United Nations E/ECA/GGIM-A/10/4/Rev.1

Economic and Social Council

Distr.: General
21 September 2024

Original: English

Economic Commission for Africa
Regional Committee of United Nations Global Geospatial Information Management for Africa
Tenth meeting
Addis Ababa (hybrid), 30 October–1 November 2024

Item 3 of the provisional agenda*
Presentation of reports

Report on the activities of the Regional Committee

I. Introduction

1. The Regional Committee of United Nations Global Geospatial Information Management for Africa aims to play a leading role in setting the agenda for the development of global geospatial information and the promotion of its use in addressing critical global challenges affecting the continent. It provides a forum for liaison and coordination among States and between States and international organizations, fostering global policy development, maintaining skills, knowledge, standards and data, and building synergies that facilitate quick responses to concerns and emergencies.

2. The work programme of the Regional Committee is designed and articulated around the following objectives:

(a) To promote and support technical activities for the development of standards, interoperability and streamlined electronic services delivery, in order to anticipate the potential use of geospatial information resources on the continent;

(b) To strengthen and align the specific needs and interests of Africa with international mechanisms;

(c) To encourage and facilitate the integration of statistics with geographies to help to track progress towards the attainment of the Sustainable Development Goals.

3. Strategic guidance provided by the global community of experts is essential in implementing the work of the Regional Committee, but the Regional Committee itself is earnestly striving to mould policy suited to African issues and ensure that national bodies can address their unique concerns.

4. The Economic Commission for Africa (ECA), as the secretariat of the Regional Committee, is pleased to submit for consideration the report on the activities carried out by the Regional Committee since the ninth meeting of the Regional Committee. The report includes a description of actions taken in response to the decisions adopted at that meeting and other activities considered to be of interest to States Members of the United Nations and other partners.

* E/ECA/GGIM–A/10/1/Rev.1.

A.24-01042 (E)

The report is articulated around policy and technical issues, capacity and outreach, and international cooperation and liaison.

II. Objectives

5. The current scope of work of the Regional Committee is in line with its aim to support regional priorities and initiatives. The objective is to encourage and continue increasing the use of geospatial information resources, including data, information and services, in the decision-making processes that lead to sustainable development, economic growth, environmental protection, the exploitation and management of resources, and social progress and to make appropriate geospatial data and information available and easily accessible to the entire community of users in many ways, including by:

(a) Building and harnessing geospatial information resources, including spatial data, common standards, applications and services, to support regional initiatives and improve the availability and use of spatially enabled data for informed decision-making in the context of the development agenda of the continent;

(b) Supporting efforts to achieve the Sustainable Development Goals and tracking progress in that regard, given that more than two thirds of the associated indicators require geospatial data sets, such as remote sensing and earth observation data, that may provide the basis for evidence-based decision-making, monitoring and accountability;

(c) Assisting States and subregional and regional institutions with the development and implementation of spatial data infrastructure and integrated geospatial information frameworks at the regional and national levels;

(d) Reinforcing the link between statistics and geospatial information by mainstreaming the enabling capabilities of geospatial technology into statistical processes;[1]

(e) Providing technical support to States in using geographic information systems, remote sensing and other geoinformation solutions and tools, and in analysing and presenting socioeconomic data to facilitate their national research and policy analysis work;

(f) Advancing holistic geospatial information strategies that enable and encourage links with international programmes and initiatives, and partnerships and collaboration within the geospatial information community in Africa and globally, with a view to expanding the opportunities to access various forms of support, including data, policy advice, technical expertise, strategic guidance and funding.

III. Integrated Geospatial Information Framework

6. Although progress in developing country-level action plans on the basis of national circumstances has been slow, States are continuing to make efforts. Most countries remain in the early stages of the needs assessment and situational analysis; Cameroon, Mali, Mozambique and Rwanda, however, have achieved tangible results.

[1] The attainment of the Sustainable Development Goals depends on the introduction of new approaches to data acquisition and integration that result in the improved availability, quality, timeliness and disaggregation of data. The Regional Committee is building the Global Statistical and Geospatial Framework that will help to outline the way in which geospatial information can be used and integrated into frameworks for monitoring progress against the indicators of the Goals.

7. Cameroon has made substantive progress by completing the development of its country-level action plan and starting to build the country data hub.

