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NATIONAL RESEARCH NEEDS & PRIORITIES ASSESSMENT REPORT 2025

This Assessment was conducted by the Research & Development Department
Ministry of Investment & Industrial Development

NATIONAL RESEARCH NEEDS & PRIORITIES ASSESSMENT

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PREAMBLE

The National Research Needs and Priorities Assessment Report 2025 represents a landmark effort by the Government of Somaliland to systematically identify and organize the research agenda necessary for sustainable national development. This initiative, led by the Ministry of Investment and Industrial Development (MoIID) through its Research and Development Department, is a response to the growing recognition that research and innovation must be at the heart of policymaking, economic transformation, and global competitiveness.

For too long, research efforts in Somaliland have been fragmented, underfunded, and insufficiently aligned with national strategic goals. Recognizing these challenges, the Ministry undertook this comprehensive assessment to map sectoral research gaps, evaluate institutional capacities, and understand the systemic barriers hindering research growth. The assessment is built upon extensive consultations with government agencies, universities, private sector actors, and development partners, ensuring that the priorities identified are nationally owned and broadly representative.

This report is not merely an academic exercise. It is a call to action—setting forth a coherent framework to drive research planning, capacity building, investment mobilization, and knowledge-driven policy formulation across Somaliland. By systematically addressing research needs in sectors such as agriculture, fisheries, energy, industrialization, governance, and technology, Somaliland is laying the foundation for a knowledge economy that can withstand global challenges and harness emerging opportunities.

Key findings highlight urgent needs such as establishing centralized digital research repositories, creating national research funding mechanism, building innovation hubs, modernizing data infrastructure, and fostering stronger partnerships between government, academia, and the private sector. In addition, the report identifies a critical need to institutionalize research governance frameworks, support youth researchers, and invest in cutting-edge technologies like AI and data analytics.
The Government of Somaliland, through this assessment, reiterates its commitment to championing a culture of research, innovation, and evidence-based development. This report provides not only a roadmap for immediate interventions but also a long-term vision for embedding research excellence at the core of the nation's progress.

The Ministry calls upon all stakeholders—government agencies, academic institutions, private sector leaders, and international partners—to align their efforts with the priorities outlined in this report. Through collective action and sustained commitment, Somaliland can unlock the transformative power of research to secure a prosperous, resilient, and self-reliant future.

Executive Summary

1.1 Introduction

In pursuit of sustainable economic transformation and evidence-driven development, the Ministry of Investment and Industrial Development (MoIID), in collaboration with the Somaliland Commission for Higher Education (SHEC), organized the **National Research Initiation Conference (NRIC)** on March 10, 2025. This landmark gathering brought together government officials, academic leaders, private sector stakeholders, and development partners to formally launch the development of Somaliland's **National Research Priorities (NRP) 2025–2030** framework.

The conference marked a pivotal shift toward institutionalizing research as a cornerstone of national policy, planning, and industrial strategy. Stakeholders underscored the urgent need for a **centralized national research system**—one that integrates academia, government, and the private sector—to facilitate targeted, high-impact research and investment interventions.

This report, titled **Research Needs & Priorities Assessment Report 2025**, serves as the foundational instrument for identifying key sectoral research gaps, assessing systemic challenges in the national research landscape, and mapping a path toward strategic alignment between Somaliland's development priorities and its emerging knowledge economy.

1.2 Purpose of the Report

The primary objective of this report is to assess national research capacity and define priority research areas that will enhance Somaliland's economic resilience, investment readiness, and institutional innovation. Specifically, the report aims to:

- Identify the most pressing development research gaps and opportunities across sectors.
- Evaluate the capabilities, tools, and limitations of the current research environment.
- Inform the design of the **National Research Priorities (NRP) 2025–2030**.
- Recommend policies and structures for sustainable research governance and investment attraction.

1.3 Key Findings

a. Research Capacity and Participation
The study revealed that while 41% of respondents had 2–5 years of research experience and 47% had conducted 1–3 projects, there remains a significant gap in advanced technical skills and access to robust data analysis platforms beyond SPSS.

b. Priority Research Areas
Survey participants identified the following as the top three research needs:

- **Agriculture and Food Security (25%)**
- **Investment and Industrialization (22%)**
- **Fisheries and Blue Economy (11%)**

These areas reflect critical concerns linked to food sovereignty, economic diversification, and resource optimization.

c. Institutional and Technical Barriers
The leading challenges to conducting research include:

- **Lack of funding and financial support (29%)**
- **Weak infrastructure (22%)**
- **Limited access to quality data (13%)**

Furthermore, only 43.8% of stakeholders regularly share research with policymakers, indicating a need for structured research-to-policy channels.

d. Investment-Oriented Research Trends
Respondents prioritized research into **industrialization and manufacturing (44%)** and **agricultural productivity (41%)** as central to Somaliland's investment agenda.

e. Planned Research for 2025
Upcoming research focuses primarily on **agribusiness expansion (56%)**, **fisheries innovation (31%)**, and **mining and export development (12%)**, aligning with national economic transformation goals.

f. Policy and Governance Engagement
Ministers and sectoral leaders at NRIC emphasized the importance of legal frameworks, centralized research databases, and public-private-academic collaboration to attract investment and ensure long-term impact.

