

Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:

Stock structure, connectivity and breeding sex ratios of eastern Pacific hawksbills

1.2. Summary description of the data:

This project, initiated with FY13 funds and extended with FY14 funds, will determine stock structure, connectivity & phylogeography of Pacific hawksbill turtles using both nuclear (microsatellite) and mtDNA markers to provide a comprehensive assessment of demographic history and both male and female connectivity. To date, we used mtDNA and 25 microsatellite loci to conduct the first-ever genetic survey of hawksbill nesting stocks in the eastern Pacific Ocean. We analyzed 160 tissue samples collected between 2008 and 2014 from nine rookeries across the region. Our results provide novel insights into population structuring and the evolutionary origins of hawksbill turtles in the eastern Pacific. Three previously identified haplotypes and four new haplotypes were found with overall frequencies of 78.7% and 21.3%, respectively; the latter only evident in Central American nesting rookeries. Significant differentiation was found between the four nesting rookeries for which we had sufficient sample sizes ($n \geq 10$), providing evidence for stock structuring in the eastern Pacific. We are collecting sample sets to apply kinship approaches to reconstruct parental genotypes from mother-offspring comparison to census males, determine operational sex ratios (OSR) of the breeding population, reproductive success of males and mating systems. A total of 2,540 hatchlings from 131 nests laid by at least 53 females (27 nests from unobserved females) were collected from Nicaragua and a total of 1,245 hatchlings from 64 nests laid by at least 46 females in El Salvador were collected during 2013 nesting season, and are currently being genotyped. We have also developed new nuclear SNP markers for hawksbill turtles and are currently genotyping a subset of rookery data to combine and compare with the micro satellites for analysis of stock structure. These genetic approaches can be used in conjunction with traditional tagging studies and satellite telemetry to improve stock assessments by incorporating missing life history and demographic parameters that allow estimation of vital rates of populations, including age at first reproduction, survivorship at different life history stages, dispersal and migration at different life history stages. The ultimate goal of this research is to inform ESA Status Reviews and produce a comprehensive baseline dataset for Pacific

hawkbills.

1.3. Is this a one-time data collection, or an ongoing series of measurements?

Ongoing series of measurements

1.4. Actual or planned temporal coverage of the data:

2013 to Present

1.5. Actual or planned geographic coverage of the data:

Pacific Ocean

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

Instrument: computer

Platform: desktop

Physical Collection / Fishing Gear: n/a

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:

Peter H Dutton

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

Southwest Fisheries Science Center

2.4. E-mail address:

peter.dutton@noaa.gov

2.5. Phone number:

(858) 546-5636

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

Peter H Dutton

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

No

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

Unknown

5. Data Lineage and Quality

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Lineage Statement:

All steps from sample collection, DNA extraction and genetic analysis are tracked and standard QA protocols are followed. Standard Operating Procedure documents are on file

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:**5.2. Quality control procedures employed (describe or provide URL of description):**

Standard laboratory QA/QC procedures are performed. Standard Operating Procedure (SOP) documents are on file for various steps

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:

- 1.6. Type(s) of data

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

<https://inport.nmfs.noaa.gov/inport/item/21713>

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NMFS Data Documentation Procedural Directive: <https://inport.nmfs.noaa.gov/inport/downloads/data-documentation-procedural-directive.pdf>

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

No

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

No

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

none

7.2. Name of organization of facility providing data access:

Southwest Fisheries Science Center

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:

<https://swfsc.noaa.gov/MMTD-Turtles/>

7.3. Data access methods or services offered:

Contact PI

7.4. Approximate delay between data collection and dissemination:

1 yr

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

Other

8.1.1. If World Data Center or Other, specify:

SWFSC

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):

Southwest Fisheries Science Center - La Jolla, CA

8.3. Approximate delay between data collection and submission to an archive facility:

4 weeks

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

Stored in a secure server.

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.