

## **GSDI Small Grant Summaries 2006-2007 Funding Cycle**

### **AMERICAS**

#### **Americas Global Map**

Title: Global Map of the Americas User Application Survey  
Organization: The Global Map of the Americas

The Global Map of the Americas (GMA) coordinates a program of activities at the regional level for the Americas and the Caribbean under the guidance of the International Steering Committee of the Global Map (ISCGM). The GMA proposed to conduct a survey targeted to institutions and organizations that cooperate with GMA, GSDI and PAIGH, as well as other International geographic and scientific organizations such as Universities focused on remote sensing and geospatial research, and select government ministries, NGOs, and industry. The survey will focus on small-scale digital cartography, with the Global Map of ISCGM as a central reference for respondents. The institutions surveyed are to indicate real and potential uses for this kind of cartography, both in their own activities and in those of the communities of other users they are familiar with. In addition the survey will also seek recommendations on the development of small-scale cartography.

#### **Belize**

Title: Promoting the use of Metadata Standards in Belize  
Organization: Galen University

One of the limitations to creating a National Spatial Data Infrastructure (NSDI) in Belize is lack of documentation on geographic datasets caused in part by the lack of knowledge of metadata and its development; absence of generally accepted metadata standards; a lack of data sharing mechanisms, and practitioners are generally unaware of access rights to data. This project seeks to build and awareness of users on development of metadata using ISO standards, and training for metadata creation. The project will consist of three activities: 1.) A three day training workshop in the use of metadata standards and thesauri with emphasis on the ISO metadata standards for geographic information, targeted at data developers and analysts in Belize. 2.) Distribution of ISO Metadata Standards and related thesauri to at least 30 organizations involved in the development and or use of geographic data. 3.) A seminar for decision makers in the public and private sectors on the importance of metadata and the need to adopt metadata standards toward developing the Belize NSDI.

#### **Jamaica**

Title: Fostering a Culture of Metadata Production  
Organization: Ministry of Agriculture and Lands

The Government of Jamaica through the Land Information Council of Jamaica (LICJ) is working to establish its National Spatial Data Infrastructure (NSDI). The LICJ is a

collaborative government organization consisting of over 60 government and quasi government organizations, professional bodies and interested private sector firms working together to achieve its objectives. The primary objective of this project is to foster a culture of metadata production and maintenance by member agencies of the LICJ. Appending objectives are to generate a set of metadata records and to institute sustainable practices for uploading and disseminating the metadata and data through the LICJ's clearinghouse, thereby contributing to the development of the National SDI.

## **Peru**

Title: Spatial Data Infrastructure – National Workshop

Organization: E-Government Office, Presidency of the Minister's Council, Peru

On November 28, 2003, the Peruvian Minister's Council, instituted the "Committee for the Spatial Data Infrastructure of Peru" (IDEP) with the following objectives: To create a Plan for the Implementation of the IDEP and to build a National Policy for Spatial Data. The achievements of the Committee since its creation are: regulations for the committee have been developed, a Public Report of the IDEP has been published, and five workshops for diagnostics have been conducted. The goal of this project is: a) To define the objectives and course content of the National Workshop; b) To extend invitations to policy makers of all ministries; c) To prepare workshop documents for: Metadata, Statistical/Administrative Records, Catalogue, Policies, etc.; d) To provide for logistics; e) To develop a media plan; f) To conduct the workshop; g) provide for post-event processing.

## **AFRICA**

### **Africa Webmap**

Title: Integration of Metadata in current MadMappers web archive

Organization: MadMappers

MadMappers is a non-profit initiative to make African GIS data easily accessible to all and to facilitate as much as possible the free flow of African GIS data within legal constraints. All work is done by members on a voluntary basis and without a formal budget. The major component of MadMappers work is to catalogue GIS data (including compiling metadata files) made available by members and external contributors. Since its inception, the [madmappers.com](http://madmappers.com) website was intended to include a data search engine which would allow non-advanced African users to intuitively identify data available in the MadMappers archive. The deliverables of this project will be addition, integration and population of a metadata system in the current Meltemi archiving and search system on the MadMappers website. The system is aimed at automating, as much as possible, the work of creating a metadata database for raster maps currently available for download. This will include the development of automated querying systems of georeference information in map sets as well as of existing metadata documents and spreadsheets. A metadata administration console will be added to allow for manual input of additional metadata information.

