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United Nations Global Geospatial Information Management in Africa
(UN-GGIM: Africa)

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Report on UN-GGIM Regional Activities in Africa

1. Introduction & Background

The African caucus of the United Nations Global Geospatial Information Management (UN-GGIM: Africa) was set up to address the issues of developing the capacities of African nations in the generation and dissemination of authoritative, accurate and maintained geospatial information in the continent. It focuses around the following key pillars:

- The African Regional Spatial Data Infrastructures (ARSDI) as a framework with policies & structures to facilitate the availability of and access to spatial data, facilitating data-sharing among data producers and users.
- The AFREF project, to develop a regional geodetic reference frame, aligned with the Global Geodetic Reference Frame (GGRF), to enable direct and seamless applications of all geospatial information on the continent.
- The SALB project, to build authoritative and accurate second administrative level boundary databases with validated datasets from member States that will be used in a number of applications including census data analysis and disaster management.
- The GeoNyms programme, to create an African gazetteer populated with Member State data and input through the UN Group of Experts on Geographical Names (UNGEGN).
- The Fundamental Geospatial Datasets to develop a well-structured and comprehensive data foundation that would be consistent, comparable and compatible at the local, national, regional, and global levels.
- The Integration of Geospatial Information and Statistics to mainstream geospatial information applicability in the various sectors and sub-national constituents of statistics.
- The 2030 Sustainable Development Agenda, to develop common tools and data for applications of geospatial technologies for monitoring and tracking progress of the sustainable development goals.

This report outlines activities carried out by the Africa region with regard to geospatial information management since the sixth session of the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM). The report includes actions taken as a follow-up of resolutions adopted by UN-GGIM and other activities considered as being of interest to Member States and partners.

2. Objectives

The main objective of UN-GGIM: Africa is to leverage the enabling capabilities of geospatial information technology to meet African development agenda and in support of the emerging global challenges. This will be mainly achieved through:

- i) Promoting and supporting technical activities in the development of standards, interoperability and streamlined electronic services delivery in such a way that they anticipate the future potential use of geospatial information resources in the continent;
- ii) Strengthening and aligning specific needs and interests of Africa with international mechanisms;
- iii) Encouraging and facilitating the integration of statistics with geospatial information efforts to attain viable and meaningful outcomes, analysis and visualization of data in supporting and tracking progress of the sustainable development goals.

3. Activities, Areas of Work – achievements

3.1. Organisation of the Second meeting of UN-GGIM: Africa.

The region has organized the Second Meeting of the Regional Committee of UN-GGIM: Africa as a back-to-back event with the StatCom Africa Meeting held from 28 November to 02 December 2016 in Grand-Bassam, Côte d'Ivoire. The meeting was attended by over 30 participants, comprising delegates from 10 African countries, as well as observers from international organizations including the United Nations Secretariat, the Africa Union, academia, regional organizations and networks, and the private sector.

The meeting reviewed progress achieved on the recommendations and actions of UN-GGIM: Africa previous meetings; offered opportunity to share knowledge and best practices on the development of geospatial information in the continent; raised awareness on the benefits to be derived through the utilization of geospatial information for sustainable development; looked at policies, measures and steps that African countries could take to ensure a successful implementation of the UN-GGIM initiative in the region. The meeting outcomes contributed to consolidate the consensus and drive the political will in leveraging the enabling capabilities of geospatial information technology to meet African development agenda and in support of the emerging global challenges.

Additionally the meeting reviewed the following critical areas for the implementation of UN-GGIM: Africa activities:

- i) Defining the modalities of engaging the Working Groups to take the role of drawing from the African Action Plan on UN-GGIM some concrete actions they can convert into fundable projects with priority actions, milestones and related costs;
- ii) Outlining the strategy for resources mobilization (to ensure the funding of some of the key activities such as AFREF, GeoNyms, SDI, Mapping Africa for Africa, etc.);
- iii) Assessing status of developing national data infrastructures in Africa: issues, challenges;
- iv) Stressing the role and place of geospatial information in the implementation and monitoring of the SDGs;
- v) Addressing relevant issues that came out of the 6th Session of the United Nations Committee of Experts on Global Geospatial Information Management: Africa participation to the work of various Expert and Working Groups: Updates, issues and opportunities;
- vi) Reviewing the African Action Plan on UN-GGIM for its final adoption.

