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ETHIOPIAN
COMMUNICATIONS AUTHORITY



Report on the Outcomes of the National Stakeholders Workshop for Ethiopia

Africa Broadband Mapping System (ABMS) Initiative

**Organized by: Ethiopian Communications Authority In
collaboration with: International Telecommunication Union and
European Union and ATU.**

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Contents

- 1. **Background and Rationale** 4
- 2. **National Context: Ethiopia** 4
- 3. **Workshop Objectives** 5
- 4. **Opening Ceremony**..... 7
- 5. **Workshop Participants**..... 7
- 6. **Key Outcomes of the Workshop**..... 8
 - 6.1. **Enhanced National Understanding of ABMS** 8
 - 6.2. **Alignment on National Broadband Mapping Priorities**..... 9
 - 6.3. **Strengthened Data Governance and Inter-Institutional Coordination** 9
 - 6.4. **Agreement on Data Standards and Indicators**..... 10
 - 6.5. **Capacity Building and Technical Skills Development**..... 10
 - 6.6. **Integration with National Regulatory and Development Frameworks** 10
 - 6.7. **Development of a National Implementation Roadmap** 11
 - 6.8. **Strengthened Regional and Continental Engagement** 11
- 7. **Conclusion**..... 11
- 8. **Recommendations**..... 13
 - 8.1. **Institutionalize ABMS for National Adoption** 13
 - 8.2. **Strengthen Data Governance, Standards, and Sharing** 14
 - 8.3. **Prioritize Un-served and Underserved Areas** 14
 - 8.4. **Build National Technical Capacity and Expertise**..... 14
 - 8.5. **Integrate ABMS with Regulatory and Policy Frameworks**..... 15
 - 8.6. **Strengthen Multi-Stakeholder Collaboration and Coordination** 15
 - 8.7. **Align with Regional and Continental Initiatives**..... 15
 - 8.8. **Establish Monitoring, Evaluation, and Continuous Improvement Mechanisms** 16



1. Background and Rationale

The Africa Broadband Mapping System (ABMS) is a comprehensive regional initiative led by the International Telecommunication Union and funded by the European Union. The initiative is designed to provide a robust, evidence-based framework for strengthening policymaking, regulatory oversight, and strategic investment planning across the telecommunications sector in Africa. By delivering accurate, harmonized, and geospatially referenced data on broadband infrastructure, network coverage, and service availability, ABMS enables governments, regulators, and development partners to make informed decisions aimed at expanding and improving digital connectivity.

Currently being implemented in 11 African countries, including Ethiopia, ABMS places particular emphasis on identifying un-served and underserved communities, mapping gaps in broadband coverage, and supporting targeted connectivity interventions. The initiative seeks to facilitate the efficient deployment of network infrastructure, enhance monitoring of service quality, and improve affordability, thereby accelerating progress toward universal broadband access. By providing a reliable and standardized platform for broadband mapping, ABMS also promotes regional integration, enabling comparative analysis, cross-border planning, and alignment with continental digital development goals. Ultimately, the initiative supports inclusive socio-economic growth by ensuring that all communities, regardless of location, can benefit from high-quality, accessible, and affordable broadband services.

Despite notable progress in expanding broadband infrastructure, many African countries continue to face challenges related to uneven coverage, service quality, and affordability, particularly in rural and remote areas. The ABMS initiative addresses these challenges by providing a standardized; geospatial platform that supports evidence-based decisions for policymakers, regulators, and development partners.

2. National Context: Ethiopia

Ethiopia has made substantial advances in its telecommunications sector as part of its national digital transformation agenda. Recent reforms have promoted private sector participation, increased competition, and facilitated infrastructure expansion. However, significant challenges

remain in ensuring equitable access to broadband services across all regions, particularly rural and remote areas. Disparities persist in service quality, availability, and affordability between urban and rural populations.

Within this context, the ABMS initiative provides a strategic tool to support the Ethiopian Communications Authority (ECA) in fulfilling its mandate. The system enables mapping of broadband infrastructure, identification of un-served and underserved areas, monitoring of service quality, and support for policy formulation, regulatory oversight, and investment planning. It also fosters coordination among government institutions, operators, and development partners, aligning national connectivity initiatives with regional and continental broadband frameworks.