1.4 Recommendations

1. **Establish a National Research Fund** to support priority-aligned, grant-based research.
2. **Develop a centralized digital research repository** to improve access and usability of data across institutions.
3. **Strengthen university-government-industry linkages** through policy-backed incentives and collaborative frameworks.
4. **Invest in infrastructure and digital tools**, including labs, cloud databases, and advanced analytics platforms.
5. **Expand capacity-building programs** focusing on data science, AI for research, proposal writing, and cross-sectoral innovation.
6. **Institutionalize the National Research Coordination Forum (NRCF)** to oversee implementation and policy alignment.

1.5 Conclusion

This assessment reaffirms the urgent need for structured, collaborative, and policy-driven research mechanisms in Somaliland. As outlined during the NRIC and in the national development agenda, a resilient, inclusive, and knowledge-driven economy is within reach—provided that research becomes a strategic pillar in decision-making, investment promotion, and industrial policy formulation.

The findings and recommendations herein form the groundwork for launching a national research framework that is **not only reactive to current needs but proactive in shaping Somaliland's future**.

2. Introduction

2.1 Background and Context

Somaliland is at a critical juncture in its pursuit of socio-economic transformation. With increasing national ambitions around industrialization, food security, natural resource management, and investment facilitation, the role of **research and evidence-based policymaking** has become indispensable. Recognizing this, the Ministry of Investment and Industrial Development (MoIID), through its Research and Development Department, initiated a comprehensive process to **define Somaliland's National Research Priorities (NRP) for the period 2025–2030**.

This effort culminated in the **National Research Initiation Conference (NRIC)** held in March 2025, convening multi-stakeholder groups from government institutions, academia, private sector entities, and international partners. The conference laid the groundwork for a coordinated and forward-looking research strategy that would serve both as a knowledge base and as a planning tool for the government's development and investment policies.

The research priorities assessment seeks to align academic inquiry with national strategic goals by identifying key gaps, facilitating collaborative mechanisms, and recommending policy instruments for effective implementation.

2.2 Objectives of the Research

The primary objectives of this national assessment are to:

1. **Identify critical research gaps** that hinder development and investment across strategic sectors such as agriculture, industry, fisheries, energy, and governance.
2. **Evaluate institutional and infrastructural capacities** across Somaliland's research ecosystem.
3. **Establish priority areas for investment-related and development research** that can inform policy and practice between 2025 and 2030.
4. **Lay the foundation for the National Research Priorities Framework (NRP 2025–2030)** by presenting empirical findings to guide future coordination, funding, and research execution.
5. **Support the institutionalization of a centralized, digital, and collaborative research infrastructure** that is aligned with national goals and international standards.

2.3 Scope and Limitations

Scope:
This assessment captures insights from 32 key stakeholders across diverse sectors including government ministries, higher education institutions, research organizations, private enterprises, and development agencies. It focuses on:

- Research needs in **investment, food security, energy, blue economy, and industrialization**;
- Barriers such as funding constraints, data availability, and research infrastructure;

- Institutional practices in data collection, sharing, and stakeholder engagement;
- Aspirations for establishing a **National Research Coordination Forum (NRCF)** and digital repository.

Limitations:

- The scope is primarily exploratory and diagnostic; it does not present sectoral deep-dives.
- The geographic sample is largely urban, potentially underrepresenting rural-based research needs.
- Data was self-reported, introducing potential subjectivity or bias in some responses.
- The study did not cover longitudinal performance or impact tracking of previous national research agendas.

2.4 Methodology Overview

The assessment adopted a **mixed-methods research design**, combining qualitative and quantitative approaches:

- **Survey Instrument:** A structured questionnaire was disseminated among 32 institutional representatives, covering research experience, sectoral engagement, challenges, tools, and data practices.
- **Event-Based Consultations:** Key insights were drawn from discussions held during the NRIC 2025, where ministers, directors, and academic leaders deliberated on sectoral priorities, legal frameworks, and institutional reforms.
- **Document Analysis:** The assessment integrated findings from related strategic documents, including:
  - The *Proposal for Developing the National Research Priorities 2025–2030*,
  - The *RD Assessment March 10 Report*,
  - The *National Investment Promotion Strategy*.
- **Statistical Tools Used:** SPSS (66%) and Excel (28%) were identified as the primary tools for data analysis among respondents, indicating a preference for accessible statistical platforms with basic functionality.