## **Burkina Faso**

Title: Technical Workshop on the Production of Metadata

Organization: Institut Géographique du Burkina (IGB)

The aim of the project is to develop and conduct a technical workshop to train geoinformation producers on the basic concepts of SDI and more specifically on the production of metadata for existing and new datasets. Initially the work will cover the basics of SDI such as concepts, components and requirements. This will be followed by more intensive training on metadata standards and metadata production tools. Participants will then be able to practice metadata production for their own data. Through the technical and scientific knowledge provided, participants will be expected to play key roles in follow-on progress and exchanges aimed at the adoption of national metadata production using ISO standards.

## **Chad**

Title: Organization of Spatial Data at the CNAR (Tchad) and Implementation of a Spatial Metadatabase for Researchers

Organization: Centre National d'Appui à la Recherche (CNAR)

The CNAR, through its GIS and Earth Observation Lab, aims to initiate a strategy of spatial data infrastructure in Chad and wishes to create a comprehensive database of its own information, organized and stored in a single place within the lab. This base would go along with a metadata catalogue presenting data available in the CNAR base, but also in the other partner institutions. This catalogue would be freely accessible to Chadian and international researchers from a dedicated computer in the Lab. Deliverables include: First steps of a strategy of spatial data infrastructure in Chad; a centralized, comprehensive database of CNAR, facilitating data access for the researchers; and a catalogue of metadata gathering all data available in Chadian partner institutions and freely accessible to Chadian and international researchers.

## **Egypt**

Title: National Spatial Data Infrastructure: Policies, Regulations and Standards

Organization: The Information Technology Institute (ITI), Ministry of Communications and Information Technology (MCIT), Egypt.

In the development of an NSDI in Egypt it has become apparent that there is a lack of qualified human resources, especially regarding policies, regulations, and standards. The project proposes to utilize GSDI experience to offer a course at the ITI (both through direct and e-learning), to help in providing the badly needed qualified human resources. The proposed course will cover the policies, standards and regulations customized to the cultural, legal and infrastructure differences between Egypt and other developed countries. Deliverables will include developing and producing training manuals and modules to be offered at the ITI. The project also hopes to provide a report on the current status of SDI in Egypt and training materials including training notes, presentation slides, instructor's manual, class exercises and assessment; and online teaching material.

## **Guinea**

Title: Metadata for the Management of the Guinea Current Large Marine Ecosystem Region

Organization: GCLME/UNILAG Centre for Environmental Information Management & Decision Support System (EIMS)

The Guinea Current Large Marine Ecosystem (GCLME) Project is an ecosystem based effort assisting countries that touch the Guinea Current Ecosystem to achieve environmental and resource sustainability. Our proposal is to prepare metadata of the geospatial information for the Guinea Current Region with a special attention in the coastal areas of the Region. This will allow timely access to coastal/oceanographic data and information products supporting operational, resource management, and research needs at local, national and regional levels as well as efforts at global scales for ocean stakeholders and a multitude of users. One of the products will be to create metadata for the Guinea Current Coastal Region. This will assist practitioners in assessing and sharing geospatial information within the Region and to promote geospatial data sharing within the region using the Internet technology and postal delivery as necessary.

## **Kenya**

Title: Mau Watershed (Sub-region) Spatial Data Infrastructure

Organization: Environmental Research Mapping and Information Systems in Africa (ERMIS Africa)

The ERMIS and her local partners propose to develop a local SDI initiative to ensure that spatial data, services, and metadata are accessible through interoperable standards-based services, systems, software and product that operate in a web-enabled environment. Specifically the project will foster local partnerships through: (i) an inventory of organizations and institutions generating and using spatial data with the Mau watershed sub-region, and (ii) convene a sub-national workshop to promoting partnerships and linkages that will support the sharing and use of spatial data under a standardized framework. The inventory will enable the defining and structuring of institutions within the sub-region in terms of their involvement and role within the spatial data framework. The workshop will enable these organizations to develop a sub-regional action plans towards establishing a Mau Watershed Spatial Data Infrastructure (MaWa SDI). In turn these activities will enable stakeholders to have a shared vision to better address social, economic, and environmental issues of pressing importance to the livelihoods and ecosystem of Mau watershed sub-region.

## **Kenya**

Title: Enhancing capacity of mapping services at ILRI

Organization: International Livestock Research Institute (ILRI)

Over the past twenty years, research at ILRI [www.ilri.org](http://www.ilri.org) has generated an extensive range of spatial data layers at various spatial scales ranging from global to local

level. However, most of these data were collected based on projects and standardization of datasets and documentation were not consistent. This has meant a major effort to collect and catalogue the data in easy to access format, a task that the unit has worked on recently. The main objective of this proposed project is to familiarize staff, partners and collaborators on the applicability and use of a recently developed portal. This will be achieved through workshops working closely with the recently established Kenya National Spatial Data Infrastructure (KNSDI) committee. The project goal is that ILRI will have established a dynamic and active user group on issues relating to spatial data exchange, facilitating better utilization of spatial data.