3. Workshop Objectives

The National Stakeholders Workshop in Ethiopia was convened to support the implementation of the Africa Broadband Mapping System (ABMS) and to ensure its effective integration into national broadband planning and regulatory processes. The workshop aimed to achieve the following key objectives:

- **Introduction to ABMS and Its Methodology:** To provide Ethiopian stakeholders with a thorough understanding of the ABMS initiative, including its objectives, technical framework, data collection processes, and analytical tools. This included demonstrating how the platform visualizes broadband infrastructure, coverage, and service availability to support evidence-based decision-making.
- **Building Consensus on National Broadband Mapping Priorities:** To engage stakeholders in identifying Ethiopia's key broadband mapping priorities, defining critical datasets, agreeing on standardized indicators, and aligning data collection with national digital development goals.
- **Strengthening Institutional Capacity:** To enhance the technical skills and knowledge of participants in **broadband data collection, verification, validation, and GIS-based mapping**, enabling sustainable national ownership and management of broadband mapping processes.

- **Fostering Multi-Stakeholder Collaboration:** To promote coordinated engagement among regulators, telecommunications operators, government agencies, academia, civil society, and international development partners. This collaboration supports **data sharing, joint decision-making and harmonized approaches** to national and regional broadband planning.
- **Developing a National Implementation Roadmap:** To design a structured roadmap for ABMS operationalization in Ethiopia, detailing institutional responsibilities, phased data collection, validation processes, capacity-building initiatives, and alignment with continental and regional broadband mapping objectives.
- **Enhancing Evidence-Based Regulatory Oversight:** To explore how ABMS can support the **Ethiopian Communications Authority (ECA)** in monitoring service quality, promoting affordability, evaluating operator performance, and enforcing regulatory compliance in the telecommunications market.
- **Supporting Targeted Connectivity Interventions:** To identify unserved and underserved areas using ABMS data, enabling **strategic prioritization of network expansion**, infrastructure investments, and public-private partnership initiatives to bridge the digital divide.
- **Promoting Inclusive Digital Development:** To ensure that broadband mapping informs interventions that **support education, health, and public service connectivity**, thereby contributing to equitable digital access for all communities, including rural and remote populations.
- **Aligning with Regional and Continental Initiatives:** To harmonize Ethiopia's broadband mapping efforts with continental objectives and ITU-led regional programs, facilitating **cross-border connectivity planning, benchmarking, and best-practice sharing**.
- **Establishing Monitoring and Evaluation Frameworks:** To define mechanisms for **ongoing data updates, performance monitoring, and impact evaluation**, ensuring that ABMS continues to inform policy, regulatory, and investment decisions over time.

4. Opening Ceremony

The workshop began with opening remarks from key dignitaries representing the Ethiopian government, the Ethiopian Communications Authority (ECA), the European Union, and the International Telecommunication Union (ITU). The speakers welcomed participants and emphasized the strategic importance of broadband mapping for Ethiopia's digital development, the role of regional and international collaboration in supporting connectivity initiatives, and the government's commitment to expanding broadband access and promoting inclusive digital transformation.

The opening remarks set the tone for the workshop, highlighting the importance of multi-stakeholder engagement, evidence-based policymaking, and coordinated efforts to achieve national and regional broadband development objectives.

5. Workshop Participants

The National Stakeholders Workshop convened a **diverse and comprehensive group of participants** representing Ethiopia's digital ecosystem, ensuring broad engagement across multiple sectors. Participants included:

- **Telecommunications Regulators:** Officials from the Ethiopian Communications Authority and other regulatory bodies responsible for overseeing the telecom sector, ensuring compliance, and promoting fair competition.
- **Internet Service Providers (ISPs):** Representatives from major and emerging service providers contributing operational insights, network data, and perspectives on infrastructure deployment and service delivery.
- **Relevant Ministries and Government Agencies:** Key stakeholders from ministries responsible for digital development, education, health, infrastructure, and public service connectivity, ensuring alignment with national development priorities.
- **International Development Partners:** Representatives from organizations including the World Bank, UNHCR, and the European Union, providing technical guidance, funding support, and international best-practice perspectives.

