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Contribution of regional committees to the global geospatial information agenda

Economic Commission for Africa Regional Committee of United Nations Global Geospatial Information Management for Africa

Eighth meeting Addis Ababa (online), 24–28 October 2022

# **United Nations Global Geospatial Information Management**

#### Report on regional activities in Africa

#### I. Introduction

- 1. The Regional Committee of United Nations Global Geospatial Information Management for Africa was created following the establishment of the United Nations Committee of Experts on Global Geospatial Information Management, which was designed to create a formal geospatial information coordination mechanism involving Member States of the United Nations as the key stakeholders.
- 2. Such initiatives have recognized the significance of geospatial information in virtually every aspect of human life, including government, commerce, academia and societal development. Geospatial information can be used to track, monitor and analyse any occurrence that has a location or temporal element. More important, it can be applied to the creation of models that help policymakers to analyse the potential consequences of various policies and events.
- 3. The work programme of the Regional Committee has to a great extent focused on promoting and facilitating the implementation of measures to address the following issues raised during the eleventh session of the Committee of Experts:
- (a) Issues in advancing policy, institutional arrangements and legal frameworks;
- (b) Technical issues in developing information and knowledge resources, applications and services that improve the availability and use of spatially enabled information for development at the national, subregional and regional levels;
- (c) Capacity-building issues, with a view to contributing to collective knowledge as a community with shared interests and concerns;





- (d) International cooperation and partnership in collaborating and coordinating activities with United Nations system entities, international and regional networks and programmes, and other development partners as an important vehicle for mobilizing financial resources and technical know-how in support of African geospatial information development.
- 4. 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 eleventh session of the Committee of Experts on Global Geospatial Information Management. The report includes actions taken in response to decisions adopted at the eleventh session, as well as other activities considered to be of interest to Member States of the United Nations and other partners.

#### II. Objectives

- 5. The main objective of the Regional Committee is to coordinate African geospatial development by consolidating previous efforts, building upon the achievements of existing initiatives, and striving to establish synergies and linkages with other networks and initiatives at the regional and global levels. The Committee will achieve this objective mainly by doing the following:
- (a) Promoting and supporting technical activities in the development of standards, interoperability and streamlined electronic service delivery in such a way that they anticipate the potential future 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 the integration of statistics with geospatial information to attain viable and meaningful outcomes, analysis and visualization of data in supporting and tracking progress towards the Sustainable Development Goals.
- 6. The Regional Committee will focus its work around the following key pillars:
- (a) African regional spatial data infrastructure, which serves as a framework for policies and instruments, to facilitate the availability of and access to spatial data through data-sharing among data producers and users;
- (b) The African Geodetic Reference Frame project, to develop a regional geodetic reference frame that is aligned with the Global Geodetic Reference Frame, which will enable the direct and seamless application of all geospatial information in Africa;
- (c) The Second Administrative Level Boundaries project, to build authoritative and accurate second administrative level boundary databases with validated data sets from ECA Member States that will be used in a plethora of applications, including census data analysis and disaster management;
- (d) The GeoNyms project, to create an African gazetteer populated with ECA Member State data and input through the United Nations Group of Experts on Geographical Names;
- (e) Fundamental geospatial data sets, 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 the application of geospatial information in the various sectors and subnational constituents of statistics;

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(g) The 2030 Agenda for Sustainable Development, to develop common tools and data for geospatial technology applications that are used to monitor and track progress towards the Sustainable Development Goals.

#### III. Integrated Geospatial Information Framework

- 7. 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. Each country is to develop a country-level action plan that details the steps that the country will take to follow up on the recommendations that are set out in the Implementation Guide, in accordance with the country's priorities and circumstances.
- 8. African countries are actively involved in incorporating the outcomes of the Sustainable Development Goal data alliance project into their country-level action plans. The project is geared towards providing the geospatial data required to support the achievement of the Sustainable Development Goals, with a data hub established in each participating country, and towards developing an action plan for each country. The understanding is that the geospatial data required can be provided only if countries can develop and implement national action plans for collecting geospatial data. The project is currently being run in 18 developing countries, including 10 African countries: Burkina Faso, Cameroon, Eswatini, Ethiopia, Morocco, Mozambique, Rwanda, Senegal, South Africa and Tunisia.
- 9. During the reporting period, technical and financial support was provided to Burkina Faso and Ethiopia to engage national stakeholders in preparing and validating their respective country-level action plans.

#### IV. Integration of geospatial and statistical information

10. The Regional Committee has administered a survey to capture information from national and regional case studies of how the Integrated Geospatial Information Framework has been adapted and implemented at the national and regional levels. The assessment report consolidates responses and highlights prevailing good practices in the implementation of the Framework, in particular regarding the response of the statistical and geospatial communities to the coronavirus disease (COVID-19) pandemic, global development agendas and national priorities.

