

Sub-task Number: CB-09-02d

Sub-task Title: CBERS/GEO Capacity Building Network

Overarching Task: Building Individual Capacity in Earth Observations

Area: CAPACITY BUILDING

Relevant Committee: CBC

Related Targets: (to be included in 2009)

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

Develop and implement a training program for the African end-users of the CBERS images. The programme will foster (i) the use of freeware and open-source geo-processing software (e.g. SPRING and TerraView), and (ii) the development of remote-sensing applications using CBERS images. Initial focus will be on users in Lusophone African countries.

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

Brazil (INPE), Point of Contact: Hilcea Ferreira, hilcea@dpi.inpe.br

China (CRSDA), Jin Yu, yujin@cresda.com

Motivation/Background

Timely and quality earth observation data provide significant inputs to all societal benefit areas and are crucial for decision support in developing countries. This task should encourage the use of free imagery from the CBERS satellites, combined with related freeware and open source solutions (SPRING and TerraView), fully exploiting the potential of data collected in the African continent. The main goal is to train potential users of these images, educating professionals in the area remote sensing by satellite and use of Geoinformatics.

Outputs

Planned

- Training material in Portuguese, English and French.
- Implement two levels of training: technical and postgraduate education:
 - o Technical level: hybrid course, containing both face to face and online elements
 - After completing the in-classroom module, students should develop a work for the application of the knowledge acquired involving a practical situation in their countries of origin, interacting through the Internet.
 - o Postgraduate education in Remote Sensing (INPE). The acceptance in the post-graduation program at INPE must follow the normal procedures for students' selection.
- Accreditation of institutions in Africa for training.

Produced (current status):

- Acceptance of one student, from Mozambique, for Masters Degree at the Remote Sensing Postgraduate Program (INPE). Fellowship will be provided by Brazilian Government.

Activities

Planned:

- Appointing Contact Institutions: visit to Lusophone African countries (Mozambique, Angola, Cape Verde, Guinea Bissau and Sao Tome and Principe) to identify national agencies or institutes with mandate to deal with Geospatial technology in each country.
- Selection of candidates for training courses, observing their capacity to be multipliers in their countries and to disseminate knowledge acquired.

- Involvement with Regional Centers for Space Science and Technology Education affiliated to the United Nations:
 - o African Regional Centre for Space Science and Technology in French (CRASTE-LF), which is affiliated to the United Nations – Morocco
 - o African Regional Centre for Space Science and Technology Education in English (ARCSSTE-E) – Nigeria
- Develop training material (first in Portuguese, then English and French) for the courses that should include: basic concepts of geotechnology and remote sensing, image interpretation, remote sensing applications and image processing using freeware and open source solutions.

Progress (current status):

- Visit to Mozambique (March 2008)
 - o CENACARTA (National Center for Remote Sensing and Cartography) has been identified as the Contact Institution in Mozambique.

Resources

So far, financial resources from Brazilian government (Ministry of Science and Technology). Additional funding for mobility support is needed.

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

This task is related to all Capacity Building components, but closer to the second one: “Individuals” because it intends do strengthen and harmonize human resource development across Africa in the fields of EO and GI Sciences. End-users include academia, universities, government and private companies.

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).

China

China Center for Resource Satellite Data and Applications (CRSDA): Conforming to the promise made in GEO meeting to share CBERS data in South Africa, CRESDA has successfully developed CBERS-02B data pre-processing system which has the function of collecting, storing and processing CBERS data and installed the system at the Hartebeeshoek ground station in South Africa in December, 2008. CBERS data can be received, stored and processed in South Africa now. CRESDA will continue to finish the plan of the capacity building network for CBERS in Africa according to the work assignment with Brazil.

ISPRS

ISPRS WG VI-1 and -4: Contribution to workshops and other activities to complete task.

Participation (Table to be filled in 2009):

Type	Member or PO	Representing	Contact Name	EmailAddress
Lead(PoC)	Brazil	INPE	Hilcea Ferreira	hilcea@dpi.inpe.br
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