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**Economic Commission for Africa  
Committee of Experts on Global  
Geospatial Information Management  
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Item 4 of the provisional agenda\*

**Contribution of regional committees and thematic  
groups to the global geospatial information agenda**

### **United Nations Global Geospatial Information Management**

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### **Report on regional activities in Africa**

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\* E/C.20/2021/1.



## **I. Introduction**

1. The Regional Committee of United Nations Global Geospatial Information Management for Africa provides a regional focus for coordinating African geospatial development and contributing to the wider global initiative. The implementation of the Regional Committee's work programme is focused on facilitating initiatives to promote advancements in: (a) policy, institutional arrangements and legal frameworks; (b) developing information and knowledge resources, applications and services that improve the availability and use of spatially-enabled information for development at the national, regional and subregional levels; (c) building capacity and collective knowledge as a community with shared interests and concerns; and (d) international cooperation and partnership, through collaborating and coordinating its activities with United Nations system entities and with international and regional networks and programmes.

2. The Economic Commission for Africa (ECA), as the secretariat of the Regional Committee, is pleased to submit the present report on the activities carried out by the Regional Committee since the tenth session of the Committee of Experts on Global Geospatial Information Management. The report includes actions taken in follow-up to resolutions adopted at the tenth session, as well as other activities considered to be of interest to member States and partners.

## **II. Integrated Geospatial Information Framework**

3. The Integrated Geospatial Information Framework focuses on geospatial information that is integrated with other meaningful data to solve societal and environmental problems. It is a standalone framework that is independent of all other spatial data infrastructure. However, it fundamentally recognizes, builds upon and augments previous investments and substantial achievements in planning and implementing spatial data infrastructure and national spatial data infrastructure. The Framework not only provides additional structure, explanation and evidence as to why national spatial data infrastructure is important, but also provides the guidance, options and actions to plan for, develop and implement an integrated national geospatial information management programme that is aligned with the national strategic priorities and circumstances in a given country.

4. In its decision 10/103, the Committee of Experts acknowledged the Implementation Guide of the Integrated Geospatial Information Framework as a means of strengthening national geospatial information management arrangements.<sup>1</sup> In addition, the Regional Committee has recognized that providing adequate resources and support for ground-level action is imperative for African countries in order to develop national action plans that can be effectively operationalized, with a view to having a significant impact. Assisting member States in developing country-specific action plans will help them to develop spatially-enabled e-services, embark on the path towards digital transformation, and bridge the geospatial digital divide on the continent.

## **III. Integration of geospatial and statistical information**

5. The need and demand for disaggregated data is great, and geocoding is needed in the context of the coronavirus disease (COVID-19) pandemic. At its sixth meeting, held online in December 2020, the Regional Committee acknowledged the progress that had been made in developing the guidelines for

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<sup>1</sup> See E/2021/46-E/C.20/2020/35.

the implementation of an African geospatial and statistical framework. In addition, it noted that the Regional Committee must provide policy-level support for the African statistical geospatial framework, and should prioritize and propose ground-level actions to advance the implementation of national and regional activities relating to the integration of statistical and geospatial information in Africa.

#### **IV. Policy and legal frameworks**

6. The Regional Committee carried out an assessment of national spatial data infrastructure development in African countries. It used a questionnaire to gather primary data that accurately reflect the current state of six components and their respective indicators (namely, strategic planning, policy and legal frameworks, data, standards, access networks, and people). The assessment methodology that was adopted was based on the Capability Maturity Model, which was originally developed by the Software Engineering Institute at Carnegie Mellon University in the United States of America for evaluating and improving software development processes. Twenty African countries responded to the questionnaire and were included in the assessment. The assessment categorized the countries, based on their ranking under the Capability Maturity Model, as either champions, aspirers or beginners. The assessment classified four countries as champions (Malawi, Namibia, Senegal and South Africa), five countries as aspirers (Burkina Faso, Burundi, Ethiopia, Ghana and Togo), and 11 countries as beginners (Cameroon, the Comoros, Côte d'Ivoire, Eswatini, Lesotho, Liberia, Madagascar, Mozambique, the Niger, South Sudan and Uganda). The assessment also identified the 4 main challenges to the successful implementation of national spatial data infrastructure in Africa: (a) an inappropriate implementation approach that used a bottom-up and voluntary model; (b) poorly developed access network infrastructure, such as electricity and information and communications technology; (c) limited human resource capacity and capability; and (d) lack of funding.