## V. Policy and legal frameworks

- 11. Guidelines on the implementation of national spatial data infrastructure in Africa have been finalized. The guidelines have been designed to provide a framework for the step-by-step implementation of national spatial data infrastructure based on the current conditions of each African country. The document also presents an approach to seamlessly link the dimensions of the national spatial data infrastructure with the strategic pathways of the Integrated Geospatial Information Framework, which represents a natural progression from the concept of spatial data infrastructure. The document was published with the financial support of the 2030 Agenda for Sustainable Development sub-fund of the United Nations peace and development trust fund.
- 12. The Regional Committee has started initial work to develop an African geospatial development index. The index will consist of multi-composite indicators that will measure the progress made by African countries in managing their geospatial information policies and resources. A key deliverable stated in the manual for the index is to provide guidance for ECA Member States to refer to when measuring, modernizing and strengthening their national

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geospatial information management arrangements, including the corresponding systems and infrastructure. The approach that will be used to calculate the indicators is based on the Composite Indicators and Scoreboards developed by the Joint Research Centre of the European Commission. The manual will provide information on the framework of the African geospatial development index, specifically on its methodology and on the variables used in the calculations.

13. The Regional Committee has developed a financial appropriation framework that can be used to assess the economic benefits of geospatial information management in Africa. The economic benefits will be represented as tangible and relatable factors for investors and government budget authorities to increase their buy-in and interest in geospatial information.

### VI. Knowledge generation, outreach and capacitybuilding

- 14. Regarding fundamental geospatial data sets, support continued to be provided for updating and validating national databases on second administrative level boundaries in Benin, Burkina Faso, Burundi, Eswatini, Mozambique, the Niger and Togo. Second administrative level boundaries are a key instrument for linking geography and statistics. In addition, the Regional Committee, in collaboration with the Second Administrative Level Boundaries programme, organized a regional workshop on geospatial value and integration, which was held in Abidjan, Côte d'Ivoire, on 22 and 23 November 2021. The purpose of the workshop was to increase ECA Member States' usage of geospatial information technology and services to address development issues more effectively by adding value to geospatial processes and data. The workshop also emphasized the critical role of geospatial data integration.
- 15. A progress report was produced on the availability of geospatial data sets for the Sustainable Development Goals. The report assessed the efforts made at the national, regional and global levels to make fundamental geospatial data sets available that are relevant for reporting on and monitoring the Sustainable Development Goals.
- 16. In the area of geospatial services and products, an online application was developed for ECA Member States to produce and disseminate comparable spatial data. The platform can be accessed at <a href="https://ecageoinfo.maps.arcgis.com/apps/MapSeries/index.html?appid=0378b9179c164726897f448cd3">https://ecageoinfo.maps.arcgis.com/apps/MapSeries/index.html?appid=0378b9179c164726897f448cd3</a> e431ae
- 17. A study was initiated to develop an innovative method for gaining geospatial insights into changes in population movements in Africa in response to the restrictive measures that have been implemented by governments in response to the COVID-19 pandemic. Geospatial tools were used to create a space-time cube allowing spatiotemporal data to be visualized and analysed through time series analysis and integrated spatial and temporal pattern analysis of population movements.
- 18. An online course on geospatial governance and policy development was organized to build the capacity of national institutions to use geospatial information effectively in policymaking. The course provided insight into the institutional infrastructure needed to drive the successful use of geospatial information and systems. Another online course was organized to build the capacity of participants to carry out socioeconomic impact assessments using geospatial information, thereby demonstrating the value of investment in geospatial projects. Both courses were delivered in an e-learning format as

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<sup>&</sup>lt;sup>1</sup> Upon approval of registration, the course can be accessed at <a href="https://enumanation.talentlms.com/shared/start/key:LESIDNHR">https://enumanation.talentlms.com/shared/start/key:LESIDNHR</a> (English only).

prerequisites to webinars held on the respective topics during which participants were able to pose questions to the presenters.<sup>2</sup>

## VII. Partnerships and regional and international collaboration

- 19. During the reporting period, the Regional Committee provided advisory services to the Global Monitoring for Environment and Security and Africa initiative,<sup>3</sup> to the African Space Agency and to the African chapter of the Group on Earth Observations.
- 20. The Regional Committee also took part in and contributed to the following events and activities:
- (a) The eleventh session of the Committee of Experts and its side events, held online on 23, 24 and 27 August 2021, at which time Morocco was elected on behalf of the region as the Rapporteur of the Committee of Experts;
- (b) The work and meetings of the various expert groups and working groups (including the Expert Group on the Integration of Statistical and Geospatial Information, the Inter-Agency and Expert Group on Disaster-related Statistics, and a working group the use of geospatial information and services in coping with disasters);
- (c) The face-to-face meeting of the High-Level Group of the Integrated Geospatial Information Framework held in April 2022. The Regional Committee was represented by Ethiopia, Morocco and South Africa, which distributed themselves among the three working groups established to address the priority goals;
  - (d) The meeting of the expanded Bureau of the Committee of Experts.