8. Mali has organized several engagement workshops in order to provide individuals from various ministries, government offices, the academic community and the private sector with an opportunity to review, refine, improve and prepare the steps towards the development of the country-level action plan for the United Nations Integrated Geospatial Information Framework. During the consultative meetings, a consensus was reached on the detailed steps for achieving the short-term and long-term strategic goals on strengthening integrated geospatial information management in the country. The workshops provided an opportunity:

(a) To broaden and deepen the consultations among the national stakeholders and, as a result, collect and review relevant inputs and formulate working groups;

(b) To elaborate a detailed plan concerning stakeholders, needs, priorities, standards and interoperability;

(c) To identify geospatial data custodian institutions and fundamental data sets in the country, arrange visits to those institutions and collect additional data;

(d) To determine the necessary links between the Integrated Geospatial Information Framework and national strategies, such as those on national spatial data infrastructure and statistical development.

9. Mozambique has completed the first two components (planning and preparing, and assessing and analysing) of the approach to developing the country-level action plan elaborated by the United Nations[2] and is currently working on the design and development of the plan itself.

10. Rwanda has elaborated its strategic plan for surveying, geographic information systems and mapping for the period 2024–2029. The strategy will form the basis for the development of the country-level action plan for the integrated geospatial information framework.

11. The Regional Committee has contributed to the work of the High-level Group of the Integrated Geospatial Information Framework. In collaboration with the Regional Committee and the Statistics Division of the United Nations, ECA held a trailblazing expert consultation and meeting in Addis Ababa from 23 to 28 October 2023, the purpose of which was to engage geospatial leaders from selected States in Africa, namely Burkina Faso, Cameroon, Côte d'Ivoire, Ethiopia, Mozambique and South Africa, in discussions on enhancing their geospatial information management capacities and implementing the Framework. At the meeting, participants reviewed and refined current approaches to those efforts, emphasizing an inclusive, integrated, self-paced and country-led approach to harnessing the enabling capabilities of geospatial technology for sustainable development.

IV. Integration of geospatial and statistical information

12. The 2020 round of the population and housing census has helped to reveal a significant increase in the use of geographic coordinates during census operations in Africa. The advancement has been attributed to the integration of geography with statistics.

[2] For more information on the approach, see the website on part 3 of the Integrated Geospatial Information Framework: https://ggim.un.org/UN-IGIF/part3.cshtml.

13. In Africa, the merging of geospatial data with socioeconomic and other information has been identified as a top priority by the Regional Committee, which, accordingly, has established a working group dedicated to developing an African action plan for the integration of geospatial and statistical data. The momentum to incorporate geography into statistics is building, and it is evident that the integration will play a crucial role in shaping and informing future policies and decisions on a global scale.

14. As a result, national statistical agencies have made significant efforts to bridge the gap between statistical and geospatial data, emphasizing the importance of knowledge and the implementation of frameworks as essential components to achieving integration. Many States are using geospatial information technology for various purposes, such as demarcating enumeration areas using centroids and boundaries, determining the locations of buildings and housing units and identifying and mapping roads and other important features, including railways, bodies of water, facilities and landmarks. The results indicate the widespread use and importance of geospatial information technology in Africa for data collection and analysis and show the growing appreciation on the continent for technology and its role in driving development and progress.

15. During the ninth meeting of the Regional Committee, the executive working group on the integration of geography with statistics organized a workshop on geocoding, aimed at enhancing the skills, knowledge and collaborations of participants in order to foster the effective integration of statistical and geospatial data. The workshop was focused on the African context, but the learning and new standards and methodologies that it resulted in could be beneficial on a global scale. Showcasing success stories, establishing tools and methodologies and discussing prevalent challenges helps to ensure that geospatial and statistical data are used effectively for more informed decision-making in many fields.

16. The Regional Committee, through ECA and in partnership with the national statistical offices of Kenya, Togo and the United Kingdom of Great Britain and Northern Ireland and the United Nations Population Fund, organized several capacity-building workshops to empower participants with the skills and knowledge that are needed for the development of geocoding schemes for spatial analysis of census data in Africa. Through hands-on training, including on geographic information software tools, participants learned methods for analysing and disseminating georeferenced census data in order to identify spatial variations in relation to the indicators of the Sustainable Development Goals and other census thematic areas. The training helped to enhance the capacity of States in mapping, analysing and combining geolocation or geocoded data with other census data to achieve a more detailed analysis. In addition, participants learned about the experiences of countries in the use and exchange of data for geospatial mapping and census analysis, helping to improve their understanding of relevant methods and software. As a result, Malawi and Zimbabwe have developed their coding schemes for the spatial analysis of their census data.