3. Research Framework

3.1 Conceptual/Theoretical Framework

The research is guided by a **systems-thinking approach** to national development, whereby research is positioned as both a **strategic input** and a **governance tool** for economic planning, investment policy, and industrial growth. This conceptual framework is underpinned by the **Knowledge-to-Action (KTA) Model**, which emphasizes the iterative process of generating evidence, translating it into policy, and institutionalizing learning for sustainable outcomes.

At its core, the framework recognizes **research as a catalyst for inclusive development**, in which academia, government, and the private sector operate as co-producers of knowledge and solutions. The theoretical model is built around five interrelated dimensions:

1. **Knowledge Generation** – Strengthening institutions and human capital to produce relevant research.
2. **Evidence Utilization** – Promoting the integration of research findings into investment, policy, and planning processes.
3. **Collaborative Governance** – Building platforms such as the National Research Coordination Forum (NRCF) to enable joint research planning and implementation.
4. **Innovation and Resilience** – Supporting sectoral innovation (agriculture, energy, fisheries, etc.) through adaptive, evidence-based solutions.
5. **Data Ecosystem Development** – Establishing digital repositories, methodological standards, and capacity for large-scale data management.

3.2 Research Questions

This national assessment was guided by the following core research questions:

1. **What are the most critical research gaps hindering economic development, investment attraction, and industrialization in Somaliland?**
2. **What are the institutional, financial, and technological barriers to effective research implementation and impact?**
3. **Which sectors are most in need of targeted research and innovation interventions between 2025 and 2030?**
4. **How do different stakeholders (government, academia, private sector) currently engage in research, and what improvements are necessary for better coordination?**
5. **What tools, data platforms, and analytical methods are available or lacking in Somaliland's research environment?**
6. **What mechanisms can enhance research dissemination, policy integration, and sustainability of research funding and infrastructure?**

4. Methodology

4.1 Research Design

This research adopts a **mixed-methods exploratory design**, combining both qualitative and quantitative approaches to capture a comprehensive understanding of Somaliland's research needs, institutional capacities, and sectoral priorities. The design is structured to assess existing gaps, collect stakeholder perspectives, and generate actionable insights that inform the formulation of the **National Research Priorities (NRP) 2025–2030**.

The rationale for using a mixed-methods design is threefold:

- To **triangulate findings** across multiple sources and perspectives;
- To **validate sectoral priorities** through statistical aggregation;
- To **elicit expert insights** from key institutional actors for deeper policy alignment.

This approach enabled a balanced examination of both numerical trends and thematic narratives across different stakeholder groups and sectors.

4.2 Data Collection Methods

A variety of primary and secondary data collection tools were used:

Primary Data Collection

1. **Structured Questionnaire Survey**:
   - A detailed survey instrument was disseminated to 32 institutional representatives including government ministries, academic institutions, research centers, and private sector actors.
   - The questionnaire covered areas such as research experience, priority sectors, infrastructural needs, barriers to research, and data practices.
2. **Key Informant Discussions (KIDs)**:
   - Conducted during the **National Research Initiation Conference (NRIC) 2025**, where ministers, university leaders, and private sector representatives articulated challenges and opportunities in aligning research with economic planning.

4.3 Sampling Techniques

The study utilized a **purposive sampling strategy** aimed at ensuring representation from key stakeholder categories. Criteria for inclusion were:

- Direct involvement in policy, research, or investment facilitation;
- Institutional relevance to Somaliland's development sectors;
- Geographic and sectoral diversity.

Sample Composition:

- Government Ministries (e.g., Investment, Energy, Fisheries, Education);
- Higher Education Institutions (e.g., Amoud University, University of Burao);
- Private Sector & Investment Firms;
- Research and Development Units within public agencies.

4.4 Data Analysis Approach

Quantitative Data from the questionnaire was analyzed using:

- **SPSS (66%)** – the most widely used software by respondents;
- **Excel (28%)** – utilized for basic statistical computation and tabulation;
- **Descriptive statistics** were generated to determine distributions, frequencies, and cross-sectoral trends (e.g., percentage of institutions prioritizing agriculture vs. industry).