## VIII. Seventh meeting of the Regional Committee

- 21. To pursue a robust advocacy campaign directed at African policymakers and to bolster the effort to transform geospatial information into a true enabler of sustainable development, the Executive Board organized the seventh meeting of the Regional Committee concurrently with the 2021 geographical information systems for Africa conference.
- 22. The seventh meeting was held in Côte d'Ivoire from 22 to 26 November 2021 and was attended by more than 80 participants, including delegations from 27 African countries, <sup>4</sup> along with observers from international organizations such as ECA, the African Union Commission and the secretariat of the United Nations Initiative on Global Geospatial Information Management, as well as representatives of academia, industry organizations and the private sector.
- 23. Meeting participants called upon ECA and the African Union Commission to work together to ensure that an overarching policy for geospatial information management in Africa is adopted by the Heads of State and to raise awareness among Heads of State so that they become champions of geospatial information management and technology in Africa.

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<sup>2</sup> Upon approval of registration, the course can be accessed at https://enumanation.talentlms.com/shared/start/key:LEEIDNHR (English) or https://enumanation.talentlms.com/shared/start/key:LEAIDNHR (French).

<sup>&</sup>lt;sup>3</sup> A joint initiative of the European Commission and the African Union Commission (see <a href="https://europa.eu/capacity4dev/gmes--global-monitoring-for-environment-and-security/wiki/gmes-and-africa">https://europa.eu/capacity4dev/gmes--global-monitoring-for-environment-and-security/wiki/gmes-and-africa</a>).

<sup>4</sup> Benin, Botswana, Burkina Faso, Cameroon, Comoros, Côte d'Ivoire, Democratic Republic of the Congo, Eswatini, Ethiopia, Ghana, Kenya, Liberia, Madagascar, Mali, Mauritania, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Senegal, South Africa, South Sudan, Togo, Uganda and Zambia.

24. The meeting helped to increase consensus and galvanize political will for harnessing geospatial information technology to further African development goals while assisting efforts to address certain growing global concerns.

#### IX. Perspectives, outlook and future plans

- 25. The activities in which the Regional Committee will take part during the upcoming reporting period include:
- (a) Organizing the eighth meeting of the Regional Committee of United Nations Global Geospatial Information Management for Africa in conjunction with the meeting of the Statistical Commission for Africa. The meeting, scheduled to be held in Addis Ababa from 24 to 28 October 2022, is expected to be held in a fully in-person format. Participants will continue to review progress made in implementing the United Nations Initiative on Global Geospatial Information Management in Africa. The meeting will also provide participants with an opportunity to share their experiences and identify the ground-level geospatial infrastructure that will be required for the post-COVID-19 recovery at the national level;
- (b) Modernizing national mapping agencies in response to new trends so that they remain relevant in providing authoritative evidence for use in policymaking;
- (c) Developing a comprehensive programme to modernize geospatial activities in Africa that will provide ideas, insights and strategic avenues for the cooperative management of development-related information. The programme will serve as a vehicle for mobilizing resources to strengthen the capacity of ECA Member States and to integrate geospatial and statistical information infrastructure;
- (d) Adapting to change and raising awareness of the value of geospatial information, which is key to securing the funding that is required to operate in a sustainable fashion. This aim reflects the reality that numerous geospatial initiatives have been launched in Africa over the years, but many of them have not been sustainable or have not achieved their full potential because they were not able to adapt to contemporary circumstances or did not make potential stakeholders aware of all the potential benefits, and thus failed to secure the funding and support that they needed. Without sufficient support, the Regional Committee is in danger of becoming yet another programme that promises a lot but ultimately fades away, which would undermine the significant role that geospatial information could play in achieving the African development agenda. For successful implementation, it is critical to review the current action plan of the Regional Committee, to set realistic goals, and to clearly explain to stakeholders the potential impact of geospatial information on life in Africa;
- (e) Tackling the communication, collaboration and cooperation challenges that the Regional Committee faces in harnessing the potential of the common framework and tools in the implementation of its activities.

#### X. Conclusion

26. The Regional Committee initiative was established to coordinate African geospatial development and to contribute to broader global efforts. The Committee has made significant strides in regaining momentum and demonstrating to national and international communities that it is committed to contributing to the realization of national and international development agendas.

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27. The strategic guidance that has emerged from the United Nations Initiative on Global Geospatial Information Management has been essential in ensuring that the Regional Committee continues to play a leading role in determining the way forward in the use of geospatial information in national and regional policy frameworks. The Regional Committee has also made a substantive effort to provide a forum for ECA Member State representatives to meet and to discuss and collaborate on important issues relating to global geospatial information management in Africa.

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