Sub-task Number: DI-09-03a
Sub-task Title: Tsunami Early Warning System of Systems

Overarching Task*:* Warning Systems for Disasters
Area: DISASTERS
Related Community of Practice: Geohazards, Coastal Zone
Relevant Committee*: TBD*
Related Targets: *(to be included in 2009)*

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

Support the establishment and continuation of a multi-hazard fully-operational global tsunami early warning and mitigation system of systems. Promote full and open exchange of publicly-funded, unclassified data relevant to tsunami warning/mitigation systems and enhancement/development of mechanisms for real-time data sharing, including seismic and sea level (deep ocean and tide gauge) data. Contribute to the operationalization of comprehensive observing networks (in-situ sea level, seismic stations and remote monitoring) and data management systems (including integration of the global ocean observing system (GOOS), international seismic networks, and related global telecommunication systems). Define and promote standards/protocols for operating observing systems, and managing data exchange/transmission for multiple observing systems relevant to tsunami detection, early warning and mitigation.

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

IOC, *Point of Contact:* Peter Koltermann, p.kolermann@unesco.org

UNOSAT

Motivation/Background *(Why should this Task or sub-task be implemented? What relevance to society? What is the state of the art? 3-5 lines)*

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:

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:

Progress (current status): …

[Note: Updates on outputs and activities will be formally provided twice a year, according to the GEO schedule for 2009]

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

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.

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

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

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).

Germany
DLR DFD-US: German-Indonesion Tsunami Early Warning System (GITEWS).

Greece
Centre of Technological Research: Efficient algorithms for tsunami detection fromr real-time data.

Japan
JAMSTEC: Exchange of the real-time earthquake information is promoted by using land and marine earthquake observation network of West Pacific Ocean region operated by JAMSTEC.
NICT: To research Tsunami detection with developing of ocean radars.

ISPRS
ISPRS WGVIII-1: Contribute to preparation of reports.

Participation *(Table to be filled in 2009):*

Type	Member or PO	Representing	Contact Name	EmailAddress
Lead(PoC)	IOC		Peter Koltermann	p.kolermann@unesco.org
Lead	UNOSAT			
Contributor	Germany	DLR DFD-US	Torsten Riedlinger	torsten.riedlinger@dlr.de
Contributor	Greece	Centre of Technological Research	Nicholas Christakis	nchristakis@tem.uoc.gr
Contributor	ISPRS	ISPRS WGVIII-1	Piero Boccardo	Piero.boccardo@polito.it
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