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**Economic Commission for Africa****Committee of Experts on Global Geospatial Information Management**

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**Report on regional activities in Africa****Acknowledgements**

The present report was compiled and finalized with the assistance of the following contributors from the Regional Committee of United Nations Global Geospatial Information Management for Africa: Andre Nonguierma (Economic Commission for Africa), Regional Committee secretariat; Sultan Mohammed Alya (Ethiopia), Chair of the Regional Committee Executive Board; Mmuso Riba (South Africa), Co-Chair of Regional Committee Executive Board; and Abdoulaye Belem (Burkina Faso), Co-Chair of the Regional Committee Executive Board.

**I. Introduction and background**

1. The African caucus of the Regional Committee of United Nations Global Geospatial Information Management for Africa was set up to tackle the issue of developing the capacities of African nations in the generation and dissemination of authoritative, accurate and managed geospatial information on the continent. It focuses on the following key pillars:

- (a) African regional spatial data infrastructure as a framework with policies and structures, to facilitate the availability of and access to spatial data, enabling data sharing among data producers and users;
- (b) African geodetic reference frame project, to develop a regional geodetic reference frame, aligned with the global geodetic reference frame, which allows for the direct and seamless application of all geospatial information on the continent;
- (c) Second administrative-level boundaries project, to build authoritative and accurate second administrative-level boundary databases with validated data sets from member States that will be used in a number of applications, including census data analysis and disaster management;
- (d) GeoNyms programme, to create an African gazetteer populated with member State data and input through the United Nations Group of Experts on Geographical Names;

- (e) Fundamental geospatial datasets, to develop a well-structured and comprehensive data foundation that will be consistent, comparable and compatible at the local, national, regional and global levels;
- (f) The integration of geospatial information and statistics, to mainstream geospatial information applicability into the various sectors and subnational constituents of statistics;
- (g) The 2030 Agenda for Sustainable Development, to develop common tools and data for the application of geospatial technologies for monitoring and tracking the progress in implementing the 2030 Agenda.

2. The present report outlines the activities carried out by the Regional Committee with regard to geospatial information management since the sixth session of the Committee of Experts on Global Geospatial Information Management. It includes the actions taken as a follow-up to the resolutions adopted by the Committee of Experts and other activities considered to be of interest to member States and partners.

## **II. Objectives**

3. The main objective of the Regional Committee is to leverage the enabling capabilities of geospatial information technology to meet the African development agenda and support emerging global challenges. This will be achieved mainly through the following:

- (a) Promoting and supporting technical activities in the development of standards, interoperability and streamlined electronic services delivery in such a way that they anticipate the potential use of geospatial information resources on the continent;
- (b) Strengthening and aligning the specific needs and interests of Africa with international mechanisms;
- (c) Encouraging and facilitating efforts to integrate statistics into geospatial information to attain viable and meaningful outcomes, analysis and visualization of data in supporting and tracking the progress made towards implementing the 2030 Agenda.

## **III. Activities, areas of work and achievements**

### **A. Second meeting of the Regional Committee of United Nations Global Geospatial Information Management for Africa**

4. The second meeting of the Regional Committee was held as a back-to-back event with the Statistical Commission for Africa meeting, held in Grand-Bassam, Côte d'Ivoire, from 28 November to 2 December 2016. More than 30 participants attended the meeting, comprising delegates from 10 African countries and observers from international organizations, including the United Nations Secretariat, the African Union, as well as representatives of academia, regional organizations and networks and the private sector.

5. At that meeting, participants reviewed the progress made in achieving the recommendations and actions of the Regional Committee's previous meetings. They shared knowledge and best practices on the development of geospatial information on the continent, raising awareness of the potential benefits to be derived through the utilization of geospatial information for sustainable development. The participants discussed policies, measures and steps that African countries could take to ensure a successful implementation of

the United Nations Initiative on Global Geospatial Information Management in the region. The meeting outcomes contributed to the consolidation of the consensus and to driving the political will in leveraging the capabilities that would allow geospatial information technology to meet the requirements of the African development agenda and support emerging global challenges.

6. In addition, the participants reviewed the following critical areas for the implementation of the Regional Committee's activities:

- (a) Defining the modalities of engaging the working groups in order to draw from the African Action Plan on Global Geospatial Information Management some specific actions that could be converted into fundable projects with priority actions, milestones and related costs;
- (b) Outlining the strategy for resource mobilization to ensure the funding of some of the key activities, such as the African geodetic reference frame, GeoNyms, spatial data infrastructure and Mapping Africa for Africa;
- (c) Assessing the status of developing national data infrastructures in Africa (issues and challenges);
- (d) Emphasizing the role and place of geospatial information in the implementation and monitoring of the 2030 Agenda;
- (e) Tackling the relevant issues identified by the participants at the sixth session of the Committee of Experts on Global Geospatial Information Management for Africa and participating in the work of various expert and working groups (updates, issues and opportunities);
- (f) Reviewing the African Action Plan for its final adoption.

