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:

Puerto Rico Relative Erosion Potential (REP) - 1990

1.2. Summary description of the data:

The relative erosion potential is an indicator of sediment and pollution runoff from land based on slope, soil type, land cover (circa 1990) and (maximum monthly) precipitation

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:

1990

1.5. Actual or planned geographic coverage of the data:

W: -67.559874, E: -65.173699, N: 18.599621, S: 17.842139

1.6. Type(s) of data:

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

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:

NCCOS Scientific Data Coordinator

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:
National Centers for Coastal Ocean Science

2.4. E-mail address:
NCCOS.data@noaa.gov

2.5. Phone number:

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:
NCCOS Scientific Data Coordinator

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):
Process Steps:
- Watersheds are an essential unit for analysis, since they link land areas with their point of discharge to the sea. We have implemented a watershed-based analysis of sediment and pollution threat to coral reefs. This analysis incorporates land cover type, slope, soil erodibility factor (k-factor), and precipitation for all land areas, using a simplified version of the Revised Universal Soil Loss Equation (RUSLE) (USDA, 1989) in order to estimate relative erosion rates for each 30m resolution grid cell. These relative erosion estimates are summarized by watershed and by basin.

Since not all erosion makes its way to the river mouth, sediment delivery ratios (based on watershed size) were applied in order to estimate relative sediment delivery at the river mouth. It should be noted that relative erosion rates and sediment delivery are being used as a proxy for both sediment and pollution delivery.This information can be used to estimate sediment plumes and impacted reefs (ideally including circulation patterns for the area.) Model results need to be calibrated using available data on river discharge, sediment delivery, and observed impacts on coral reefs. We are working with NOAA's Summit to Sea project to use satellite imagery to maps areas of observed plume and identify habitat change, as well as to help calibrate model results.Model Implementation Step 1) The first step of the analysis involves estimating likely relative erosion rates for each 30 m resolution grid cell using a modified, simplified form of the Revised Universal Soil Loss Equation (RUSLE) (USDA, 1989). Information on slope, land cover type, precipitation, and soil porosity were integrated to develop an indicator of relative erosion potential (REP) for all land areas within the wider Caribbean. Inputs: (REP relies upon four input data sets,4. Slope (percentage) - for each 30m grid cell, derived from the raw Digital Elevation Model. 5. Relative erosion rate by land cover type from NASA Geocover-LC products (1990). Relative erosion rates for each land cover type were calculated using a look-up table (below.) Land cover categories were reclassified to relative erosion rates, ranging from 15 (for forest) to 220 for barren land. These relative erosion rates are based on published work involving conversion factors. Land Cover Type, Grid Code, Relative Erosion RateDeciduous Forest, 1, 15Evergreen Forest, 2, 15Shrub/Scrub, 3, 50Grassland, 4, 125Barren, 5, 220Urban, 6, 210Agriculture, 7, 200Permanent Wetland, 9, 80Mangrove, 10, 80Water, 11, 5Cloud/No Data, 13, 06.Precipitation during the peak rainfall month (in millimeters) - Long-term average monthly precipitation values for the peak rainfall month of the year is an interpolated grid based on data for climate stations from NOAA's National Climate Data Center (NCDC). This variable was chosen because it is more indicative of the rainy season and more extreme events during the year.7.Soil erodibility factor (K-ffactor) - the K-ffactor was obtained from the SSURGO database of the USDA.Relative Erosion Potential (REP) = (%) Slope x maximum monthly precipitation x soil kffactor x relative erosion rate for land cover type / 1000 (NASA Geocover - LC with 1.4 ha minimum mapping unit "http://www.MDafederal.com/geocover/geocoverlc/"; USGS National Elevation Dataset "http://ned.usgs.gov/"; NRCS Soils Database "http://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/")

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:
- 1.7. 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
- 8.3. 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://inport.nmfs.noaa.gov/inport/item/39458

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: http://www.nmfs.noaa.gov/op/pds/documents/04/111/04-111-01.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:
National Centers for Coastal Ocean Science

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

7.2.2. URL of data access service, if known:
http://ccma.nos.noaa.gov/ecosystems/coralreef/summit_sea/summit2seaPR.zip

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):
National Centers for Coastal Ocean Science - 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.