## **Kenya**

Title: GIS on Indigenous Population and Occupations in Kenya  
Organization: MAONI Network

The project hopes to develop a GIS reference model for indigenous populations that will increase political support for spatial data infrastructure and earth observations applications development, alongside national or sub-national activity. Indeed, this will foster expanded partnerships. The project hopes to accomplish: surveys and/or inventories, publishing a series of newsletters, developing awareness materials about SDI, establishing metadata and clearinghouse nodes, and preparing a scholarly article featuring on SDI.

## **Kenya**

Title: Metadata Training for the Kenyan Government and Non-profit Cooperators  
Organization: African Conservation Center

Kenya is moving quickly toward adopting geospatial standards and developing an SDI clearinghouse. There is a great need for adequately trained experts. The goal of this project is to develop and conduct a 3-day metadata train-the-trainer workshop for about 35 people from roughly 20 key institutions from the government and non-profit organizations. The workshop will focus on preparing metadata using the ISO metadata standard. This cadre of trainers would then conduct similar training within each institution/organization. Along with working abilities in metadata, the goal is for practitioners to understand the creation and use of a clearinghouse and generally to become advocates within each ministry/organization for NSDI implementation.

## **Niger**

Title: Niger National SDI Plan: Working group installation for the first national SDI symposium preparedness.  
Organization: Niger National Geographic Institute (IGNN), Niamey Niger

Our main objective is the development of a national SDI plan for our country. The first step is to identify and engage stakeholders and assign them into work groups focusing on infrastructure issues. The work group will develop a guiding plan that will be reported out in a national symposium on the SDI plan. The goal of this effort is to provide some

financial resources to the national committee to provide for formalizing a National SDI committee, anointing Work Groups, and initiating meetings of the working groups.

## **Nigeria**

Title: Spatial Data Infrastructure - Capacity Building for Nigerian Professionals  
Organization: Centre for Geographic Information Systems, Benin City, Nigeria

The Centre for Geographic Information systems (CGIS) is a non-profit, non governmental organization based in Benin City, Edo State, Nigeria that was established to promote GIS training, research, documentation and publication services. The adoption and use of Geographical Information Systems (GIS) and SDI in Nigeria demands adequate capacity building for variety of professionals. The current educational outlets for such training in Nigeria are very few and their emphasis is on theory, lectures with very little practical 'hands-on' experiences for students. Additionally training is tailored for full-time students, thus excluding working professionals. The objective of our project is to organize a one week training course in GIS and spatial data Infrastructure for professionals. The target participants are geographers, surveyors, GIS experts, environmental scientists and managers, forest officers and security personnel, engineers and architects drawn from public and private organizations. The total number of participants shall be 16 persons.

## **South Africa**

Title: South African Address Standard Workshop  
Organization: University of Pretoria

South Africa is currently developing a common national address dataset, which will be one of the base reference datasets of South Africa's SDI. South Africa has six metropolitan municipalities, and 231 rural municipalities. Of these, three metropolitan municipalities were actively involved in the meetings for the address standard, while the other three metropolitan municipalities communicated via e-mail (due to travel constraints). However, the other 231 municipalities have not yet been involved as they are scattered all over the country. Thus, there is a need to communicate with these municipalities about the address standard. The aim of this proposed project is to reach as many municipalities as possible providing information on the new national address standard, and to involve them in the finalization of the standard. The grant will be used to help provide: 1.) A workshop on the South African Address Standard, at the GISSA Conference in Durban; 2.) Participation of at least two municipal employees, who would otherwise not be able to participate; 3.) development of informative brochures and posters on the South African Address Standard.

## **South Africa**

Title: Training of data managers in GIS  
Organization: The South African Environmental Observation Network (SAEON)

The government-sponsored South African Environmental Observation Network is responsible for coordinating and facilitating long term ecological research and

environmental observation in South Africa and the management of the associated data. Currently South African Earth Observation (EO) data sits at the various institutions that produce the data. The SAEON has started collating this data and making it publicly available at national and international levels. In order to achieve this, a practical system is being implemented whereby data from different sources, using different standards can be seamlessly integrated. In order to implement the above system at our nodes, it is crucial that SAEON staff be adequately trained in the use of current GIS software. Three data managers from different SAEON nodes will attend training.

