



41st International Sea Turtle Symposium

Workshop Proposal for ISTS41

Title of Proposed Workshop:

Future technologies for large-scale monitoring of marine turtle nesting populations

Name of Main Organiser: Dr Liliana Poggio Colman, Dr Sam Weber

Email Address: l.p.colman@exeter.ac.uk

Suggested Duration of Workshop: Half Day (4 hours)

Description and Justification of the Workshop:

Major nesting colonies (e.g. those with >10000 nests per year) play a pivotal role in driving marine turtle population dynamics and are often used as indicator sites for assessing the regional and global conservation status of these species. However, high densities of nesting females and/or large geographic areas mean that such populations are often logistically difficult to monitor using conventional nest counts or mark-recapture. Given that monitoring often competes for limited resources with management activities that contribute to species recovery, efficient approaches for estimating nester abundance and trends at these sites are urgently needed.

This workshop aims to bring together expertise to reflect on the specific challenges associated with monitoring large marine turtle nesting aggregations and discuss how emerging, labour-saving technologies could help (or not) to address them. The intended audience are managers and researchers involved in the monitoring of nesting populations where traditional nest counting or mark-recapture is proving to be difficult, or in places where population growth will likely render current monitoring approaches impractical in future.

Using selected case studies, speakers working on large nesting populations will first set the scene by outlining current monitoring solutions and challenges. Participants will then be invited to share experiences of using technology to monitor marine turtle nesting numbers in the field (e.g. drones, remote sensing, thermal imaging cameras) and reflect on the cost, scalability and reliability of these approaches compared to more conventional methods. Finally, we will consider what technologies might be

around the corner that could transform the way in which large marine turtle populations are monitored in the near future.

Expected Outcomes of the Workshop:

The workshop aims to provide a forum to share expertise and ideas on what the future of marine turtle monitoring could look in some of the world's largest nesting populations. It will be an opportunity for researchers involved in monitoring large-scale nesting populations to share information about their challenges, solutions they are exploring and applicability to different sea turtle rookeries.

Group discussions will work through some of the common challenges faced with monitoring these populations and summarise current/emerging technologies and their suitability in different contexts. We aim to produce a literature review supplemented by expert input from the workshop on different technologies. This workstream could result in a "technology roadmap" for conservation projects identifying techniques most appropriate for investment through future initiatives. Most importantly, the workshop will build networks across the world of individuals with experience and expertise relevant to the multidisciplinary challenges associated with monitoring large-scale marine turtle nesting populations.