programmes, public displays and local gatherings (e.g. festivals, political events, town and village meetings).

Income Generating Activities (IGAs)

The over-reliance on and harvesting of marine species by coastal communities for sustenance is one of the challenges experienced by KESCOM. The main challenge is attempting to encourage communities to be involved in sea turtle conservation initiatives against the backdrop of limited livelihood options. Anecdotal reports have indicated that fishermen have resorted to poaching sea turtles in the event of inadequate fish catches, although some poach turtles because of a long term traditional believe that sea turtles have medicinal as well as aphrodisiac properties.

KESCOM has facilitated TCGs members from various areas to identify and even initiate income generating activities (IGAs). These IGAs have not only proved essential for the conservation of marine and coastal resources and ecosystems but also for the overall development of local communities.

Conclusion

The results of conservation action at the local level contribute directly to the national database and information center based at Mombasa. The database is relied upon in informing national sea turtle related policy and legislative issues / reviews, and regional initiatives through the IOSEA MoU, nested within the Nairobi Convention.

However, the impact of these activities on the overall goal of sustainable sea turtle populations in Kenya has been limited due to factors ranging from

availability of resources to insufficient involvement of major stakeholders, especially local communities. The nature of these limitations suggests that the steps in enhancing sea turtle conservation in Kenya would include increased community participation in sea turtle conservation and the development and implementation of strategies to make marine conservation, in general,

more integrated and pro-active by utilizing sea turtles as a flagship for marine conservation. The fact that sea turtles are migratory and are impacted by many coastal activities including fishing, tourism and coastal development indicates that effective management programmes would have to take into consideration broader coastal marine development issues.

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