

POSSIBLE ROLES FOR THE SWALIM PROJECT

Towards SDI for Somalia

Many countries in Africa are on the way towards having a formal, national strategy on Spatial Data Infrastructure (SDI). Somalia, however, after fifteen years of civil strife, is lagging behind. The SWALIM project collects information to improve water and food security. The authors describe how the project, despite its lack of legal or institutional authority or specific SDI focus, already has in place many components of an SDI.

SWALIM stands for Somalia Water & Land Information Management, and the project aims at improving water and food security. For this a lot of data is needed, and fifteen years of civil strife have contributed to this not being available. There has been loss of and damage to most relevant information collected over the previous half century. This has led to Somalia falling behind other African countries such as South Africa, Kenya, Botswana, Mali and Nigeria in moving towards national SDI. Our objectives now are to collect the data needed for water and land-resources management, to derive user-friendly information from that data, to store the information in easily accessible databases and to disseminate it via both conventional and electronic media. Current activities include an irrigation geo-database, rainfall and climate network stations and data collection and collation of soils, geological and hydrological data. The project aims also at building capacity, so that Somali institutions become capable of taking over SWALIM functions in the future. The project is funded by the European Commission, with a 5% contribution from UNICEF, and implemented by the United Nations Food and Agriculture Organisation (FAO).

Working Together

To achieve its aim, the project is trying to recover lost information from all over the world and in collaboration with partner agencies to re-establish data collection networks, with SWALIM acting as a repository for all information collected. The data and information is freely available to anyone working in related fields in Somalia, through outlets including the website, email request, the project's information resource centre and dedicated Liaison Offices in Somalia. Dissemination media include Web downloads, searchable catalogue, information CDs, reference library and stand-alone databases and applications. In the long run, emerging and future Somali administrations should take an information-based approach, treating information baselines as priority assets. In the current absence of central government, FAO acts as custodian of the information. We also work with many partner NGOs and international agencies, collecting essential baseline data on a continual basis.

SDI and Somalia

The implementation of a SDI involves, in addition to technical matters, also institutional matters relating to organisational responsibilities, overall national information policies, and financial and human resources. A well-functioning SDI requires common core geo-datasets organised according to widely accepted standards to which other geo-data can be easily referenced. In Somalia such core geo-datasets do not exist. Agencies use their own data-collection methods, and different projections, spheroids and datum. There are no commonly accepted datasets except on a few, rare occasions. Moreover, core data should be readily accessible and available at little or no cost from user-friendly and seamless sources, to meet public needs and encourage conformance with it by producers of other geospatial data. In Somalia many agencies work in isolation and do not share their data. Some agencies sell their data, while others provide it free. There is no warehouse structure set up to act as a data clearinghouse. A good SDI requires also that both core and other geodata is updated according to accepted standards. In Somalia, only in some sectors, such as water resources, are agencies working together to harmonise data collection and avoid duplication of effort.

Benefiting the Most

A good SDI also requires that thematic and tabular data be compatible with the core data. In Somalia, data is available in all kinds of formats and an accepted standard format for data distribution does not exist. What is more, there should compatibility between geo-data produced by one producer and similar data produced by others. SWALIM where possible used international standards; however, this may not be the case with other organisations. A good SDI should also make possible integration of geodata with many other datasets to produce information useful for decision-makers and the public. A great deal of capacity building is needed in Somalia, not only to convert data to information, but also to be able to interpret that information. In addition the responsibility for generating, maintaining and distributing data should be widely shared by different levels of government and the private sector. Governments take advantage of private-sector capabilities available at reasonable prices rather than maintain dedicated capabilities. There is an active private sector in Somalia that flourishes (especially in the Information Technology sector) thanks to lack of government controls. Finally, the costs of generating, maintaining, and distributing such data should be justified in terms of public benefit and/or private gain; overlap and duplication among participating organisations should be avoided wherever possible. The costs of data collection and distribution are justified in Somalia as long as information ends up in the hands of the Somali authorities, where it will be of benefit to the most. Overlap and duplication of effort is largely minimised by considerable donor co-ordination on the part of the Somalia Aid Co-ordination Body (SACB).

Parts In Place

The factors central to the effective use of available geo-information, include:

- clearly defined core (or base) geo-datasets; core datasets involve “the minimum primary sets of data that cannot be derived from other datasets and that are required to spatially represent phenomena, objects or themes important for the realisation of economic, social and environmental benefits consistently across Africa at local, national, sub-regional and regional level
- adherence of geographic data-sets to known and accepted standards
- accessible documentation about existing geo-information (metadata)
- policies and practices which promote the exchange and reuse of information
- adequate human and technical resources for collecting, maintaining, manipulating and distributing geo-information.

Despite some shortcomings, SWALIM has some of the components of a SDI in place, or plans to implement them.

Success Factors

Although perhaps not in the ideal position to further the SDI concept, SWALIM is best-suited (given additional resources) and is in a unique position to hand over all the components of an SDI to the Somalia authorities when appropriate. While some SDI components appear to be in place, ultimately it is the “handing over” that is the critical aspect. What is missing is an adequate governance regime for maintaining what will have been set up. Most “organisational success factors” for (US state-level) inter-agency GIS co-ordination identified by the US National States Geographic Information Council (NSGIC) are either absent or present only in rudimentary form in Somalia. These include:

- designation of a full-time, paid co-ordinator with authority to implement state business and strategic plans
- a clearly-defined authority for national co-ordination of geospatial information technologies and data production
- formal relationship between national co-ordination office and the state’s Chief Information Officer
- a champion (politician or executive decision-maker) aware of and involved in the process of co-ordination
- assignation of responsibilities for developing the SDI and clearinghouse
- state government capacity to work with and co-ordinate local government, academia and the private sector
- existent sustainable funding sources to meet projected needs
- co-ordinators with authority to enter into contracts and become capable of receiving and spending funds
- federal government working through the national co-ordinating authority.

Hand-over

How to ensure a smooth hand-over to emergent Somali authorities, and how to ensure that SDI legal and co-ordination frameworks can be developed and embedded in Somali legislation and daily administrative routine? In Puntland, the Ministry of Planning publishes Puntland Facts and Figures, and Somaliland has a cadastral survey unit in conjunction with the University of Hargeisa. Building on existing capacities, these units could be used and expanded for SDI implementation; however, investigations into current capacity and future resource-needs are needed. Interagency co-operation and acceptance would have to be greatly strengthened, as would links with local Somali authorities, to ensure that all parties contribute to a common goal of having open and accessible information.

The Future

SWALIM will continue to generate core datasets, basic land assessment will be carried out, and plans are in place to provide online access not only to metadata but also to geo-data. We also plan to have a searchable online catalogue, conforming to international standards to ensure interoperability with other agencies, and plans have been initiated for a Web-mapping service. All activities and work plans originate from input by Somali authorities at various stakeholder workshops. Thus we have the endorsement of the current Somali authorities.

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Further Reading

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