

## **GCOOS Data Manager April 2014**

### **Position Description**

**Background.** The phrase “Data Management and Communications” derives from the document “Data Management and Communications Plan for Research and Operational Integrated Ocean Observing Systems.” The DMAC Plan<sup>1</sup> describes the functional elements of the DMAC subsystem, and so, is relevant to a description of the functions of the Data Manager.

<sup>1</sup>[http://www.ioos.noaa.gov/library/dmac\\_plan\\_2005.pdf](http://www.ioos.noaa.gov/library/dmac_plan_2005.pdf)

The DMAC subsystem is distinct from the other subsystems which are:

- Observing (sensors, instruments, and platforms)
- Primary Data Assembly (where data first come ashore)
- Modeling and Analysis (forecasts and decision-making)

The DMAC subsystem combines typical data management activities related to good data stewardship with informatic elements that enable machine-to-machine interoperability. Stewardship activities include negotiating with providers for delivery of data and metadata, inventory control, backup and archive. Informatic elements include managing metadata standards and establishing and maintaining services for data: search, discovery, browse, access, and transport. These activities and elements link data providers to data consumers as well as the linking the other subsystems together.

#### *Notes:*

1. In the GCOOS-RA, the manager of the DMAC subsystem is called the Data Manager.
2. The Data Manager reports to the Executive Director of the GCOOS-RA.
3. In the GCOOS-RA, the products generating activity is part of the DMAC subsystem.
4. In the near future the DMAC subsystem will be asked to perform uniform quality-control on data feeds in order to meet certification requirements.

#### **Responsibilities:**

1. Monitor and respond to IOOS Program Office DMAC-related activities  
The IOOS Office recommends standards and best practices for metadata content, web services, data encoding and middleware. These evolve and change over time. The regions are expected to conform to evolving guidance. The IOOS Office established several community-wide activities, including HF-RADAR and Glider Data Assembly Centers, a National Data Set Registry, guidance on QA/QC, and a National Glider Plan. The regions are encouraged to contribute to these activities either by contributing data or by participating in their planning, design, and review. The GCOOS Data Manager will engage where useful.
2. Monitor and engage with the DMAC activities of other entities  
The IOOS Association, the Gulf of Mexico Alliance, the Gulf of Mexico Research Initiative, the National Coastal Data Development Center, the Marine Portal Planning Network, the Marine Metadata Interoperability Program and other groups are engaged in work that influence the availability and treatment of significant amounts of new and old data. The GCOOS Data Manager will engage with these groups to: influence the outcomes of those activities, attract new data sets and contacts, and establish GCOOS-RA as the preeminent data integrator in the Gulf.

3. Manage the development of the GCOOS-RA DMAC Subsystem.  
The GCOOS Data Manager sets the vision, priorities and timelines for the development, enhancement and maintenance of the DMAC subsystem, both software and hardware. S/he assigns tasks to DMAC staff and monitors progress. S/he participates in engagements with stakeholders to determine if stakeholder requirements can be met with the existing DMAC subsystem or, if not, the feasibility of enhancing the system to meet those needs.
4. Build rapport with new and existing data providers.  
The Data Manager works with data providers to educate them on requirements needed to establish and maintain interoperability between their systems and the GCOOS Data Portal.
5. Support ongoing activities of the GCOOS-RA enterprise.  
The Data Manager:
  - Supports the Executive Director and GCOOS Staff by writing and reviewing reports, planning documents, newsletters, and website stories as directed.
  - Reports status and progress of the DMAC subsystem at the Board of Director and Parties meetings.
  - Authors or co-authors proposals for new funds for the GCOOS-RA DMAC subsystem.
  - Participates in reviews of subcontractor performance in the areas of data delivery and data system conformance.
  - Supports the Outreach and Education Coordinator by contributing tailored elements of the DMAC element capability to outreach and education projects as needed and expeditiously implementing approved outreach and education modifications to the web site.
6. Software coding, product generation, application maintenance, system IT.  
As needed and as able, the Data Manager participates in all aspects of IT needed to develop, enhance, and maintain the various websites, systems, networks, products and applications that comprise the DMAC subsystem.

### **Reporting Activities**

Submit monthly activity reports, including major activities planned for coming month, to the Executive Director. Submit activity reports to the Board, in desired format, as requested.

### **Key Performance Indicators**

The performance of the GCOOS Data Manager should be judged by the following measures.

1. The number of IOOS Program Office and other national DMAC-related activities (such as steering teams, writing teams, review teams, pilot project participation, and data provision) in which the GCOOS Data Manager is engaged and the level of engagement.
2. The number of engagements and level of engagements with other groups having significant Gulf of Mexico data-related activities.
3. The degree to which the data and products portals conform to the evolving best practices and standards promulgated by the U.S. IOOS Program Office.
4. The degree to which the data and products portals meet the needs of the regional stakeholders.
5. The number of new data streams, of whatever type, incorporated into the data portal.
6. The consensus opinion of the regional data providers of how well the GCOOS DMAC subsystem and DMAC staff are meeting the data providers' needs for information, assistance, and availability of portal resources.
7. The consensus opinion of the GCOOS-RA Executive Director and Board of Directors as to the performance and responsiveness of the GCOOS Data Manager and DMAC staff. The number of successful proposals submitted.
8. The degree to which the data and product portals are online and functional.