V. Policy and legal frameworks

17. The Regional Committee has carried out a study on developing an overarching mechanism for holistic geospatial information governance in Africa, with the overall objective of obtaining a high-level political recognition of the importance of geospatial information in Africa.

18. The following avenues for action have been identified among the preliminary findings of the study:

(a) Definition of the vision for effective global geospatial information management in Africa with associated long-term goals;

(b) Development of a policy brief to expound the role and importance of geospatial information in sustainable development, including the 2030 Agenda for Sustainable Development and Agenda 2063: The Africa We Want, of the African Union, with demonstrated tangible evidence;

(c) Appointment of a high-level committee for geospatial information advocacy in Africa;

(d) Engagement of Heads of State in Africa, with a view to holding a special conference on establishing an intergovernmental mechanism, such as a conference of ministers on geospatial information;

(e) Financial engagement of the members of the Regional Committee.

19. It has become critical for States in Africa to draft and implement geospatial information management policies and legal frameworks that are commensurate with advances in technology, in particular with the advent of artificial intelligence, in order to enable geospatial information authorities on the continent to regulate, produce and share timely and accurate geospatial information to all users. Without those policies and frameworks, the authorities could soon become irrelevant, given that their roles could effectively be assumed by large high-technology companies, which would represent a grave breach of national sovereignty.

VI. Knowledge generation, outreach and capacity-building

20. Collaboration has continued with the Geospatial Information Section at United Nations Headquarters in order to provide assistance to States in Africa with editing, updating and validating national geodatabases on second administrative level boundaries.

21. Through ECA, the Regional Committee has finalized a compendium of data sources for monitoring the impact of climate change in Africa. The compendium highlights the need for a comprehensive and accessible set of data sources to monitor and analyse the impact of climate change on the continent and is useful for policymakers, researchers and other stakeholders. Developing the compendium involved identifying relevant data sources, harmonizing data and ensuring data accuracy and accessibility. The objective of the compendium is to provide an evidence-based approach to addressing climate change challenges in Africa and promoting sustainable development initiatives.

22. In addition, the Regional Committee has started a study on making urbanization work for Africa, with the aim of developing a regional urban spatial framework. The framework will be a guide to using geospatial data sources for mapping and monitoring urbanization on the continent, include reliable data sources and be aimed at helping urban planners and policymakers to make informed decisions about managing urban growth and development.

23. The speed and associated challenges of urbanization make sustainable and equitable urban planning in African cities a pressing need. As a result, geospatial and statistical data and techniques, such as small area estimation and spatial suitability analysis, have been used in an effort to assess the suitability of developing an urban spatial framework. The main objective of such a framework is to create economically vibrant, resilient, connected and socially equitable cities by establishing a compact, polycentric urban model that helps

to promote mixed land use, affordable housing, social equity, connectivity, mobility, resilience, economic growth and innovation. By using the power of geospatial intelligence and in-depth spatial analysis, the study provides valuable guidance for shaping the future of urban development in Africa. The resulting blueprint for urban spatial frameworks, as exemplified by the case study of Luanda, serves as a model for sustainable and inclusive urban development in African cities, with outputs and recommendations that can be replicated in other cities on the continent.

24. A study is being carried out to explore the integration of geospatial data into small area estimation in the health sector. In the case of Luanda, an empirical Bayesian kriging regression that incorporated geographical coordinates effectively accounted for spatial autocorrelation and variations in health outcomes, resulting in more precise predictions. Moreover, the inclusion of spatial covariates in the model allows for a comprehensive spatial analysis, highlighting local trends and patterns that may be missed by traditional regression models without spatial information. For researchers and policymakers tackling health issues in Africa, that methodology offers a game-changing solution.

25. Through the SDG Data Alliance, many States have taken steps to share and publish their national geospatial data sets, which are critical to tracking progress in the implementation of the 2030 Agenda. The Alliance was launched only in 2021, but it has already made great strides in understanding the needs of States and providing the resources that they lack. There remains much to be done, however, in order to support States effectively. To build capacity and capability, centres of excellence of the United Nations could be instrumental in introducing resources and initiatives. The resources would be focused on skills and expertise, rather than funding for institutions. For instance, the development of country-level action plans for the Integrated Geospatial Information Framework is an ongoing process, aimed at understanding the value proposition and messaging. Each State recognizes that learning and progress are constant, and if the momentum is sustained in the right direction, everyone will be better off in the future.

