

# SIREN-Turtles, a Mobile App to Facilitate Data Collection, Comparability and Sharing of Beach Nesting Data

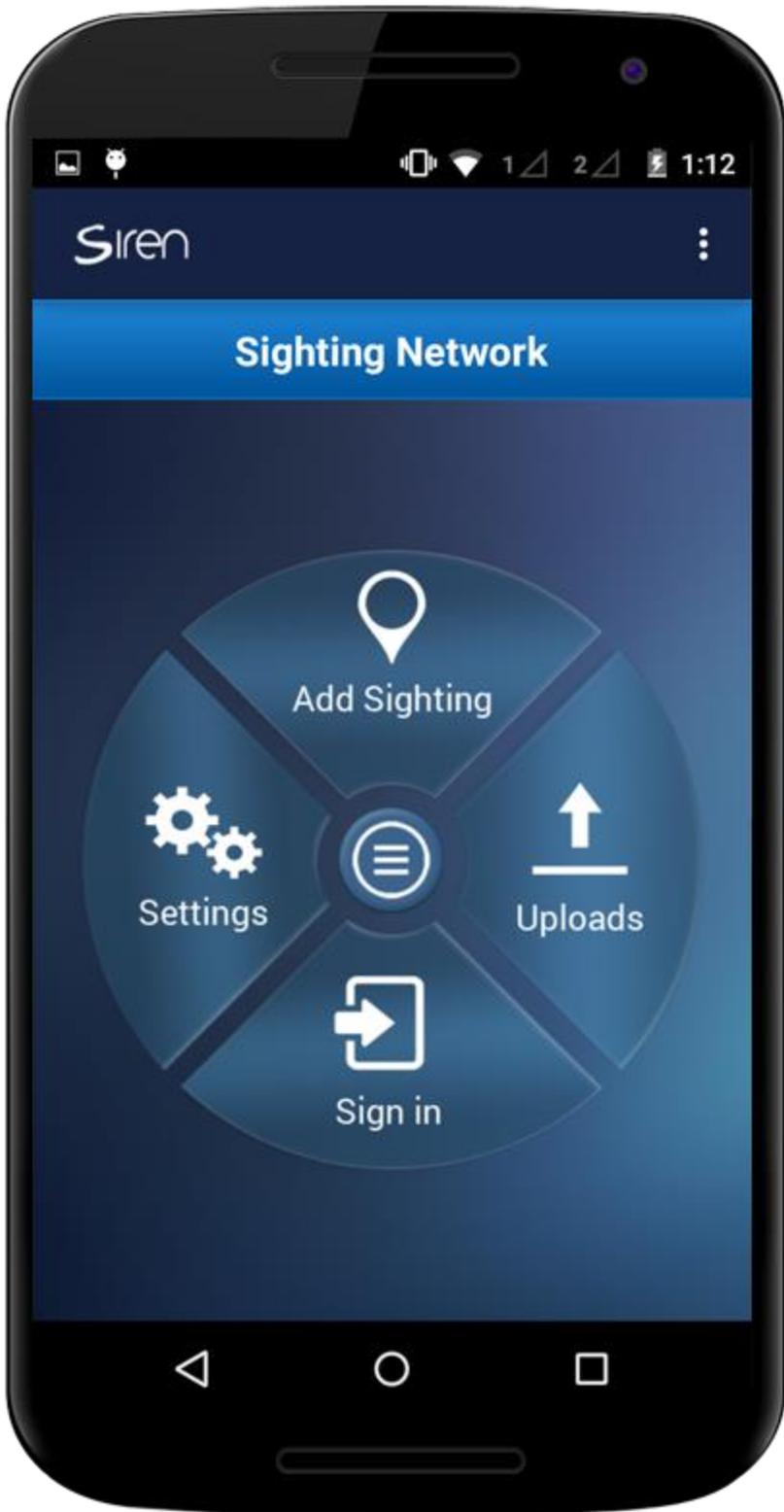
By Aristide Takoukam

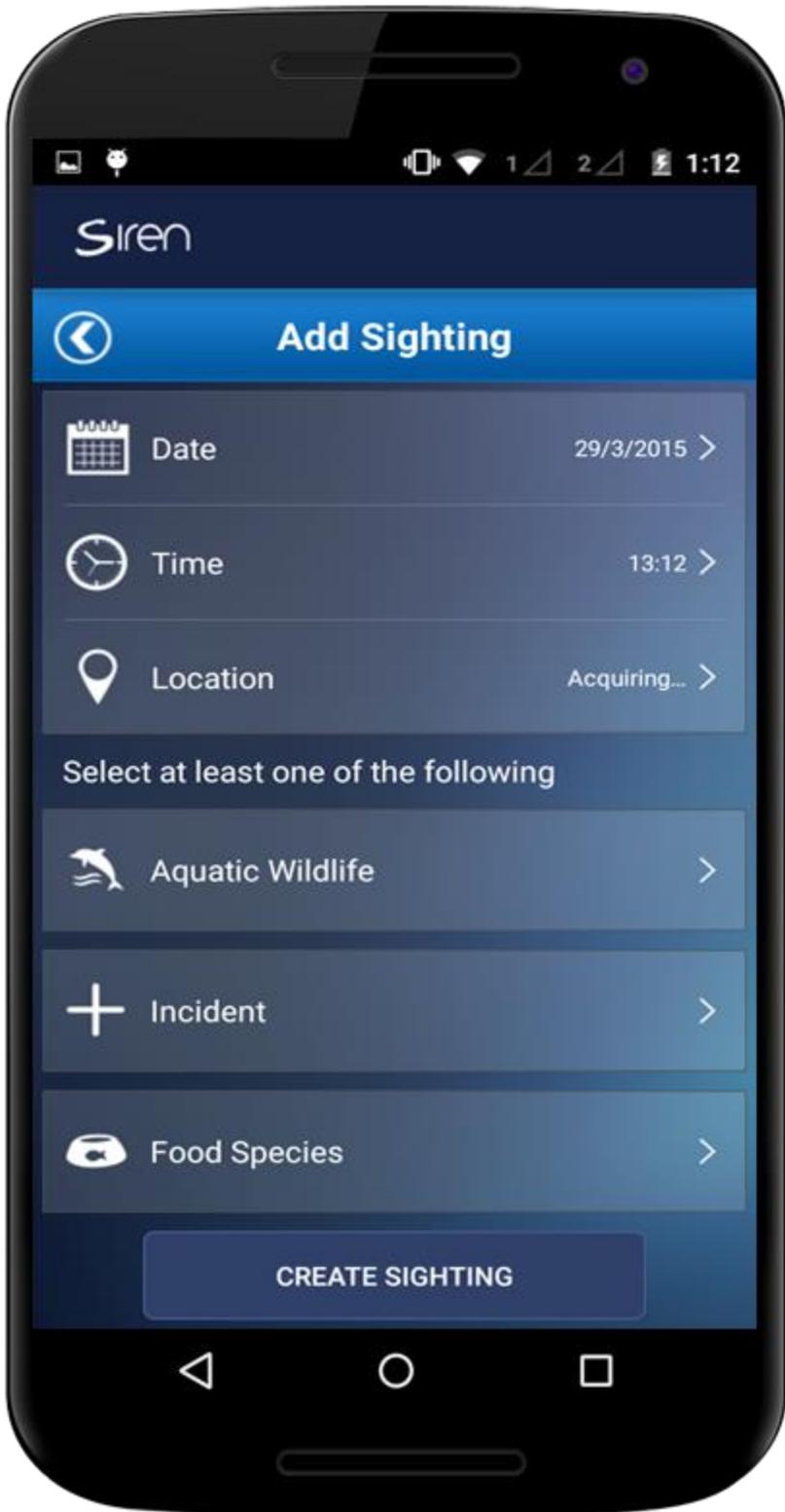
Marine megafauna including sea turtle's provide valuable ecosystem services as most are keystone species whose extirpation in a community would more likely lead to its imbalance. Although most of these flagship species are the admired by many, their populations remain threatened by increasing anthropogenic activities. Data on marine mega-fauna necessary for their protection is scant as compared to their terrestrial homolog; the reason being the complexity and the high cost of data collection, and limited financial resources. The lack of scientific skills, in addition to poverty in developing African countries, make data collection even more challenging, while hunting pressures remain concerning.

