

Data Management Plan:

We are seeking to assemble a collaboration team to jointly examine animal satellite tracking data (past or present), to assess biodiversity change through time and informing conservation management (hereafter referred to as the “collaborative initiative”). The collaboration would be a joint effort in the context of the Marine Biodiversity Observation Network (MBON) and the Animal Telemetry Network (ATN). The study area at this point includes the Gulf of Mexico, Western North Atlantic, and Caribbean regions. The data will also be synthesized into a collaborative paper identifying hot spots and potential drivers for abundance and movement trends. No raw data or species-specific trends will be generated that would prevent contributing PI’s from publishing stand-alone movement papers, and you would get authorship on any and all manuscripts or curated data projects. The final synthesized data end products would be housed in the MBON [online portal](#).

The primary data management activities for this collaborative initiative will be centered within the Research Workspace (RW) of the ATN Data Assembly Center (DAC), a community resource operated by Axiom Data Science. The RW provides a scientific computational and collaboration space for researchers to: A) create cooperative projects, B) upload, centralize, store, manage, analyze and share their data, and C) prep data packages for release to the ATN Data Portal and permanent archival at DataONE or NCEI.

I. The first step will be for the PI or data manager to use the ATN Registration App (<https://dacregistration.atn.ioos.us/>) to create a unique project within the DAC into which specific project-level metadata (e.g., title, abstract, contact information) and satellite tag deployment records (e.g., PTT IDs, species, deployment dates) will be inserted. The project-level and tag deployment metadata are submitted electronically using the ATN metadata templates provided within the App. Deployment-level metadata can be entered manually one tag at a time or an upload csv option allows users to ingest batches of satellite tag deployment records.

II. Following registration within the App, the ATN Data Coordinator (DC) will push the project to the RW, linking it to the ATN Campaign and associated with the curators of this collaborative initiative. Once a project is within the RW environment the PI or data manager can assign additional users to the project with specified levels of access (i.e., owner, contributor or viewer). The RW can be used to manage, share and analyze data, as well as prep data packages for eventual release and archive.

Individual project PIs and collaborators will only have access to their assigned RW projects, but they will not have access to the raw data from the full suite of other projects contained within either the ATN Campaign or the collaborative initiative to protect data of individual PIs. As leaders of the collaborative initiative, Dr. Neil Hammerschlag and his graduate student, Chelsea Black, will have secure access to all projects and associated data/metadata as part of the initiative for analysis and incorporation into multi-species habitat suitability models, movement, and hotspot analyses. No ‘raw’ data or species-specific trends will be generated that would prevent contributing PIs from publishing stand-alone movement papers. PIs will get authorship on any and all generated manuscripts or curated data products.

III. When tags are deployed, the data are transmitted via the satellite-based Argos Data Collection and Location System (CLS) to either the PI or routed in R/T to the tag manufacturer (e.g., Wildlife Computers, SMRU), who in turn can make it accessible to the DAC. Auto-ingested data will then be inserted into the appropriate RW project for access by the project PI or assigned collaborators. Data that cannot be auto-ingested via a tag manufacturer or vendor service (i.e., CLS) must be uploaded directly into a RW project. Once in the DAC, the data will be

visualized in the ATN Data Portal (<https://portal.atn.ioos.us/>) along with PI provided project-level metadata. No actual data will be publically released at this time, data will remain protected or under embargo.

IV. Upon project completion, data can be released from embargo and made publically available. This will require the completion of an accompanying dataset-level metadata record which will be generated within the RW using the RW metadata editor tool. A dataset DOI will be minted and a dataset citation generated upon archival at DataONE or NCEI. Upon release, data will also be linked to your project page within the ATN Data Portal. Dataset packages will included the ‘raw’ and/or curated data files, the deployment log and a detailed metadata record describing when, where, why and how data was collected, any post-processing or data curation steps, data table fields and units, and any use limitations or caveats. An electronically-signed data release agreement is also required.

For more information about the ATN, its DAC or data submission to the ATN Campaign and this collaborative initiative, please contact the ATN Data Coordinator, Dr. Megan McKinzie via email at mmckinzie@mbari.org. For questions regarding this collaborative initiative and contributed data usage please contact Chelsea Black at chelsea.black@rsmas.miami.edu.