VII. Partnerships and regional and international collaboration

26. The Regional Committee has been actively involved in various initiatives, ensuring that substantive progress is being made for Africa. In particular, the Regional Committee has been involved in activities related to the SDG Data Alliance and the implementation of the Integrated Geospatial Information Framework. Weaknesses in the geospatial knowledge infrastructure, however, have been highlighted, suggesting that capacity-building efforts and improvements in that area are needed. Despite those challenges, the Regional Committee has remained dedicated to achieving its objectives.

27. The Regional Committee has participated in or contributed to the following events and activities:

(a) Thirteenth session of the Committee of Experts on Global Geospatial Information Management and its side events, which was held in New York from 31 July to 4 August 2023, in which participants broadened their networks and learned from the experience of representatives of other regions;

(b) Work and meetings of various expert groups and working groups, including the expert group on the integration of statistical and geospatial information, the working group on geospatial information and services for disasters and the Inter-Agency and Expert Group on Disaster-related Statistics;

(c) Work of the High-level Group of the Integrated Geospatial Information Framework;

(d) Work of the Subcommittee on Geodesy, with the election of Côte d'Ivoire to the international advisory committee of the United Nations Global Geodetic Centre of Excellence;

(e) The working week of the International Federation of Surveyors, held in Accra from 19 to 24 May 2024, which was based on the three themes of attracting and retaining young people, embracing geoinformatics and purposeful spatially enabled data for climate action. It was underscored at the meeting that the paths to sustainable development in Africa rely upon the effective use of innovation and technology, which, in turn, require comprehensive geodetic infrastructure and integrated geospatial information frameworks with related policies, institutional arrangements and the seamless integration of data. The Regional Committee emphasized that, by making geocoding a standardized component in data collection, the monitoring of progress towards the achievement of the Sustainable Development Goals would be greatly improved, leading to better decision-making;

(f) Meeting of the expanded Bureau of the Committee of Experts;

(g) Geospatial Week, sponsored by the International Society for Photogrammetry and Remote Sensing and held in Cairo from 2 to 7 September 2023, during which a combination of workshops was convened by some 30 working groups of the Society and which provided a platform for international scholars, graduate students, future scientists and representatives of industrial sectors to learn and share knowledge and experience of using geospatial technology for sustainable development and a better quality of life for people across the world.

28. The participation of the Regional Committee in those various programmes and initiatives helped to strengthen partnerships and inspired international collaboration for space development in Africa, in line with the implementation of the African Space Policy and Strategy.

VIII. Ninth meeting of the Regional Committee

29. The ninth meeting of the Regional Committee was held back-to-back with the thirty-first International Cartographic Conference in Cape Town, South Africa, from 14 to 18 August 2023. The meeting was attended by more than 80 participants, including members of the Regional Committee and its Executive Board, and representatives of national authorities for mapping, cartography, surveying and statistics. Experts from the academic community, research institutes, government, civil society, industry organizations and the commercial sector, and representatives of subregional and regional organizations participated in the meeting.

30. Delegates from the following 25 African countries participated in the meeting: Botswana, Burkina Faso, Burundi, Cameroon, Comoros, Congo, Côte d'Ivoire, Djibouti, Eswatini, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mali, Morocco, Mozambique, Namibia, Nigeria, Senegal, South Africa, Togo, Tunisia, Uganda and Zimbabwe.

31. Resource persons and observers from the following non-African countries were present: France, Iran (Islamic Republic of), Japan, Netherlands (Kingdom of the), Pakistan, Thailand, Türkiye, United Kingdom, United States of America and Yemen.

32. Representatives of the following organizations were also in attendance: African Association of Remote Sensing of the Environment; African Regional Institute for Geospatial Information Science and Technology; Afroleadership; AIC Mindful; Bill and Melinda Gates Foundation; Central Statistical Agency

of Ethiopia; Centre for Study, Research and Production of Information for the Environment and Sustainable Development; ConsultingWhere; Digital Earth Africa; Esri; Esri Eastern Africa; Geomatics, Topography, Engineering, Advice; Geospatial Initiatives; Geospatial World; International Cartographic Association; International Federation of Surveyors; Network of African Professionals in Geomatics; Pasco Corporation; Place; PVBLIC Foundation; Technical University of Kenya; and World Geospatial Industry Council.

33. Representatives of the following United Nations entities were in attendance: ECA; Statistics Division of the United Nations; Geospatial Information Section at United Nations Headquarters; World Food Programme; and Office of the Resident Coordinator in Nigeria.

