

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:

Fish and Invertebrate Interpolated Biomass Distribution Surfaces 20221201

1.2. Summary description of the data:

These files contain rasterized interpolated biomass distributions for fish and invertebrate species caught in NOAA Fisheries fishery-independent surveys. The distribution maps were produced for the Distribution Mapping and Analysis Portal (DisMAP) project. The distributions were generated from catch-per-unit-effort data from the fisheries-independent surveys. This data set covers 8 regions of the United States: Northeast, Southeast, Gulf of Mexico, West Coast, Eastern Bering Sea, Aleutian Islands, Gulf of Alaska, and Hawai'i islands.

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

One-time data collection

1.4. Actual or planned temporal coverage of the data:

1983-01-01 00:00:00+0000 to 2018-12-31 00:00:00+0000, 1982-01-01 00:00:00+0000 to 2019-12-31 00:00:00+0000, 1984-01-01 00:00:00+0000 to 2019-12-31 00:00:00+0000, 2008-01-01 00:00:00+0000 to 2019-12-31 00:00:00+0000, 2016-01-01 00:00:00+0000 to 2021-12-31 00:00:00+0000, 1974-01-01 00:00:00+0000 to 2019-12-31 00:00:00+0000, 1974-01-01 00:00:00+0000 to 2019-12-31 00:00:00+0000, 1989-01-01 00:00:00+0000 to 2017-12-31 00:00:00+0000, 1989-01-01 00:00:00+0000 to 2019-12-31 00:00:00+0000, 1989-01-01 00:00:00+0000 to 2019-12-31 00:00:00+0000, 2003-01-01 00:00:00+0000 to 2018-12-31 00:00:00+0000, 1977-01-01 00:00:00+0000 to 2004-12-31 00:00:00+0000

1.5. Actual or planned geographic coverage of the data:

W: 170, E: -165, N: 57, S: 47

W: -179.197518, E: -157.831166, N: 66.407258, S: 52.381891

W: -170.172131, E: -132.598245, N: 68.700527, S: 42.575894

W: -98.093708, E: -80.105629, N: 33.659368, S: 21.062114

W: -160.286293, E: -154.708469, N: 22.304216, S: 18.823194

W: -78.192156, E: -64.280058, N: 44.941573, S: 34.573376

W: -78.147741, E: -64.257666, N: 44.957636, S: 34.607578

W: -82.942858, E: -74.453441, N: 35.832347, S: 28.755658

W: -82.942553, E: -75.221655, N: 35.140068, S: 28.756

W: -82.942689, E: -74.453815, N: 35.832103, S: 28.756

W: -129.52295, E: -115.914315, N: 48.536502, S: 31.44918

W: -130.08881, E: -118.138256, N: 49.380794, S: 36.069475

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.)

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:

John F Kennedy

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:

john.f.kennedy@noaa.gov

2.5. Phone number:

301-427-8149

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:

Timothy J Haverland

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?

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

The interpolated biomass distribution maps were created by conducting several processing steps of the raw fishery-independent survey catch-per-unit effort data, using R and Python scripts to clean and standardize the datasets and then generate the interpolated biomass layers. The data processing workflow, as well as information on the original sources of the data, are provided in detail in the below Sources and Process Steps.

Process Steps:

- 2022-12-01 00:00:00 - The data was obtained from the above sources as raw survey data. Please refer to the original source for detailed metadata information on each trawl survey.
- 2022-12-01 00:00:00 - The raw survey data was then processed using an R script, which combined the individual files collected for each regional survey into one dataset with standardized names and units across all regions, and removing unnecessary columns. During this processing step, decisions were made to in some cases trim a regions data to either eliminate certain years or strata based on evaluation of survey coverage for those years or strata.
- 2022-12-01 00:00:00 - The processed data was then fed into a Python script to generate the interpolated biomass distribution maps. The layers were summed in each region by year to provide species richness layers for each region.
- 2022-12-01 00:00:00 - These maps were then uploaded to the NOAA Fisheries Mapping portal as ESRI Imagery mosaic layers for display on DisMAP.

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):

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
- 1.7. Data collection method(s)
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
 - 7.1.1. If data are not available or has limitations, has a Waiver been filed?
 - 7.1.2. If there are limitations to data access, describe how data are protected
- 7.3. Data access methods or services offered
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.2. Data storage facility prior to being sent to an archive facility
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

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://www.fisheries.noaa.gov/inport/item/69028>

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.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?

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?

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

7.2. Name of organization of facility providing data access:

NMFS Office of Science and Technology (OST)

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

7.2.2. URL of data access service, if known:

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/Aleutian_Islands_20220516/ImageServer

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/Eastern_Bering_Sea_20220516/ImageServer

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/Gulf_of_Alaska_20220516/ImageServer

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/Gulf_of_Mexico_20220516/ImageServer

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/Hawaii_Islands_20221201/ImageServer

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/Northeast_US_Fall_20220516/ImageServer

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/Northeast_US_Spring_20220516/ImageServer

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/Southeast_US_Fall_20220516/ImageServer

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/Southeast_US_Spring_20220516/ImageServer

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/Southeast_US_Summer_20220516/ImageServer

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/West_Coast_Annual_2003_to_Present_20220516/ImageServer

https://maps.fisheries.noaa.gov/image/rest/services/DisMAP/West_Coast_Triennial_1977_to_2004_20220516/ImageServer

7.3. Data access methods or services offered:

7.4. Approximate delay between data collection and dissemination:

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)

8.1.1. If World Data Center or Other, specify:

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):

Silver Spring, MD

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

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

9. Additional Line Office or Staff Office Questions

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