7. In view of the above, the following action items and approaches to support successful national spatial data infrastructure implementation in African countries are recommended: (a) securing buy-in from top-level policymakers and decision-makers; (b) adopting a mandatory model of implementation; (c) adopting a product-based implementation approach; and (d) adopting a step-wise implementation methodology that involves analysing the environment, formulating a strategy, then implementing that strategy. Such a methodology should include a mechanism for integrating national spatial data infrastructure with other national strategies, such as those for the application of the Integrated Geospatial Information Framework, and strategies for the development of statistics, through situation analysis, strategic plan development, strategy formulation, strategy implementation, and continuous improvement.

#### **V. Regional and international collaboration and capacity development**

8. During the reporting period, the Regional Committee provided advisory services in the context of the Global Monitoring for Environment and Security and Africa initiative,<sup>2</sup> and to the African Space Agency and the African chapter of the Group on Earth Observations.

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<sup>2</sup> A joint initiative of the European Commission and the African Union Commission (see <https://africa-eu-partnership.org/en/projects/global-monitoring-environment-and-security-gmes>).

9. During the period under review, the Africa region took part in the following events and activities:

a) Participation in and contribution to the tenth session of the Committee of Experts and its side events, held online on 26 and 27 August and 4 September 2020;

b) Participation in and contribution to the meeting of the expanded Bureau of the Committee of Experts;

c) Participation in and contribution to the work and meetings of the Expert Group on the Integration of Statistical and Geospatial Information;

d) Participation in and contribution to the work of the Inter-Agency and Expert Group on Disaster-related Statistics, in particular with regard to preparations for an expert forum for producers and users of disaster-related statistics, held on 7, 8 and 10 June 2021.

10. The Regional Committee has developed a financial appropriation framework along with an assessment of the economic benefit of geospatial information management in Africa. The economic benefits have been represented as tangible and relatable factors for investors and government budgetary authorities in order to increase their buy-in and interest in geospatial information.

11. Under the 2030 Agenda for Sustainable Development Sub-Fund of the United Nations Trust Fund for Peace and Development, the Regional Committee, with support from ECA, carried out several capacity-building activities at the regional level, including:

a) Organizing workshops for Central and Southern African countries to raise awareness among, and enhance the capacity of, member States in those subregions in the production of geospatial information;

b) Engaging young women fellows in a research study on the current state of national data ecosystems, to assess existing strategies and the achievements of African countries in integrating statistical and geospatial information, and to share experiences and best practices in each of the five subregions;

c) Organizing an online e-learning course on evaluating the socioeconomic benefits of investing in geospatial information.

## **VI. Sixth meeting of the Regional Committee**

12. The sixth meeting of the Regional Committee was held online, in a scaled down format, from 1 to 4 December 2020. The meeting was attended by over 90 participants from 43 countries across the globe, of which 32 were from African countries that were represented by heads of national geospatial authorities or agencies. Many partners and private-sector representatives also attended.

13. The meeting provided a platform for: (a) reviewing and sharing knowledge and best practices on the development of geospatial information in Africa; (b) networking among geospatial information institutions and practitioners; (c) generating synergy at the national level to facilitate geospatial information management; and (d) building linkages among partners and other regional subcommittees with a view to effectively mitigating the impact of the COVID-19 pandemic. The meeting also provided an opportunity to review progress achieved in implementing recommendations that emerged from previous meetings of the Regional Committee.

14. Among the key tasks on the agenda of the meeting were the following:

- a) Reporting on activities undertaken by ECA, member States and working groups;
- b) Reviewing issues relating to geospatial information policy at the national and regional levels that required a decision, resolution or recommendation in respect of actions to be taken by member States, ECA, partners and other stakeholders (e.g., the use of geospatial strategies to address the COVID-19 pandemic);
- c) Receiving technical issues that had been flagged by member States and stakeholders or tabled by the secretariat of the Regional Committee;
- d) Exploring new trends through presentations on developments in the field of geospatial information (e.g. Digital Earth Africa),<sup>3</sup> with a view to increasing awareness;
- e) Focusing on a special topic relating to the geospatial response to the COVID-19 pandemic.