34. In recognition of the dual role of the meeting as a parliamentary process and a forum for intellectual exchange, the programme of work included formal technical presentations and reports of selected countries on their experience, best practices and methodologies in various domains. The meeting provided, therefore, an unparalleled opportunity to advocate strongly the use of geospatial technology in policymaking in Africa.

35. Among other calls, the participants requested ECA and the Executive Board of the Regional Committee to appoint a high-level advisory committee with the responsibility for helping to steer collective, strategic thinking towards the establishment of an overarching machinery for geospatial information management in Africa, including, but not limited to, a conference of ministers, a summit of Heads of State and Government and the identification of an African geospatial champion. Participants requested the Executive Board to undertake a review of the mechanism for achieving the financial engagement of members of ECA in the Regional Committee and setting the criteria for contributions.

36. In addition, the participants urged members of ECA to embrace technological advances, such as artificial intelligence, data analytics and machine learning, to automate and enhance the process of integrating geospatial and statistical information.

37. It was agreed at the meeting that the Executive Board elected during the previous meeting, held in Addis Ababa in 2022, would remain the same for the ninth meeting. In Uganda, a new commissioner of the Uganda Survey Department had been appointed as the country's representative to the Regional Committee. The following countries comprised the Executive Board:

Chair:	South Africa
First Vice-Chair:	Cameroon
Second Vice-Chair:	Morocco
First Rapporteur:	Uganda
Second Rapporteur:	Burkina Faso
Ex officio member:	Ethiopia

IX. Perspectives, outlook and future plans

38. Africa must be positioned strategically in relation to the major geospatial information initiatives being implemented at the global level. Africa will not be able to benefit from the developments in the use of geospatial information without establishing an overarching continental mechanism, such as a geospatial conference of ministers, champions at the level of Heads of State and Government and commitment from national leaders.

39. The Regional Committee will participate in the following meetings during the upcoming reporting period:

(a) Tenth meeting of the Regional Committee, to be held in conjunction with the ninth session of the Statistical Commission for Africa. The scheduling of the meetings of the Regional Committee to coincide with other relevant geospatial events on the continent helps to increase attendance and the sharing of knowledge and experience, which results in more effective meeting inputs and outputs. Participants in the tenth meeting will have the opportunity to assess the advancements made regarding the recommendations made and action taken during previous meetings of the Regional Committee. Attendees will be able to share knowledge and best practices in the development of geospatial data in Africa, raise awareness of the benefits to be gained from using geospatial information for sustainable development and consider policies, measures and actions that could be implemented to guarantee the effective fulfilment of the United Nations Initiative on Global Geospatial Information Management in the region;

(b) The 2024 conference of the African Association of Remote Sensing of the Environment. The biennial international conferences are held across Africa and have grown in stature and size, increasingly attracting hundreds of participants from Africa and abroad, to become the premier event in remote sensing in Africa. The next conference will take place in November 2024, and the Regional Committee will be an important partner, through sponsorship grants and the organization of technical side-event workshops.

40. Considering the current trends of the geospatial information environment, including rapid technological innovation and advancements, and the pervasiveness of digital transformation, the Regional Committee intends to undertake studies in order to appraise those trends, advancements and emerging technology, such as geospatial artificial intelligence, the growing adoption of cloud-based geospatial solutions and data standards, the increasing use of geospatial information for climate change adaptation and mitigation, and geospatial and disaster risk management. It is expected that the Regional Committee will then be able to advise and inform States about the strategic pathways that can be used by national mapping agencies to continue auditing and upgrading their geospatial strategies and operations, in order to remain effective and efficient.

X. Conclusion

41. Geospatial information products, analysis and applications are essential to development in Africa at all levels. Achieving optimal results from geospatial information requires a coordinated approach and the adoption of common frameworks, in addition to standardization and compliance at every level. Such a task is beyond the capacity of any single country or region, and, therefore, it forms the basis of the work of the Regional Committee.

42. The Regional Committee is implementing a strategy to ensure that national and regional spatial data and technology are available to as many users as possible and are developed, managed, procured and coordinated in line with best practices. Efforts are ongoing to develop and manage geospatial data in a coordinated manner by establishing standards, adopting or developing best practices, forming mechanisms for supporting collaborative data initiatives, providing a unified data clearing house and facilitating the completion of continental frameworks and infrastructures. The strategy should help to expand and improve the use and awareness of geospatial technologies through increased collaborative educational opportunities and outreach. In addition, it should help to identify and secure sustainable funding sources to support national geospatial programmes and operations.