

Sub-task Number: DA-09-02a

Sub-task Title: Data Integration and Analysis Systems

Overarching Task: Data Integration and Analysis

Area: DATA MANAGEMENT

Relevant Committee: ADC

Related Targets: (to be included in 2009)

Sub-task Definition (as given in the 2009-2011 Work Plan):

Coordinate data management approaches that encompass a broad perspective of the observation data life-cycle – from input to processing, archiving, and dissemination, including reprocessing, analysis and visualization of large volumes and diverse types of data.

Leads (GEO Member or PO, Entity carrying out the work, Contact: e-mail):

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Motivation/ Background

GEOSS is being developed to achieve more effectiveness and greater economies in the operation of observational systems through convergence among global, regional and national facilities toward interoperable and integrated observational and information systems. This can be done through increased coordination and communication between the centres, and the development of standards and best practices that can be shared among the centres. In order to achieve its GEOSS objectives GEO must encourage convergence among information systems. This can be achieved most effectively by the development of meaningful linkages and joint initiatives between data centres,

Outputs (e.g. products and services which result from the activities of the Task/sub-task; outlined in the form of deliverables with timelines)

Planned:

The following outputs are anticipated as a result of this subtask:

- 1) Inventories of the significant data centres in all societal benefit areas.
- 2) Alliances between different centres with similar objectives (e.g., World Data Centres, Research Data systems, etc)

Produced (current status):

Activities (operations or work processes through which resources are mobilized to produce specific outputs; outlined in the form of milestones including timelines)

Planned:

September 2009: The questionnaire for the Water Data Centres will be distributed (Phase II Survey)

November 2009: The analysis of the first survey will be published.

November 2009: A workshop will be held to clarify the issues in developing a data center alliance.

December 2009: Lists of the data centers for all SBAs will be developed for Phase 3.

March 2010: The analysis of the second survey will be published

Progress (current status):

July 2009:

GEO 2009-2011 Work Plan DA-09-02a.doc Last Updated: July 2009

A listing of water centers for the Phase 2 survey has been compiled.

Preliminary analysis from the Phase 1 survey have been carried out and presented at the May 2009 ADC meeting in Stresa Italy.

Teleconference calls with a core group of contributors were held to coordinate DA-08-02a activities

March 2009: A Phase I survey of Data Centres has been undertaken and the results are being analyzed.

Resources (indication of resources – e.g. financial, human – contributed by GEO Members or Participating Organizations to produce outputs)

Japan is providing resources to assist in the coordination and implementation of this activity.

Architecture and Data Component

1) Please briefly describe any task-related Earth observation resources (data set, system, website/portal) and any related Web Service interfaces that are contributed to GEOSS. State whether these items are or will be registered with the GEOSS Component and Service Registry for access via the GEO Web Portals, and whether any associated standards or other interoperability arrangements will be registered in the Standards and Interoperability Registry.

2) Please also describe what data and information your activity/system needs that you would request to be accessible through the GEOSS Common Infrastructure.

Capacity Building Component

(capacity building is defined to include the development of capacity related to: (i) Infrastructure and technology transfer (Hardware, Software and other technology required to develop, access and use EO); (ii) Individuals (education and training of individuals to be aware of, access, use and develop EO) and (iii) Institutions – building policies, programs & organizational structures to enhance the value of EO data and products).

1) In accordance with the above definition does this Task have a capacity-building component? If so, please provide a short description of this component including a description of end users.

During its later stages this subtask will have a capacity building component. Capabilities, developed by and for the more advanced countries, will be shared with the data centers and observational programs of less developed countries.

2) Have any additional CB needs for this Task been identified? Please provide a short description.

None have been identified to date.

User Engagement Component

(please briefly describe to what extent end users are engaged in this Task and influence the nature of the outputs produced)

At present, users have not been highly engaged in this activity although the Data Centres themselves are very focused on the needs of users. When available, the results of the reviews of User need statements produced by the GEO Communities of Practice will be assessed to obtain views and guidance on the ways in which data systems should converge. The Water Cycle and IGWCO Communities of Practice are actively engaged in providing the names of water cycle data centres for the Inventory of centres for the Phase 2 survey. To encourage this dialogue other Communities of Practice will be asked to submit the names of data centres that

are relevant to their objectives. This strategy will be followed when the analyses for alliances are done on a sector by sector basis.

Science and Technology (S&T) Component

1) Please briefly describe the elements of scientific research or technological development contained in this Task.

2) In relation to the S&T component(s) of this task, please describe gaps, priorities, continuity needs, barriers, scientific expertise and additional resource needs (this information will be used for developing a gaps and needs assessment in Task ST-09-01)

Members and POs' Contributions to Outputs and Activities above:

(Input is optional. This section gives the chance to Members and POs to provide more details (3-5 lines) on their individual activities, making a clear connection with the Outputs and Activities outlined above).

Australia

Contribute to discussions on data management and integration, global data sets and interoperable systems.

Japan

Univ. of Tokyo: To lead this task by developing Data Integration Analysis System (DIAS) and by promoting alliance formation in cooperation with data centers in the world.

JAXA: To contribute to develop the Japanese data integration and analysis system and also to establish the task team in the CEOS/WGISS.

USA

NOAA: Will ensure appropriate cross-NOAA input to this task as chair of the NOAA Data Management Integration Team.

EC

EU-project HYPOX: Hypox data assimilation and integration.

EuroGEOSS will contribute to the identification of significant data centres relevant to selected SBAs, and best practices for their increased interoperability.

Participation (Table to be filled in 2009):

| Type | Member or PO | Representing | Contact Name | EmailAddress |
|-------------|--------------|--|-------------------|------------------------------|
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