

**Sub-task Number:** CB-09-05c

**Sub-task Title:** SERVIR Expansion

**Overarching Task:** Infrastructure Development and Technology Transfer for Information Access

**Area:** CAPACITY BUILDING

**Relevant Committee:** CBC

**Related Targets:** (to be included in 2009)

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

Establish SERVIR regional hubs in geographic regions other than Panama (where it was originally established to serve the Meso-American region) – starting with eastern Africa. Develop additional SERVIR tools that can provide (i) early warnings of thunderstorms, flash floods, and vector-borne diseases; (ii) climate prediction mapping; and (iii) air quality monitoring. SERVIR is a system that integrates satellite and other geospatial data for improved scientific knowledge and decision-making by managers, researchers, students, and the general public. The SERVIR system is web-based and makes available previously inaccessible Earth observation data and online decision-support tools to interpret, map and visualize (3D) this data. It is used to monitor weather, forest fires, and ecological changes, as well as to respond to severe events such as red tides, tropical storms, and flooding.

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

USA (USAID), Point of Contact: Carrie Stokes, cstokes@usaid.gov

USA (NASA)

### **Motivation/Background**

This sub-task builds the capacity of countries in eastern and southern Africa to use earth observations for local decision-making. It will provide previously inaccessible yet much-needed map and satellite data to the public and mapping of climate projections relevant to people in the local areas where they live. It will use state-of-the-art modelling with local precipitation monitoring to provide early warning of flood potential and Rift Valley Fever outbreaks.

**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: 2008:** Installation of server hardware & software and launch of SERVIR-Africa, with Climate Mapper tool. Registry of existing African geospatial web services.

**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: in 2009,** early warning tools for flood and Rift Valley Fever. Development of climate change impacts on biodiversity application. Metadata and webmap service training. Coursework on rapid land cover mapping. Development of plans for communications, financial sustainability, monitoring and evaluation.

**Produced** (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)

USAID, NASA, RCMRD, CATHALAC, UAH, AAG, USGS, IRI, IAGT, Dartmouth Flood Observatory, UMD, ESRI (to name a few)

### **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.

The purpose of this sub-task is to build the capacity of African countries to use earth observations for social benefit. It relates to 1) infrastructure and technology transfer and 2) individuals. Specifically, the SERVIR system includes installation of a server to provide satellite and map information to the public via the internet and development of software applications (tools) such as Climate Mapper and flood early warning; and training and coursework for university students and government officials in use of the system and specific applications.

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

none

### **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).*

**South Africa**

CSIR SAC: The infrastructure for CBERS download will be built at Sac and there will be people trained.

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

Type	Member or PO	Representing	Contact Name	EmailAddress
Lead(PoC)	USA	USAID	Carrie Stokes	cstokes@usaid.gov
Lead	USA	NASA		
Contributor	South Africa	CSIR SAC	Alex fortesque	afort@csir.co.za
Contributor	South Africa	CSIR SAC	Nale Mudau	nmudau@csir.co.za
Contributor	UNOOSA		Lorant Czaran	lorant.czaran@unoosa.org