7. The participants stressed the need for the African Action Plan on Global Geospatial Information Management to be more ambitious with regard to the overarching aspect of geospatial information policy and governance in Africa. A continental-level policy must be developed and aligned with the African space policy and strategy recently adopted by the African Heads of State. 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 advocacy directed at policymakers in Africa, in order to turn geospatial information into a sustainable development enabler.

8. The participants also acknowledged that there was little participation from African government officials. Without the support of the Economic Commission for Africa (ECA), most countries found it difficult to attend. The participants therefore suggested that ECA should consider undertaking an awareness-raising campaign to have all African countries fully involved in the initiative.

## **B. Action plan on global geospatial information management for Africa**

9. The continental action plan on global geospatial information management for Africa, now branded the African Action Plan on Geospatial Information for Sustainable Development, was developed and aligned with global and regional agendas and programmes, namely, the 2030 Agenda and Agenda 2063: The Africa We Want. The purpose of the Action Plan is to foster and support the development of technical activities, strengthen and align the specific needs and interests of Africa and encourage and facilitate the integration of statistics into geospatial information. The Regional Committee formally endorsed the Action Plan. The process of geospatial and statistical

information integration should begin immediately in order to anticipate future urgent information needs regarding the 2030 Agenda and Agenda 2063.

### **C. Development of the African statistical and spatial framework for the integration of geospatial and statistical information**

10. The Regional Committee has begun to develop 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 statistics offices all the way through training, data and processes. An expert group meeting was subsequently held to review the framework, consolidate the consensus and encourage the political will to steer the development and management of geospatial information in support of the emerging global challenges in Africa. The next step will be to develop sectoral priority actions with a logical framework of objectives, results, activities, a chronogram and related costs.

### **D. Identification of geospatial datasets for Sustainable Development Goal indicators**

11. In supporting the implementation of and reporting on the 2030 Agenda, the Regional Committee has developed a matrix identifying the geospatial data sets that are labelled on the basis of their criticality for the monitoring and implementation of each Sustainable Development Goal indicator. This work is ongoing and will be aligned with the activities of the Working Group on Geospatial Information of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators.

### **E. Geospatial information resources for regional initiatives**

12. 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 the following:

- (a) The updating of the African component of the second administrative-level boundaries geodatabases is an ongoing effort. The Regional Committee is part of the global effort to move into a new procedure of an annual updating mode of collection, editing, validation and dissemination of a full coverage of administrative units within countries. Various activities were carried out to upgrade the African status (in Botswana, Ethiopia and Mauritius, among others) to the same level, comparatively, in other regions;
- (b) The sourcing, collecting, processing, validation and building of the African infrastructure geodatabases;
- (c) The collection of digital elevation model data at 30 m resolution that covers the entire continent;
- (d) The continuous support provided to the Regional Steering Committee by the African geodetic reference frame programme to complete the roll-out of 10 global navigation satellite system reference stations in the following countries: Burundi, Chad, Côte d'Ivoire, Ghana, Kenya, Namibia, Zambia and Zimbabwe. The installation of the stations, completed with the assistance of Trimble Inc., and the first set of the parameters of the reference frame has been computed.

13. The Regional Committee would like to revamp its work on developing guidelines of best practice for the acquisition, storage, maintenance and dissemination of fundamental geospatial data sets 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.

## **F. Contributions of the Regional Committee of United Nations Global Geospatial Information Management for Africa**

14. The Africa region participated in the following United Nations global geospatial information management-related events and activities:

- (a) Participation in and contribution to the sixth session of the Committee of Experts on Global Geospatial Information Management and its side events, held in New York from 1 to 5 August 2016. The session offered a good opportunity for many formal and informal contacts to be made with various interlocutors on issues of common interest. This was in order to continue to strengthen the Regional Committee's interaction with public and private organizations, institutions and individuals involved in the development of geospatial information and to support the African geospatial community effectively by increasing awareness among stakeholders, identifying and unlocking funding streams and learning from the experience of other regions;
- (b) Contribution to the work of the Expert Group on the Integration of Statistical and Geospatial Information;
- (c) Contribution to the work of the Working Group on Fundamental Data by providing the initial thematic descriptions of water, biosphere and land cover or land use;
- (d) Participation in and contribution to the Committee of Experts on Global Geospatial Information Management Expanded Bureau Meeting, held in New York from 7 to 9 December 2016;
- (e) Participation in and contribution to the second meeting of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators Working Group on Geospatial Information, held in Mexico City from 12 to 14 December 2016, and its third meeting, held in Kunming, China, from 8 to 10 May 2017.