- **Academic and Research Institutions:** Experts and researchers contributing analytical expertise, GIS mapping knowledge, and technical support for data collection, validation, and interpretation.

The participation of this diverse group of stakeholders enabled inclusive and multi-dimensional discussions that addressed regulatory frameworks, technical considerations, policy implications, and national development objectives. The workshop featured presentations by the ITU team, contributions from invited experts joining virtually from Europe and other African countries, as well as structured group discussions and panel sessions on various thematic topics. These interactions provided participants with valuable insights into the Africa Broadband Mapping System (ABMS) initiative, its methodology, and its potential applications for evidence-based policymaking and connectivity planning.

For detailed information on the workshop schedule and topics covered, please refer to the agenda annexed to this report.

This multi-stakeholder engagement was instrumental in building consensus on national broadband mapping priorities, data standards, and implementation strategies, while also strengthening collaboration and knowledge exchange among national authorities, operators, development partners, and international actors.

6. Key Outcomes of the Workshop

The National Stakeholders Workshop provided a structured platform to introduce the Africa Broadband Mapping System (ABMS) to Ethiopian stakeholders, enabling a shared understanding of its strategic value for national digital development. The workshop resulted in several significant outcomes, highlighting the role of ABMS in supporting evidence-based policymaking, regulatory oversight, and multi-stakeholder coordination.

6.1. Enhanced National Understanding of ABMS

Participants developed a comprehensive understanding of the ABMS platform, including its technical architecture, data layers, and analytical capabilities. The system was recognized as a critical decision-support tool for the Ethiopian Communications Authority (ECA), policymakers,

and other stakeholders to visualize broadband infrastructure, assess service availability, and identify connectivity gaps at both national and sub-national levels. Stakeholders acknowledged that ABMS enables more informed planning, targeted interventions, and effective monitoring of broadband expansion efforts.

6.2. Alignment on National Broadband Mapping Priorities

The workshop facilitated consensus on Ethiopia's broadband mapping priorities, emphasizing the strategic use of ABMS to:

- Identify un-served and underserved areas;
- Support the expansion of broadband connectivity to rural, remote, and disadvantaged communities;
- Inform spectrum management, infrastructure sharing, and network rollout planning; and
- Guide national programs targeting the connectivity of schools, health facilities, and other public institutions.

This agreement ensures that ABMS implementation directly contributes to Ethiopia's inclusive digital development agenda and strengthens national efforts to close connectivity gaps.

6.3. Strengthened Data Governance and Inter-Institutional Coordination

The workshop emphasized the importance of robust data governance frameworks to maximize the effectiveness of ABMS. Stakeholders agreed on the need for:

- Improved coordination among data-producing institutions;
- Clear data-sharing agreements with telecommunications operators and infrastructure providers; and
- Standardized processes for data validation, updates, and quality assurance.

The workshop reaffirmed the ECA's central role as the national focal point for broadband data coordination, regulatory oversight, and ensuring the integrity and reliability of broadband mapping data.

6.4. Agreement on Data Standards and Indicators

Participants reached consensus on the key datasets and indicators required for effective broadband mapping, including:

- National fiber backbone and transmission networks;
- Mobile network coverage (2G, 3G, 4G, and emerging 5G networks);
- Points of presence and international gateways; and
- Connectivity status of public institutions.

Stakeholders emphasized that alignment with ITU-recommended indicators and methodologies is essential to ensure data comparability at regional and continental levels, enabling Ethiopia to benchmark progress against other African countries and contribute to continental broadband initiatives.

6.5. Capacity Building and Technical Skills Development

Through technical presentations, demonstrations, and interactive sessions, the workshop significantly enhanced national capacity in:

- GIS-based broadband mapping;
- Data quality assurance and validation; and
- Interpretation of broadband maps for regulatory, policy, and investment decisions.

This capacity development ensures sustainable national ownership of the ABMS platform, enabling Ethiopian stakeholders to independently manage broadband data and use it for planning and monitoring purposes.