The meeting also stressed the need for the African Action Plan to be more ambitious regarding the overarching aspect of geospatial information policy and governance in Africa. A continental level Policy must be developed, aligned with the Africa Space Policy and Strategy recently adopted by the Africa Head of States. As quick win actions, it was decided to launch the development of a Position Paper on geospatial information (provided for in the logical framework), followed by the advocacy action in the direction of the policy makers in Africa, in order to turn geospatial information into a real sustainable development enabler. The meeting further acknowledged that there was little participation from African government officials. Without ECA support, most of the countries found it difficult to attend. Therefore, it was suggested that ECA may consider undertaking an awareness raising campaign to get all African countries fully involved in the initiative.

3.2. UN-GGIM: Africa Action Plan

The continental action plan on UN-GGIM: Africa, now branded “African Action Plan on Geospatial Information for Sustainable Development” (GI4SD), was developed and aligned with global agendas and programmes (Agenda 2030 and AUC 2063 Vision) to foster and support technical activities development, strengthen and align specific needs and interests of Africa, and encourage and facilitate the integration of statistics with geospatial information. The Action Plan was formally endorsed by the regional committee. As quick win actions, the meeting has decided

to further carry out the development of a Position Paper on geospatial information policies for Africa, followed by the advocacy action in the direction of the policy makers in Africa, in order to turn geospatial information into a real sustainable development enabler. The process of geospatial and statistical information integration should also start immediately in order to anticipate the urgent information needs ahead of us in the frame of the UN Sustainable Development Agenda 2030 and the AU Agenda 2063.

3.3. Development of the African Statistical and Spatial Framework (ASSF) for the integration of geospatial and statistical information

UN-GGIM: Africa has started the development of a global strategic framework for the integration of statistical and geospatial information. The strategy outlines some of the policy principles on how to mainstream geospatial technology into the work of national statistical offices all the way through training, data and processes. An Expert Group meeting was subsequently organised to review the framework, consolidate the consensus and drive the political that will steer the development and management of geospatial information in support of the emerging global challenges in Africa. The next steps will be to develop sectoral priority actions with a logical framework of objectives, results, activities, chronogram and related costs.

3.4. Identification of Geospatial Datasets for SDG Indicators

In supporting the implementation and reporting on the SDGs, UN-GGIM: Africa has developed a matrix identifying the geospatial datasets that are labelled based on their criticality for the monitoring and implementation of the goals and targets for each SDG indicators. This work is ongoing and will be aligned with the activities of the Inter-agency and Expert Group on SDG Indicators Working Group on Geospatial Information (IAEG-SDGs WGGI).

3.5. Geospatial information resources for regional initiatives

Several regional geospatial databases are being developed, incrementally updated and accrued to support regional initiatives. These databases form the core of the African Regional Spatial Data Infrastructure. These include:

- i) The continuous update of the African component of the Second Level Administrative Boundaries (SALB) geodatabases is an ongoing effort. UN-GGIM: Africa is part of the global effort to move into a new procedure of a yearly updating mode of collection, editing, validation and dissemination a full coverage of administrative units within countries. Various activities were carried out to upgrade the African status (Mauritius, Ethiopia, Botswana, etc.) to the same level, comparatively to others regions.
- ii) The sourcing, collecting, processing, validating and building of the African infrastructures (PIDA) geodatabases;
- iii) The collection of Digital Elevation Model (DEM) data at 30 m resolution that covers the entire continent.
- iv) Continuous support was provided to the Regional Steering Committee of the African Reference Frame (AFREF) programme to complete the roll-out of 10 GNSS reference stations in the following countries: Burundi, Chad, Côte d'Ivoire, Ghana, Kenya, Namibia, Zambia, and Zimbabwe. The installation of the stations was now completed with the assistance of Trimble Inc., and the first set of the parameters of the reference frame has been computed.

