

COORDINATION OF ACOUSTIC TELEMTRY

Many marine species exhibit ranges and distributions that traverse man-made boundaries. For migratory, protected, and recreationally and commercially important species, tools that assess movement and presence/absence must be implemented at broad scales to accurately characterize animal distribution and potential range shifts, understand cumulative effects, and to separate these effects from other influences. Acoustic telemetry networks enable cooperative research for these species at broad scales.

WHAT ARE WE ASKING OFFSHORE WIND COMPANIES TO DO?

Best and preferred

RWSC and ROSA recommend that your entity joins the regional acoustic telemetry network in your study area (e.g., Atlantic Cooperative Telemetry Network (ACT), FACT Network, Ocean Tracking Network (OTN)), and submits its acoustic telemetry data (receiver metadata, tag metadata, downloaded detection files) as either a publicly available project or a private project that participates in regional data management following your region's user agreement. Note that with your permission, your regional telemetry network can assist with sharing your receiver locations with RWSC and ROSA for inclusion in the [RWSC Research Planning Map \(https://rwsc.org/map\)](https://rwsc.org/map) without making changes to your current project permissions. Visit the ACT Network's MATOS Data Portal (<https://matos.asascience.com>) for the mid-Atlantic and Northeast U.S. or FACT (<https://secoora.org/fact/>) for the Southeast U.S. for more information including User Agreements. In addition, RWSC and ROSA recommend that movement data products for electronically tracked marine animals are uploaded to the OTN thematic OBIS node and archived with NOAA NCEI. Please contact admin@rwsc.org with any questions or assistance implementing these recommendations.

At minimum

RWSC and ROSA can also accept receiver locations for inclusion on the Research Planning Map for all ocean users to access. This can be done by emailing the receiver location information to admin@rwsc.org, using the acoustic telemetry metadata templates available at <https://matos.asascience.com/report/submit>.

BENEFITS OF COLLABORATIVE DATA SHARING

- **Standardized, interoperable, analysis-ready data:** the regional acoustic telemetry networks provide data standardization and QA/QC services by acoustic telemetry data experts for all datasets in their network. This provides consistency for researchers and analysts working with big datasets and saves time.
- **A framework for managing data collaboration:** membership within a regional acoustic telemetry network gives participants a defined framework for collaborative data collection, and allows entities to define and execute timelines for data reporting and fulfil external expectations of data availability.
- **Increase longevity of deployments:** awareness of all acoustic telemetry receiver deployments shown on the public [Research Planning Map](#) improves navigational safety and reduces risk of conflict with other ocean users. Disruption of receivers is expensive to repair, causes data loss, and may reduce data quality.
- **Better science:** more and better-placed receivers in a cooperative network lead to higher potential statistical power and certainty in results/analyses, including better chances to detect cumulative effects and increase disentanglement of potential impacts of offshore wind development from climate change impacts. Without participation in a regional network, you may be unaware of where your tagged species move outside of your own receiver array.
- **Less redundancy:** reduces the inadvertent expensive duplication of receiver coverage and allows for informed planning of asset placement that leverages the existing network coverage.
- **More context for decision-makers:** elevates your project to a grander scientific landscape allowing decision-makers within your entity, as well as regulators, resource managers, and many others to understand your data and results in a broader context.

ABOUT ACOUSTIC TELEMTRY

Acoustic telemetry has revealed a great deal about species movement that informs fisheries management and conservation. In U.S. Atlantic waters, this method is increasingly being used as a cost-effective way to gather data on species in and around offshore wind areas. Through acoustic telemetry, live marine animals are released back into the ocean after being instrumented with an electronic tag that pings out a unique ID code at regular intervals. When a tagged animal travels within range (typically 0.5 km or more in continental shelf environments), a receiver records its unique ID number, along with the date and time. Arrays of acoustic receivers record the presence of tagged animals along with other environmental information that is transmitted by the tags or gathered by additional sensors affixed to the receiver stations. Receivers are periodically retrieved and detection data are downloaded and combined with tag and receiver metadata to understand animal movement.

Offshore wind developers who participate in RWSC and ROSA have expressed interest in generating data to inform the successful development and operation of their individual projects as well as to deepen understanding of potential cumulative effects of offshore wind development in U.S. Atlantic waters. Whether acoustic telemetry is used to study the movements of migratory species that often span beyond individual receiver arrays or more resident species that may remain within a study area, carefully formatted data and metadata are needed to ensure that the resulting data are useable within a project and interoperable across projects. Thus, to adequately characterize distribution and potential range shifts, the collection of acoustic telemetry data must occur using comparable methods and with standard data and metadata formats.