The African Marine Mammal Conservation Organization (AMMCO), created the first mobile application, SIREN, dedicated to marine mega-fauna in West Africa in 2015 and sponsored by PPI-IUCN. The application aims to provide cost-effective, and participative opportunistic data collection to reduce data gaps on marines species in Africa. The App enables people to collect and record minimum data (date, time, GPS location, species and photo) of marine animal opportunistic sightings. More than one hundred sightings were reported by fishermen successfully to our database during this pilot phase. More than 20% of the reported sightings were dead or bycaught sea turtles.

This success inspired AMMCO to use a similar mobile solution to address some issues related beach nesting monitoring data, which are not used to their optimum potential. Some of the issues include the incompatibility of data formats that does not allow the comparability across geographical areas, limited skills to analyze the data and the difficulty of digitizing the data and centralize them to a larger database. AMMCO, in collaboration with RASTOMA, is developing SIREN-Turtles, a new version of the SIREN App to be used around the world by sea turtle researchers for an easy and systematic collection of nesting beach monitoring, including data. The App could be used offline and will be available on iOS, Android and Web interface in French and English, for a start. Each uploaded data will be accessible in an interconvertible format on the AMMCO website with the concern of the data contributor. Because data collected through SIREN-Turtle will match the SWOT minimum standard for nesting data, it will be readily connectible to feed the SWOT database or another database at the local, national, or global levels in only a few clicks. Using the Girondot model integrated into our server, the user could process their data online, generate and export statistics and graphs of interest in just a few clicks. Therefore, SIREN-Turtle will allow for easy data collection, secured storage, quick data processing, fast and easy data sharing and enhance comparability across geographical areas and projects. Overall, while SIREN will allow general users to contribute with opportunistic dead, live, or nesting data to inform on threats and hotspots, SIREN-Turtles will be dedicated to sea turtle researchers to boost the accessibility and usability of beach nesting data. Both will better support decision making to improve the protection status of sea turtles locally, nationally, and globally.

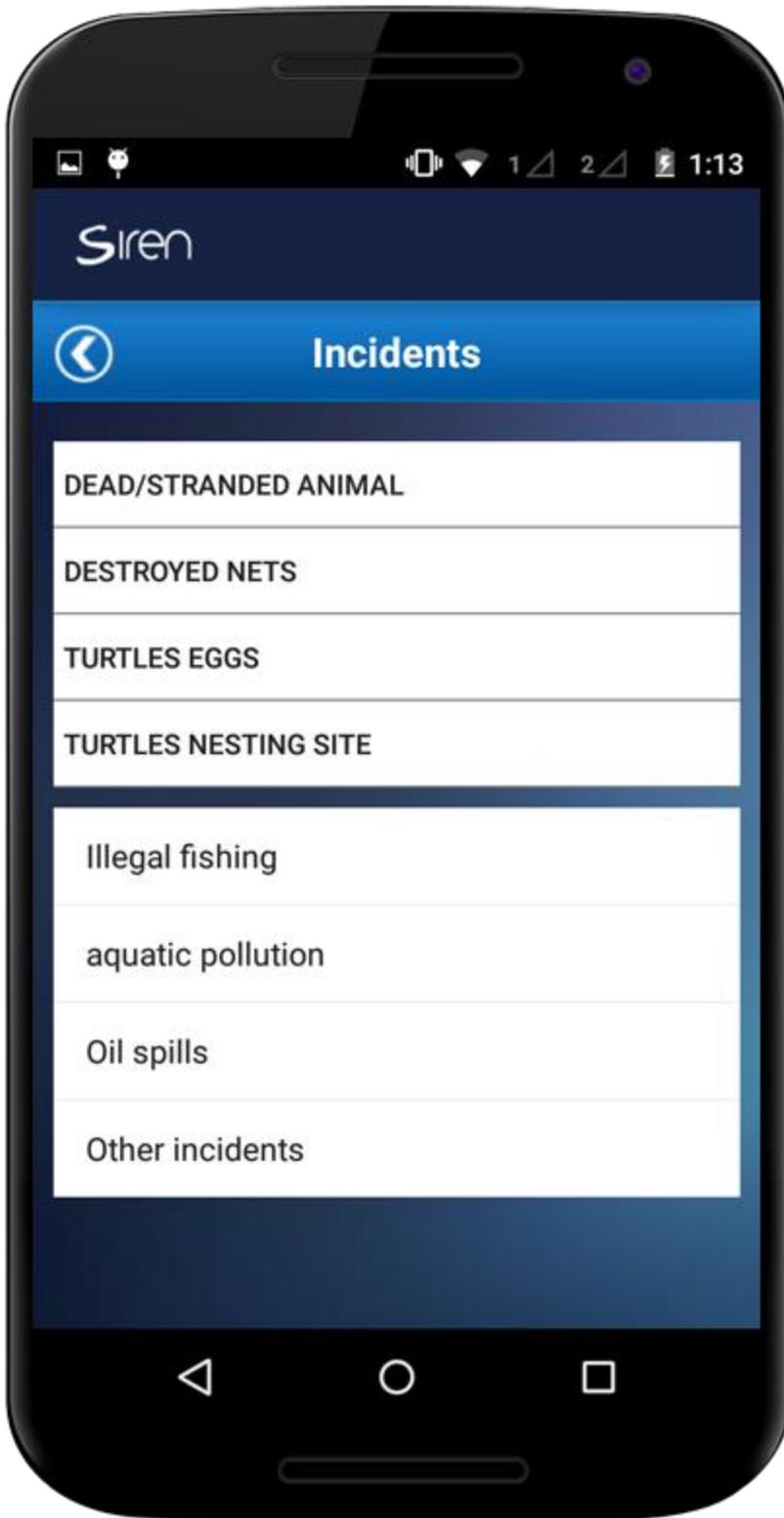
Acknowledgments: Alexandre Girard and Alexis Guilleux (RASTOMA), Cyril Balam (Nanotech Solution), Rodrigue Ngafack (AMMCO), Rufford Small Grants Foundation.

