

**U.S. GEOLOGICAL SURVEY/EROS CENTER
TECHNICAL REQUIREMENTS DOCUMENT
for
TECHNICAL SUPPORT SERVICES CONTRACT SOLICITATION**

TRD NUMBER

0011

PERFORMANCE PERIOD

Contract Base Year: April 1, 2010 thru March 31, 2011

PROJECT NAME

Hazards Mitigation OFDA Worldwide PASA

1.0 Scope

This Technical Requirements Document (TRD) defines requirements for technical support for the Hazards Mitigation OFDA Project at the USGS Center for Earth Resources Observation and Science (EROS) to be provided by the Contractor. Work activities include a combination of basic and applied research; analyses and interpretation of remotely sensed data; preparation of geospatial data for processing through hydroclimatological models; assisting with the development of early warning systems for flooding; providing dynamic data access and delivery over the Internet; collaboration with other government and academic research scientists, other US government entities, and international organizations such as ICIMOD and MRC. Provide technical expertise associated with the broad spectrum of satellite and aerial remote sensing systems and derivative data sets as well as other geospatial data characterizing the land, water, and atmospheric environments together with working knowledge of the hardware and software systems used to process the data, run the models, and provide access to the data. Participation in professional societies is encouraged as is publication of professional papers, fact sheets, content for web pages, and oral and poster presentations as a normal course of responsibility. Support beyond those identified in this TRD will be addressed by the USGS Project Manager as necessary to reflect changes in skill requirements during this contract period. The Contractor will provide a work manager familiar with the field of science, who interfaces with the staff, monitors performance, prepares periodic reports in coordination with the task leads, and reports to the USGS Project Manager. The remainder of this TRD outlines the project work requirements to be performed subject to available funding.

2.0 Deliverables

This project emphasizes research and science which exploit the unique resources of EROS to monitor the global environment and provide early warning of impending natural and manmade hazards at local to global scales. Deliverables necessary for the successful completion of this project include functional models, databases, well maintained web pages, up-to-date posters, professional papers, presentations at workshops and conferences, and periodic reports detailing accomplishments, products, issues and problems. Higher level accomplishments including scientific networking both locally and nationally/internationally, participation in professional societies, and developing specific scientific leadership based on our remote sensing resources, modeling expertise, and effective collaborations internationally. Deliverables and accomplishments are to be seen as progressive milestones.

The Hazards Mitigation OFDA Worldwide PASA project consists of “tasks” which represent reasonably cohesive units of research, development, and applications work. Each has specific deliverables within the broad scope defined above. These are

detailed in the funding source agreement with USAID and supplement the inclusive SIR support provided by the USGS.

Asia Flood Network

1. Technical support requirements will be needed to support intermittent activity during the contract year.
2. In partnership with Arctic Slope contractor and the International Centre for Integrated Mountain Development (ICIMOD) in Katmandu, Nepal, helps with GeoSFM applications in member countries, possibly Bangladesh and Pakistan.
3. Continue to enhance national and regional capacity to produce hydrometeorological forecasts and warnings, and help to fill gaps in the end-to-end flood mitigation vision of AFN.
4. Work with ICIMOD to enhance its flood information website and help member countries develop their own flood information nodes.
5. Help train MRC staff on GeoSFM use and implement operational use for the 2010 flood season.
6. Respond on an as-needed basis to MRC and ICIMOD member country needs for satellite imagery, digital elevation data, and other geospatial data in those instances where USGS is well positioned to be of assistance (Landsat, MODIS, SRTM, NOAA RFE, NASA TRMM, and AFWA MM5 grids).
7. Document progress through monthly reports and publications in the professional literature and presentations at appropriate professional conferences and workshops.
8. Help translate techniques into procedures useful for scientists in MRC countries.
9. Contribute to the preparation of training materials for workshops and formal training classes.
10. Contribute to a draft peer-reviewed manuscript detailing the methodology and its application to the priority study area.
11. Provide input to monthly and quarterly progress reports, as well as an annual report of accomplishments.

3.0 Schedule

All work is to be performed in a timely manner as determined by the USGS Project Manager working in coordination with the Contractor. The objectives of the agreement will be met by monthly project progress reports, presentations, peer reviewed publications, conference attendance and presentations, the development of training materials and workshops, training of U.S. and international collaborators, etc.

4.0 Communications Requirements

The USGS will meet with TSSC Management quarterly, or at a frequency requested by the USGS, to discuss expenditures and emerging requirements. The contractor shall keep the Government project manager informed of all activities, such as work successes, problems, and potential problems as soon as they are known. Other

communications required by the USGS in support of work may include quarterly briefings, special reviews, and presentations at key events.

The contractor will understand requirements of the project and ensure expectations are met by:

- Developing the associated work plan and monitoring its execution/progress
- Assisting in the coordination or facilitation of external cooperative agreements
- Maintaining a current compilation of publications, submissions, and proposals by project
- Supporting and organizing project and sub-project meetings
- Ensuring that Web pages and fact sheets are current and professional
- Notifying the Help Desk of changes in ownership of software, desk and laptop systems, servers, etc.
- Identifying areas of overall or specific risk and participating in mitigation strategies
- Coordinating with Finance staff to assist with income calls and updates.