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GENDER AND DIGITAL INCLUSION RESEARCH

Bridging the Digital Gender Gap in Somalia:

Assessment, Initiatives, and Recommendations

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Purpose: *This document examines the digital gender divide in Somalia, assesses the National Communications Authorities (NCA) existing programs to promote female participation in information and communication technology (ICT), identifies the structural barriers that women and girls face in accessing digital technologies, and sets out regulatory direction of the NCA's gender and digital inclusion agenda.*

1. Introduction

Digital inclusion is the ability of all members of society to access and benefit from digital technologies; it is a prerequisite for equitable economic development. Globally, a persistent gender gap in digital access, skills, and participation means that women disproportionately miss out on the economic, social, and civic opportunities that the digital economy provides.

In Somalia, this gap is particularly acute. A combination of low female literacy, economic exclusion, social norms, and limited infrastructure coverage leaves Somali women and girls facing compounding barriers to digital participation. At the same time, Somalia's rapid expansion of mobile connectivity and the establishment of a functioning regulatory authority within the NCA create a genuine opportunity to build inclusion into the digital infrastructure from the outset.

Since 2018, the NCA has recognized gender and digital inclusion as a core policy priority, delivering training programs, hosting national events, and forging partnerships with national and international organizations. This document reviews these efforts, situates them within Somalia's broader digital gender divide, and identifies the measures needed to accelerate progress.

2. Somalia's Digital Gender Divide: The Current Picture

2.1 Key Statistics

The following table presents key indicators that frame the digital gender divide in Somalia.

Indicator	Estimate	Notes
Somalia female population (est.)	~49.3% ¹	Approximately half of total population
Mobile penetration (national)	~9.91 Million ²	Significantly lower among women, particularly in rural areas
Female literacy rate	~45.3% ³	Among the lowest globally; major barrier to digital access
Girls enrolled in secondary school	~25% ³	Gender parity in education remains a critical challenge
Employment rate of women	~12% ³	Female participation in the tech sector is extremely limited
Women employed as ICT professional	~0.6% ³	
NCA ICT training programs delivered (since 2018)	35+ ¹	Targeted programs specifically for girls and young women

¹ Source: Population-Estimation Survey National Statistics Bureau

² Source: National Communications Authority

³ Source: Integrated Household Budget Survey SIHBS 2022 National Statistics Bureau

Note: Somalia-specific gender-disaggregated data on digital access remains limited. Strengthening the evidence base through a dedicated national survey is one of the priority recommendations of this paper.

2.2 The Significance of the Gender Gap

The digital gender gap is not merely a matter of access to technology. It compounds and reinforces existing inequalities. Women without digital access are excluded from mobile financial services, online markets, e-government services, and remote employment opportunities. In a country where digital mobile money systems like Hormuud's EVC Plus are integral to daily economic life, digital exclusion is economic exclusion.

For girls, the gap has long-term consequences for their educational and career trajectories. Without exposure to digital tools and ICT skills in school, girls are less likely to pursue STEM fields, technology careers, or entrepreneurship, leading to a persistent underrepresentation of women in Somalia's growing technology sector.

Closing the gap is therefore not simply a matter of equity; it is a precondition for Somalia to achieve the full economic potential of its digital transformation.

3. Structural Barriers to Female Digital Participation

The following barriers have been identified through analysis of Somalia's social, economic, and infrastructural context, complemented by findings from the NCA's Girls in ICT Day 2025 Conference and comparable research from the region.

Barrier	Analysis
Literacy and education	Low female literacy rates limit the ability to access, use, and benefit from digital technologies. Without foundational literacy, digital tools remain inaccessible to a large portion of Somali women.
Affordability	Mobile devices and data costs represent a disproportionate share of household income for women, who typically have lower economic independence than men.
Social and cultural norms	In many communities, girls and women face social restrictions on device ownership and internet use. Family-level gatekeeping limits independent digital access.
Geographic remoteness	Rural and nomadic communities, where women are disproportionately represented, have limited infrastructure coverage and fewer in-person digital training opportunities.
Lack of role models and mentorship	The absence of visible female ICT professionals reduces aspirational pathways for girls considering technology careers.
Curriculum and content	Educational content and digital platforms are creating cultural and linguistic barriers to engagement.