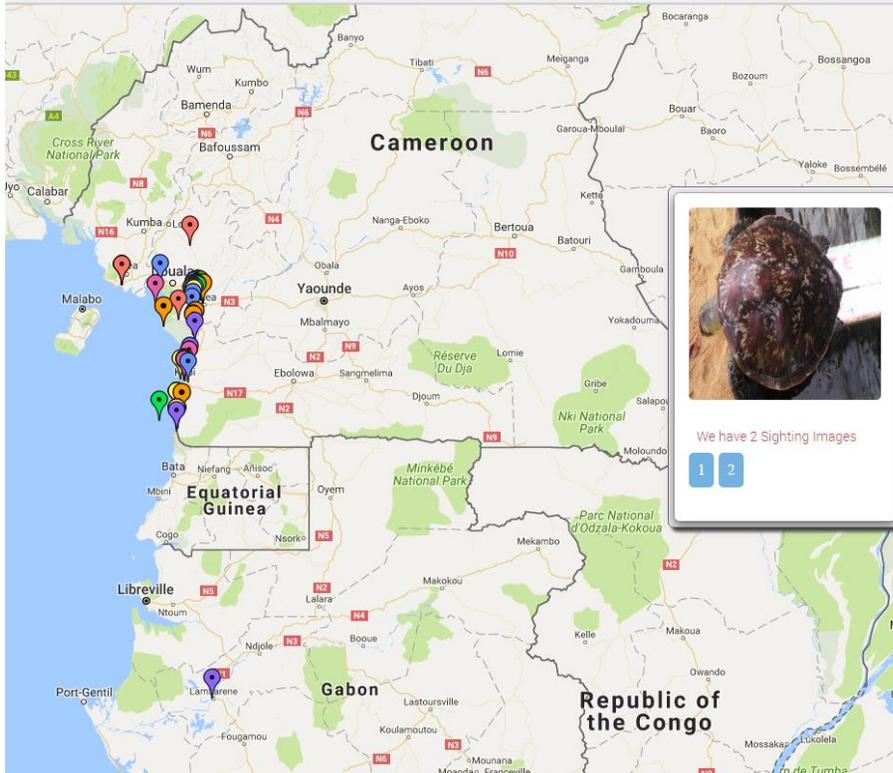












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