## **G. Capacity development**

15. Capacity development is essential to fulfil the sustainable development endeavour in Africa. The continent now recognizes that geospatial information plays a critical role in ensuring sustainable development. Accordingly, to leverage the "enabling" capabilities of geospatial information for sustainable development, immediate attention should be given to building the capacities of African countries to ensure that no one is left behind in this regard. The developing countries of Africa recognize that the geospatial information divide is growing and that an urgent intervention is required to reverse this trend to enable the continent to reap the benefit of this critical development infrastructure.

16. The Regional Committee has made some efforts to garner technical support in this regard from public and private sector development partners on a bilateral and multilateral basis. In this regard, the support that Ethiopia received from the Environmental Systems Research Institute in addition that from the

European Union (Monitoring for Environment and Security in Africa), China (land cover mapping using GlobeLand 30) and Trimble Inc. (CORS GPS) offered to a number of African countries, are worth mentioning. There is still more to be done, and therefore the support of the United Nations Global Geospatial Information Management secretariat remains essential to realizing this goal.

## **H. Publicity and outreach**

17. The Regional Committee has participated in several geo-related events, using those opportunities to interact with a broad range of decision makers, users and service providers from various countries. Participating in such meetings is important, given that the region takes advantage of those events to deliver keynotes and express Africa's vision and strategy for geospatial science and technology development. The various conferences also offered opportunities to keep abreast of the current trends in geospatial services and products.

18. In addition, during the reporting cycle, the region held an awareness-raising workshop for the local media in Ethiopia to establish and consolidate a collaboration platform between media professionals, researchers and geospatial professional and decision makers. The workshop outlined the need for an intensive regional awareness-raising campaign and an online media campaign through various channels, such as social media, web portals and e-discussions on the role of geospatial information science and technology in socioeconomic transformation throughout Africa.

## **IV. Partnerships and regional and international collaboration**

19. The region has continued its effort to build partnerships with regional and international organizations in order to advance the continent's perspective in the global arena of geospatial information management. The aim is to enable cooperation in the development and use of African geospatial information to monitor, analyse and assist decision-making in global and African challenges.

20. The Regional Committee is a member of the coordination team of the Global Monitoring for Environment and Security programme. It continues to be fully involved in the design and implementation of the programme to ensure that all conditions for the application of space observation are for the benefit of the continent. Members of the coordination team also includes ad hoc constituencies from the European Commission, the African Union Commission and member States.

21. The Regional Committee for Africa is ensuring that the workplan of the Group on Earth Observations adequately reflects African issues and encourages African countries to participate in the Group. The region is actively involved in defining the AfriGEOSS implementation plan, the subset of the Group on Earth Observations for Africa.

## **V. Priority issues and challenges**

22. The associated challenges in implementing the global geospatial information management mechanism include the inadequate response and lack of political will by countries to carry out geospatial initiatives and the lack of financial resources to assist member States.

23. With regard to technical assistance, including developing various databases and applications, it became obvious that the data necessary were not always available, emphasizing the importance of including data collection, management, dissemination and access policies in development information strategies and plans.

## **VI. Outlook and future plans**

### **A. Third meeting of the Regional Committee of United Nations Global Geospatial Information Management for Africa**

24. The region plans to organize the third meeting of the Regional Committee in conjunction with the 2017 international conference on geographical information systems in Africa (AfricaGIS 2017), a prominent geoinformation event on the continent. The meeting is to be held in Addis Ababa from 20 to 24 November 2017.

### **B. Overarching geospatial information policy for Africa**

25. Notwithstanding the accomplishment of more than 10 years of work on spatial data infrastructure development in Africa, such development still reflects an incoherent piecemeal 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 regard, the Regional Committee has taken the step to develop an African geospatial information policy as an overarching framework for formulating national policies for geospatial information on the continent. The expectation is that the policy will help to harmonize efforts, attract the funding required to drive these efforts, maintain support and gather momentum.

### **C. Geospatial information standards for Africa**

26. 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. The Regional Committee has embarked on the preparation of a guideline document on geospatial standards. National mapping agencies will use this document as a reference for strengthening the harmonization of fundamental geospatial data sets 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 also 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 international policy and standards.

## **VII. Conclusion**

27. The Regional Committee has made substantive progress in terms of gaining some momentum and assuring the global arena that Africa is serious about contributing. The region is at the forefront of the worldwide confluence between geospatial information and statistics. There is strong recognition and determination for the two disciplines to work together to achieve better results for both, as recognized by the revamped Strategy for the Harmonization of Statistics in Africa.