UN-GGIM: Africa would like to revamp its work on developing “Guidelines of Best Practice for the Acquisition, Storage, Maintenance and Dissemination of Fundamental Geo-Spatial Datasets” as part of the Mapping Africa for Africa initiative. These guidelines are intended to serve as a valuable tool for National Mapping Agencies and others in providing the fundamental geospatial information.

3.6. Contribution to UN-GGIM Activities

The Africa region participated in the following UN-GGIM related events and activities:

- Participation and contribution to the sixth Session of the Committee of Experts of GGIM and its side events, held in New York in 1 – 5 August 2016. The session offered good opportunity for many formal and informal contacts with various interlocutors on common interest in order to continue strengthening UN-GGIM: Africa interaction with public/private organizations, institutions and individuals that are involved in the development of geospatial information to effectively support the African geospatial community by raising awareness, funds and learning from the experience of other regions.
- Contribution to the work of the United Nations Expert Group on the Integration of Statistical and Geospatial Information (UN EG-ISGI).
- Contribution to the work of the WG on Fundamental Data in providing the initial thematic descriptions on Water, Biosphere and Land Cover / Land Use
- Participation and contribution to the Expanded UN-GGIM Bureau Meeting that was held 7 – 9 December 2016 at UNHQs in New York.
- Participation and contribution in the 2nd meeting of IAEG-SDG WGGI in Mexico City, Mexico 12 – 14 December 2016 and the 3rd meeting of IAEG-SDG WGGI in Kunming, China 8 – 10 May 2017.

3.7. Capacity Development

Capacity development is essential to fulfill the sustainable development endeavour in Africa. It is now recognized that geospatial information plays a critical role in ensuring sustainable development. Hence, to fully leverage the “enabling” capabilities of geospatial information for sustainable development, capacity building requires immediate attention so as to ensure that no one is left behind in this regard. However, in the developing countries of Africa, it is recognized that the geospatial information divide is growing and an urgent intervention is required to reverse this trend and to enable the continent to reap the benefit of this critical development infrastructure. UN-GGIM: Africa has made some efforts to garner technical support in this connection from public and private sector development partners on bilateral and/or multilateral basis. In this regard, the support Ethiopia received from Esri, and the support of the European Union (African Monitoring of the Environment for Sustainable Development - AMESD, Monitoring for environment and security in Africa – MESA) China (Land cover mapping using Globeland 30) and Trimble (CORS GPS) offered to a number of African countries are worth mentioning. However, there is still more to be done and therefore the support of UN-GGIM Secretariat remains essential to realize this goal.

3.8. Publicity and Outreach

UN-GGIM: Africa has participated in several geo-related events, taking these opportunities to interact with broad range of decision makers, users and service providers from various countries. The participation at such meetings is important, as the region takes advantage of these opportunities to deliver keynotes and express the continent's vision and strategy for geospatial science and technology development in Africa. The various conferences also offered opportunities to keep abreast with current trends of geospatial services and products.

Further to this, during the reporting cycle, the region has organised a sensitization workshop for local media in Ethiopia so as to establish and consolidate collaboration platform between media professionals, researchers and geospatial professional and decision-makers. The workshop outlined the need for intensive regional awareness raising campaign and on-line media campaign through various channels such as social media, web-portal, e-discussion on the role of geospatial information science and technology in socio economic transformation in Africa at a large.

4. Partnerships, Regional & International Collaboration

The region has continued its effort to build partnership with regional and international organizations to voice the continent perspective in the global arena of geospatial information management. The aim is to provide cooperation for the development and use of African geospatial information to monitor, analyse and assist decision making in global and African challenges.