## **West Africa**

Title: Web Map Services for Vulnerability Monitoring and Food Security in Sub-Sahara Countries.

Organization: Institute of Biometeorology of the National Research Council (IBIMET-CNR), Italy

Since 1986 the Institute of Biometeorology of the National Research Council has perused the establishment of action plans to mitigate the effects of drought and desertification. In the last years the evolution of technologies towards distributed GIS based on World WideWeb and Open Source software has opened new frontiers for the Institutions that have limited funds to invest in commercial GIS products. This small project proposal is oriented to build components of a Geoportals architecture following the OGC specifications (OGC [geospatial portal reference architecture](#)) using open source solutions. The aim is the migration of the SVS web site, which actually represented an entry point to geographic content, to a geoportals with distributed GIS functionalities. This activity is strongly oriented to the “interoperability” approach of the data sharing. Principal stakeholders will be ARC, CILSS Nationals Services, and/or international agencies and researchers.

## **EUROPE**

### **Moldova**

Title: Geospatial Data Standardization

Organization: Agency for Land Relations and Cadastre of the Republic of Moldova

The Republic of Moldova is engaged in facilitating the creation of a National Geographic Information System and a National Spatial Data Infrastructure (NSDI) is an essential component. The aim of this project is geospatial data standardization for development at the national, regional and local levels that will allow policy makers and citizens to better address important social, economic, and environmental issues. In the frame of this project we are planning to acquire, translate, adopt and publish the most important geographic information standards ISO 19100 using this grant with co-financing from the Technical Committee for Informational Technology Standardization and National Institute of Standardization and Metrology. This work will be done with contribution of the experts from Institute of Geodesy, Engineering Research and Cadastre INGEOCAD and Technical University of Moldova.

## **ASIA**

### **Mongolia**

Title: Establishing web mapping services and applications for the capital area,  
Ulaanbaatar, Mongolia

Organization: The Mongolian Society of Photogrammetry and Remote Sensing (MSPRS)  
c/o MonMap LLC, Ulaanbaatar, Mongolia

The capital city of Ulaanbaatar is experiencing unmitigated growth. To create an efficient city plan, new organizational and educational measures have to be implemented. It will be essential to acquire and manage new and up to date levels of spatial information and to update existing information concerning infrastructure facilities and structures of the built up areas. A Geographic Information System (GIS) is the basis for efficient and sustainable urban planning and implementation for Ulaanbaatar. Establishment of web mapping services and its applications will be essential for better and faster exchange spatial information. The proposed project is to develop web mapping services for city organizations and its adjoining communities.

### **Nepal**

Title: Cadastral Metadata of Nepal

Organization: Himalayan College of Geomatic Engineering and Land Resources  
Management

The Himalayan College and Department of Land Information and Archives wish to prepare cadastral metadata of Nepal as per the guidance of GSDI/US FGDC. The objective of the project is to produce digital Cadastral Metadata of Nepal, prepare sample metadata for Kabhrepalanchok district, and to provide information to the users through the internet for a nominal charge. The project will conduct a digital cadastral inventory of Nepal including a) digital District boundary map at the time of Cadastral Survey; b) District metadata with municipal and Village Development Committee(VDC) boundaries of the survey period; c) Municipality and village development committee (VDC) map covering areas of a sample district like Kabhrepalanchok (1000 maps); d) scanned cadastral plans, file plan, field book, plot register, land ownership certificates of sample district; e) development of web design for acquiring scan maps through internet with payment of nominal cost by credit card to the Department; and f) Preparation of cadastral metadata manual.

### **Pakistan**

Title: Environmental Spatial Metadata Archive of Pakistan

Organization: World Wide Fund for Nature – Pakistan

In 1999, WWF-Pakistan established GIS Laboratory, in its headquarters. Since its inception the lab has acquired/developed large amount of spatial data including satellite

imagery, digital vector data, and digital terrain models. Pakistan strongly believes in sharing information/knowledge to promote its aims to conserve nature and maintain ecological balances. In this regard, the WWF-Pakistan is establishing a Spatial Data Infrastructure (SDI), previously know as data clearinghouse, for sharing conservation information, data and expertise. Creating this SDI is an attempt to organize biodiversity information to make it more widely available and useful. <http://www.esmap.pk>. The project's objectives are 1.) To bring information about spatial data available within environmental domain in Pakistan; 2.) To share information about quality of such data and its other associate technical attributes; 3.)To promote easy access to spatial data for current and future environmental projects; 4.) To encourage environmental donors/agencies to avoid wasteful duplicate efforts and to promote effective economical management of such resources.