6.6. Integration with National Regulatory and Development Frameworks

Participants confirmed that ABMS will be integrated into key national frameworks, including:

- National broadband and digital transformation strategies;
- Universal access and service programs;
- Quality-of-service monitoring frameworks; and

- Affordability and competition assessments.

The platform was recognized as a strategic tool for ECA, supporting evidence-based regulation, transparent monitoring of sector performance, and targeted interventions to improve connectivity, affordability, and service quality across the country.

6.7. Development of a National Implementation Roadmap

A preliminary national roadmap for ABMS operationalization was developed, outlining:

- Institutional roles and responsibilities;
- Phased data collection, validation, and publication processes;
- Capacity-building initiatives; and
- A timeline for full operationalization of ABMS in Ethiopia.

This roadmap provides a practical foundation for coordinated follow-up actions and ensures that stakeholders work collaboratively to implement the initiative effectively.

6.8. Strengthened Regional and Continental Engagement

The workshop reinforced Ethiopia's commitment to contributing national data to the Africa-wide broadband mapping effort, supporting:

- Regional connectivity planning and cross-border coordination;
- Strategic development of cross-border infrastructure; and
- Benchmarking and reporting of broadband progress against other African countries.

By participating actively in this continental initiative, Ethiopia strengthens its regional role in broadband development, while ensuring national priorities are aligned with continental digital transformation goals.

7. Conclusion

The National Stakeholders Workshop on the Africa Broadband Mapping System (ABMS) initiative in Ethiopia was highly successful in achieving its stated objectives. By bringing together a diverse range of stakeholders, including regulatory authorities, internet service

providers, government agencies, academic institutions, and international development partners, the workshop fostered inclusive dialogue, multi-sectoral collaboration, and knowledge sharing that are essential for effective broadband mapping and planning.

Through presentations, interactive discussions, and panel sessions, participants gained a comprehensive understanding of the ABMS platform, its technical architecture, data layers, and analytical capabilities. Stakeholders were able to appreciate the strategic value of the system as a decision-support tool for regulatory oversight, policy formulation, infrastructure planning, and monitoring service quality and affordability. The workshop successfully facilitated alignment on national broadband mapping priorities, with a shared focus on identifying unserved and underserved areas, supporting connectivity expansion in rural and remote communities, and integrating broadband mapping into programs for schools, health facilities, and other public institutions.

The event also strengthened institutional capacity by equipping participants with the skills and knowledge required for GIS-based mapping, data quality assurance, and analytical interpretation, thereby promoting long-term national ownership and sustainability of the ABMS platform. Furthermore, it reinforced the Ethiopian Communications Authority's central role in coordinating broadband data collection, governance, and regulatory oversight, while promoting effective collaboration across government agencies, operators, and international partners.

The development of a preliminary national implementation roadmap demonstrated the workshop's practical outcomes, providing clear guidance on roles, responsibilities, phased data collection, capacity-building initiatives, and a timeline for operationalization. Participants also recognized the importance of aligning Ethiopia's broadband mapping efforts with continental initiatives, enabling the country to contribute to the Africa-wide broadband mapping effort, facilitate regional connectivity planning, and benchmark national progress against other African countries.

In summary, the workshop met and exceeded its objectives by:

- Enhancing national understanding of ABMS and its applications;
- Building consensus on national broadband priorities and standards;

- Strengthening inter-institutional coordination and data governance;
- Developing capacity and technical expertise for sustainable implementation; and
- Establishing a clear roadmap for operationalization, aligned with regional and continental objectives.

The workshop represents a significant milestone for Ethiopia’s digital transformation agenda. It not only laid the foundation for the effective implementation of ABMS but also reinforced Ethiopia’s commitment to evidence-based policymaking, inclusive broadband expansion, and regional collaboration, contributing to the broader goal of achieving universal, affordable, and high-quality broadband access across the country.