15. The meeting helped to raise awareness among countries of opportunities and facilities offered by pan-African institutions and partners in response to the COVID-19 pandemic that are or will be critical for supporting geospatial activities.

## VII. Priority issues and challenges

16. Participants in the sixth meeting of the Regional Committee acknowledged that solutions needed to be identified for the following issues:

- a) Numerous datasets sat hidden and unused on shelves across the continent. Member States should publish such data through, for example, the ESRI Africa Geoportal application,<sup>4</sup> thereby augmenting the accessibility of their national datasets and information products;
- b) Fundamental geospatial dataset production, updating, revision and maintenance were stalled in many African countries. Greater effort must be made to validate and submit national data on administrative units in the context of the Second Administrative Level Boundaries project, in line with the priorities of the African plan of action on global geospatial information management for the period 2016–2030;
- c) There was a lack of the financial resources that are key to building the spatial data foundation that is needed to leverage geospatial information. Each country must develop a workable financing framework and a resource mobilization strategy, while committing to dedicating more resources to the development of their national mapping authorities.

## VIII. Future plans and events

17. The seventh meeting of the Regional Committee will be organized in conjunction with the AfricaGIS 2021 conference. The meeting will be held in a hybrid online and in-person format, and is tentatively scheduled to be held from 22 to 26 November 2021 in Abidjan. At the meeting, participants will continue to review progress made in the implementation of the United Nations Global Geospatial Information Management initiative in Africa and will also provide an opportunity to share experiences and identify the ground-level geospatial infrastructure that will be required for post-COVID-19 recovery at the national level.

<sup>3</sup> Available at <https://www.digitalearthafrika.org/>.

<sup>4</sup> Available at <https://www.africageoportal.com/>.

18. The Regional Committee noted that, with the emergence of certain new trends, national mapping agencies were at a crossroads that would determine whether they would remain relevant in the evidence business. Capacity development continued to be a critical issue in Africa, and the continent continued to be left behind in that regard. It was therefore essential for stakeholders in the region to develop a comprehensive programme for modernizing geospatial activities in Africa to provide ideas, insights and strategic avenues for the cooperative management of development-related information. The programme would serve as a vehicle for mobilizing resources to strengthen the capacity of member States and for integrating geospatial and statistical information infrastructure.

## **IX. Responding to the COVID-19 global pandemic**

19. Although geospatial technology and geo-referenced data can play an essential role in the African effort to combat COVID-19, the Regional Committee has noted numerous challenges and tensions related to the use of geospatial information in response to the pandemic. The Committee has carried out a study to conceptualize and develop a continental strategy for using geospatial information to mitigate the impact of the COVID-19 pandemic. The strategy includes a road map to harness the power of geospatial information to track and monitor the transmission of the disease and to quell its impact on the continent. The African geospatial response consists of four building blocks: (a) mapping African geospatial expertise to provide a fact-based decision tool to health-care authorities, governments and frontline workers; (b) using geographic information systems to strengthen African health-care systems through the development of geospatial data infrastructure, including data warehouses; (c) building geospatial infrastructure to support the implementation of the geospatial response; and (d) putting in place mechanisms to govern the response strategies.

20. The Regional Committee calls upon member States and interested partners and entities to assist the region in determining which ground-level actions can be used by national mapping agencies, the private sector and civil society organizations to leverage geospatial information technology to respond to the COVID-19 crisis, in accordance with national circumstances.

## **X. Conclusion**

21. The global COVID-19 crisis has had a direct effect on the implementation of the Regional Committee's activities. The impact of the COVID-19 pandemic has compromised the operational capabilities of African national mapping agencies through: (a) the pressure brought on by additional demands for data; (b) the diversion of funds from mapping budgets and expenditures; and (c) the postponement or cancellation of activities related to the production and updating of fundamental and thematic datasets (e.g., surveys of the geodetic network of ground control points).

22. Notwithstanding that reality, the Regional Committee has strived to provide a forum for member State representatives to meet, discuss and collaborate on important issues relating to global geospatial information management on the continent.