These barriers do not operate in isolation. They interact and reinforce one another. A girl who does not attend secondary school (education barrier) is less likely to own a device (affordability and social norm barriers), less likely to encounter digital skills training (geographic and structural barriers), and less likely to see herself as a potential technology professional (role model barrier). Effective policy must address multiple barriers simultaneously.

4. NCA Initiatives on Gender and Digital Inclusion

The NCA has been active in this space since 2018. The following table summarizes the principal initiatives undertaken to date.

Initiative	Description
Girls in ICT Day (annual)	Annual national event celebrating the ITU's global Girls in ICT Day, held each April. The 2025 conference was co-hosted with NTTI and SIMAD iLab and featured government, development partners, academia, and the private sector.
National ICT training programs	Since 2018, the NCA has delivered more than 35 targeted ICT training programs for girls and young women across Somalia.
National innovation competitions	Competitive events where Somali girls showcase technology innovations, providing recognition, confidence-building, and exposure to the wider tech ecosystem.
Stakeholder partnerships	Ongoing partnerships with diverse stakeholders to deliver technical assistance and capacity building.
Policy advocacy	The NCA advocates for inclusive ICT policies at the national level and promotes gender mainstreaming within the communications regulatory framework.

4.1 Girls in ICT Day 2025 Conference

The most recent major initiative is the Girls in ICT Day 2025 Conference, held in Mogadishu on 24 April 2025. Co-hosted with the National Telecommunications and Technology Institute (NTTI) and SIMAD iLab, the conference brought together government officials, development partners, academia, telecom operators, internet service providers, technology companies, and civil society organizations.

The 2025 conference featured three panel sessions on STEM education, local tech leadership, and a competitive innovation segment in which Somali girls presented technology projects. International speakers included representatives from UNDP Somalia, the East African Communications Organization (EACO), and the Internet Society, each emphasizing the importance of sustained investment in STEM education and mentorship.

The NCA Director General, Mr Mustafa Yassin Sheikh, noted that since 2018 the NCA has delivered more than 35 targeted ICT training programs for girls and has celebrated Girls in ICT Day annually to promote awareness and create opportunities. The Minister of Communications

and Technology, H.E. Mohamed Adan Moallim Ali, reaffirmed the government's commitment to ensuring that every girl has the opportunity to learn, create, and lead in the ICT sector.

4.2 Assessment of NCA's Current Efforts

The NCA's initiatives represent a meaningful foundation. However, the following observations should inform the next phase of the gender and digital inclusion agenda:

- **Reach:** Events centered in Mogadishu have limited direct impact on girls in regional and rural areas, where barriers to digital inclusion are greatest.
- **Evidence base:** The absence of robust gender-disaggregated data on digital access makes it difficult to measure the impact of existing programs or set evidence-based targets.
- **Mainstreaming:** Gender and digital inclusion activities currently operate largely as standalone programs rather than being mainstreamed into NCA's core regulatory functions, such as licensing, spectrum allocation, and universal service.
- **Sustainability:** Program delivery has relied heavily on international partnerships. The NCA is seeking to strengthen long-term sustainability by actively engaging funding partners while also embedding inclusion objectives within its institutional mandate and budget framework.

5. International Experience and Lessons for Somalia

Several comparable countries and regional bodies offer lessons that are relevant to Somalia's context.

5.1 Rwanda

Rwanda has achieved significant progress in narrowing the digital gender gap through a combination of mandatory ICT education in schools, targeted subsidies for female entrepreneurs accessing digital financial services, and a regulatory requirement that universal service funds allocate resources specifically to female digital access. Rwanda's experience demonstrates that regulatory tools not just awareness campaigns are necessary to drive structural change.

5.2 Kenya

Kenya's Ajira Digital Program has trained hundreds of thousands of young people, with deliberate targeting of young women in rural areas, in digital skills for the online work economy. The program combines digital literacy with access to freelance platforms and is delivered through decentralized digital hubs⁴. Somalia could consider a comparable model leveraging existing NCA and operator infrastructure.

5.3 East African Community (EAC)

EAC, of which Somalia is a member, has developed regional frameworks for gender mainstreaming in telecommunications regulation. The NCA should actively engage with EAC's gender working groups to align Somalia's approach with regional standards and to access technical assistance.