8. Recommendations

Drawing on the discussions, technical presentations, and outcomes of the National Stakeholders Workshop, the following recommendations are proposed to guide the implementation, operationalization, and sustainability of the Africa Broadband Mapping System (ABMS) in Ethiopia, and to maximize its impact for national development, regulatory oversight, and regional connectivity initiatives:

8.1. Institutionalize ABMS for National Adoption

- Integrate ABMS as a core component of Ethiopia’s national broadband and digital transformation frameworks, ensuring its use as a formal decision-support tool for planning, regulation, and investment prioritization.
- Designate the Ethiopian Communications Authority (ECA) as the primary coordinating institution for ABMS, responsible for overseeing data governance, inter-agency coordination, and alignment with national digital policy objectives.
- Establish formal governance mechanisms that define the roles and responsibilities of all relevant stakeholders, including ministries, regulators, operators, and development partners, to ensure sustained operational ownership of the platform.

8.2. Strengthen Data Governance, Standards, and Sharing

- Develop robust data governance frameworks, including policies, standards, and procedures for collection, verification, validation, and maintenance of broadband infrastructure and service data.
- Establish formal data-sharing agreements with telecommunications operators, internet service providers, infrastructure owners, and other relevant institutions to ensure timely and reliable data availability.
- Implement processes for continuous data quality assurance, standardization, and harmonization, aligned with ITU-recommended indicators and methodologies, enabling national, regional, and continental comparability.

8.3. Prioritize Un-served and Underserved Areas

- Utilize ABMS data to identify un-served, underserved, and disadvantaged communities, including rural, remote, and peri-urban areas, to guide targeted policy and investment interventions.
- Support strategic deployment of broadband infrastructure, leveraging both public and private sector resources, including public-private partnerships, to accelerate equitable access to high-quality connectivity.
- Incorporate broadband expansion strategies for schools, health facilities, government institutions, and other public services, ensuring that critical public infrastructure is connected efficiently.

8.4. Build National Technical Capacity and Expertise

- Strengthen national capacities in GIS-based mapping, broadband data analytics, and technical interpretation to ensure that ECA and other stakeholders can effectively use ABMS for evidence-based decision-making.
- Conduct continuous capacity-building programs targeting regulatory officials, technical staff, and data managers to ensure sustainable institutional ownership and technical independence.
- Promote knowledge transfer from ITU and regional partners to develop local expertise in emerging technologies, mapping methodologies, and digital policy analysis.

8.5. Integrate ABMS with Regulatory and Policy Frameworks

- Leverage ABMS to support evidence-based regulatory oversight, including monitoring service quality, enforcing standards, promoting competition, and assessing affordability across different market segments.
- Integrate broadband mapping insights into national digital transformation strategies, universal service programs, quality-of-service monitoring frameworks, and sector-specific digital initiatives.
- Use ABMS outputs to inform spectrum management, infrastructure sharing policies, and investment planning, ensuring that resources are efficiently allocated to maximize coverage and service quality.

8.6. Strengthen Multi-Stakeholder Collaboration and Coordination

- Foster ongoing collaboration among regulators, operators, government agencies, academia, civil society, and international partners to ensure that ABMS informs integrated national and regional broadband strategies.
- Promote joint planning, data-sharing, and cross-sectoral coordination, facilitating harmonized interventions that maximize impact on broadband access, quality, and affordability.
- Encourage stakeholder engagement in policy dialogues and technical consultations to continuously refine mapping priorities and methodologies.

8.7. Align with Regional and Continental Initiatives

- Contribute national broadband data to the Africa-wide broadband mapping initiative, ensuring Ethiopia's alignment with continental digital development objectives.
- Facilitate regional connectivity planning, cross-border infrastructure coordination, and benchmarking of national progress relative to other African countries.
- Ensure that ABMS outputs support Ethiopia's participation in ITU-led initiatives, regional regulatory harmonization efforts, and continental digital transformation frameworks.

8.8. Establish Monitoring, Evaluation, and Continuous Improvement Mechanisms

- Develop a comprehensive monitoring and evaluation framework for ABMS to track progress in data collection, quality, coverage expansion, and sectoral impact.
- Periodically review mapping methodologies, indicators, and data collection tools to incorporate emerging technologies, best practices, and international standards.
- Use evaluation outcomes to refine policy interventions, regulatory strategies, and investment priorities, ensuring ABMS remains a dynamic tool for supporting Ethiopia's digital transformation goals.