

The Decadal Evolution of Technology in Community-Based Sea Turtle Conservation in Kenya

Hashim O. Said¹, Lily D. Mwasi¹, and Hassan B. Mohamed¹

¹World Wide Fund for Nature Kenya (WWF-KE), P. O. Box 62440-00200, Nairobi, Kenya

Abstract

Technology has been the cornerstone behind the World Wide Funds for Nature – Kenya (WWF-KE) work in sea turtle conservation, dating as far back as 1996. With the initial efforts being realized in Kiunga, one the most important nesting and foraging grounds for the green sea turtle (*Chelonia mydas*) in Kenya and the entire Western Indian Ocean (WIO), the first technological intervention included the use of satellite-based telemetric tagging. This led to the mapping of key foraging grounds for sea turtles and the subsequent establishment of local community conservation areas and area-based fishing gear restrictions to help conserve sea turtles. Later interventions saw the establishment of youth-led community champion groups in sea turtle conservation, dubbed Turtle Conservation Groups (TCGs). These groups were trained in the use of Geographic Positioning System (GPS) devices to mark sea turtle nests, track patrol efforts and collect paper-recorded data on sea turtles from 5 key locations and 26 nesting beaches in Kiunga. More recently, WWF-KE worked on updating this data collection system by spear-heading the development of the first national sea turtle conservation protocol, which led to the inception of the first, participatory-developed and government-approved sea turtle mobile data collection application – the *Kasa* app (*Kasa* meaning sea turtle in the local Swahili language). Efforts with the national authority for sea turtle conservation are also in place to support national sea-based aerial surveys to monitor sea turtle rookeries and keep track of abandoned, lost or discarded fishing gear within Kenyan waters. While TCGs entail the cornerstone behind WWF-KE's success in sea turtle conservation, their sustainability still hangs in the balance with most being reliant on donor funding and the currently compromised ecotourism sector (owing to terror attacks and the recent COVID-19 pandemic). Despite these challenges, the community-based conservation approach resulted in major success, including the protection of five key locations in Kiunga with up to 26 nesting beaches; 2,021 reported and protected nests between 1997 and 2013; and 173,333 viable hatchling releases between 1997 and 2013.