5.4 ITU Girls in ICT Initiative

⁴ Source: Ministry of Information, Communication, and Digital Economy (MICDE),

The ITU's global Girls in ICT initiative⁵, which provides the framework for the NCA's annual event, offers access to toolkits, data, and a global network of practitioners working on female digital inclusion. The NCA should deepen its engagement with the ITU beyond the annual event, including participation in research, capacity-building programs, and indicator frameworks.

6. Recommendations

The following recommendations are structured using the SMART framework (Specific, Measurable, Achievable, Relevant, and Time-bound) and organized by implementation timeframe (short-, medium-, and long-term). The NCA will collaborate with relevant government institutions, operators, and development partners to ensure measurable and time-bound implementation outcomes.

Recommendation	Objective	Expected Impact	Timeframe
Conduct national ICT access and usage assessment	To generate reliable, disaggregated ICT access data by gender, age, and location	Improved evidence-based policymaking and targeted ICT interventions	Short-term (0–12 months)
Expand ICT awareness and outreach programs	To increase ICT awareness beyond major urban centers	Reduced urban–rural digital divide	Short-term (0–12 months)
Strengthen ICT data collection and monitoring systems	To establish a standardized national ICT data framework	Improved data quality, transparency, and decision-making	Short-term (0–12 months)
Promote participation in ICT initiatives	To increase inclusion of women, youth, and underserved groups in ICT programs	Enhanced digital inclusion and ICT skills uptake	Short-term (0–12 months)
Develop a national digital inclusion strategy framework	To establish a comprehensive policy framework addressing digital inclusion	Stronger coordination of inclusion policies and programs	Medium-term (1–3 years)
Integrate inclusion into regulatory and licensing frameworks	To mainstream inclusion within ICT regulation and licensing	More equitable access and regulatory support for inclusion	Medium-term (1–3 years)
Strengthen cross-sector collaboration for digital skills development	To coordinate ICT skills development across sectors	Improved national digital skills capacity	Medium-term (1–3 years)
Promote knowledge-sharing and professional	To enhance ICT sector learning and capacity	Increased institutional and workforce ICT	Medium-term (1–3 years)

⁵ Source: International Telecommunications Union

development initiatives	building	competency	
Reduce disparities in access to digital services	To close the digital divide across regions and population groups	More equitable national digital access	Long-term (3+ years)
Increase participation in the ICT sector across all groups	To ensure inclusive participation in the ICT workforce and ecosystem	Greater diversity and inclusivity in the ICT sector	Long-term (3+ years)
Establish institutional mechanisms for inclusion	To sustain long-term focus on digital inclusion policies	Improved policy continuity and accountability	Long-term (3+ years)
Implement regular ICT inclusion reporting systems	To monitor progress and improve transparency over time	Enhanced accountability and evidence-based governance	Long-term (3+ years)

Cross-cutting recommendation: Gender mainstreaming in regulation

Across all timeframes, the NCA shall systematically integrate gender considerations into its core regulatory functions. This means, as a minimum:

- Working with licensed operators to report gender-disaggregated subscriber and coverage data;
- Including gender impact assessments in major regulatory decisions, including spectrum assignments and universal service fund allocation;
- Ensuring that NCA's own workforce reflects gender diversity at all levels, including senior management.

7. Conclusion

Somalia's digital transformation is underway. Mobile connectivity is expanding, a regulatory framework is in place, and the ICT sector is growing. But digital growth that excludes half the population is not digital transformation, it is digital stratification.

The NCA has demonstrated a genuine commitment to gender and digital inclusion through its Girls in ICT Day program, its training initiatives, and its partnerships with national and international stakeholders. The challenge now is to move from programs at the margins to policy at the center, embedding gender inclusion into regulation, resource allocation, and institutional design.

The recommendations in this document are intended to support that shift. They reflect both the urgency of the challenge, as Somalia's digital gender gap is among the most significant in the region, and the genuine opportunity that the NCA's regulatory mandate and growing institutional capacity provide.

Somalia's digital transformation will not be complete until every girl has the opportunity to learn,

create, and lead in the ICT sector. This document is a contribution toward making that a measurable, achievable goal.