The GMES Programme: As member of the Coordination Team along with ad hoc constituencies from the EC, AUC and the Member States, UN-GGIM: Africa continues to be fully involved in the design and implementation of the programme to ensure that all conditions for application of space observation are for the benefit of the continent.

Group on Earth Observations (GEO): UN-GGIM: Africa is ensuring that the GEO work plan adequately reflects African issues and encourages African countries to participate in GEO. The region is actively involved in defining the AfriGEOSS implementation plan, the subset of GEO for Africa.

5. Priority Issues and Challenges

In implementing the global geospatial information management mechanism, the associated challenges include: inadequate response and lack of political will to implement geospatial initiatives by countries, and lack of financial resources to assist member states.

In technical assistance including developing the various databases and applications, it became obvious that the needed data is not always available, emphasizing the importance to include data collection, management, dissemination and access policies in development information strategies and plans.

6. Perspectives/Outlook, Future Plans

6.1. Third meeting of UN-GGIM: Africa

The region plans to organise the third meeting of UN-GGIM: Africa in conjunction with the AfricaGIS 2017 Conference, a premium geoinformation event in the continent. The meeting is tentatively scheduled for 21-25 November 2017.

6.2. Overarching geospatial information policy for Africa

Even though more than a decade's work has been done with regards to SDI development in Africa, it still reflects an incoherent piece-meal approach characterized by loose networks and informal relationships. There is no evidence of one model; rather, there is evidence of a complete lack of national geospatial information policy on the continent. In that regards, UN-GGIM: Africa has taken the step to develop an African Geospatial Information Policy as an overarching policy framework for formulating national policies for geospatial information in the continent. It's expected that the framework will help in harmonizing the efforts and in attracting the funding required to drive the efforts, maintain support and gather momentum.

6.3. Geospatial information standards for Africa

African countries and their partners collect and manage large amounts of geospatial data – but these data are often not easily accessible or not well documented and organized in a standardized way. Un-GGIM: Africa is embarked in the preparation of a guideline document on Geospatial Standards which will be used by national mapping agencies as a reference for strengthening the harmonization of fundamental geospatial datasets in Africa, including the common standards and metadata that would make statistical and geospatial information more useable and more relevant to a wider range of stakeholders. The document will identify some of the best practices and experiences, and outline the guiding principles for adopting common standards in the mapping practices in Africa. This will help the continent to develop common regional standards in line with the international policy and standards.

7. Matters/Issues for Consideration

UN-GGIM: Africa has made substantive progress in terms of gaining some momentum and assuring the global community that Africa is serious about contributing. The region has strengthened its effort to join the front runners in the integration of geospatial information and statistics. There is strong recognition and determination of the two disciplines to work together to achieve better results for both, as recognised by the revamped Strategy for Harmonisation of Statistics in Africa (SHaSA).

However, UN-GGIM: Africa acknowledges that there was little participation from African government officials in the deliberations of the regional committee to date. In order to overcome this challenge, it is required to pursue a strong advocacy action in the direction of the policy makers in Africa, in order to turn geospatial information into a real sustainable development enabler.

Hence in line with the motto “Leave no one behind”, the support of the UN-GGIM Secretariat remains critical to enhance the capacity building effort in our region compounded with a strengthened advocacy and public outreach.

There is a communication gap that the regional committee needs to address. UN-GGIM: Africa must establish an information, knowledge and awareness raising platform (in a form of a dedicated website) that provides: i) updates on the regional committee’s activities with all documents, presentations, resources and guidelines made available online; ii) monitoring, identification and dissemination of best practices on geospatial information resources, applications, and services; iii) moderated on-line discussion on emerging issues, trends and challenges related to Geospatial information science and technology system and development; iv) Promotion of national and regional collaboration framework with other institutions and initiatives.

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