Qualitative Data (from open-ended responses and KIDs) were analyzed using **thematic content analysis**:

- Responses were coded into thematic categories such as: *Barriers to Research*, *Sectoral Gaps*, *Data Infrastructure*, and *Collaboration Needs*.
- Recurrent themes were identified and linked to broader institutional and policy contexts, providing the foundation for strategic recommendations.

5. Contextual Analysis

5.1 Literature Review

Research and innovation are universally recognized as vital enablers of sustainable development and economic resilience. Globally, national research strategies have increasingly focused on aligning R&D outputs with development objectives such as food security, climate adaptation, digital transformation, and industrialization. For instance, **Kenya's National Research Priorities (2018–2022)** and **Tanzania's Research Agenda (2021/22–2025/26)** have emphasized stakeholder-driven frameworks, investment-backed research, and sector-specific innovation.

In the context of Somaliland, few coordinated efforts have been made historically to structure research investment and governance. However, the growing recognition of evidence-based planning is now reflected in several strategic efforts:

- The **Proposal for Developing the National Research Priorities (NRP) 2025–2030)** highlighted the lack of a national research funding mechanism, limited institutional collaboration, and weak data infrastructure as barriers to progress.
- Previous research frameworks (2018–2023) focused on sectoral verticals such as ICT, agriculture, energy, and health, but lacked implementation structure and centralized coordination.

5.2 Policy and Program Context

Somaliland's research and development environment must be understood within the broader policy frameworks shaping investment, industrial growth, and higher education.

Key Policy Milestones:

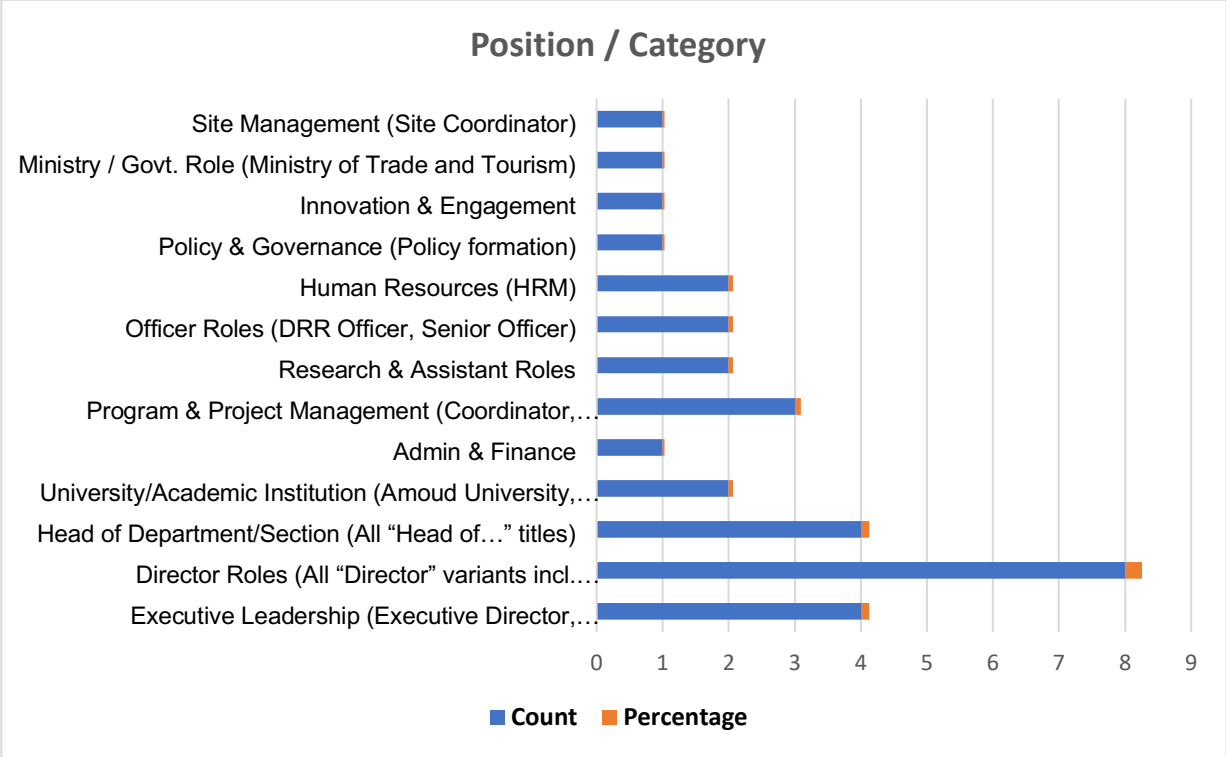
1. **National Investment Promotion Strategy (NIPS)**:
   Articulates a roadmap for enterprise-led economic development and positions research as a critical enabler for sectoral transformation. It identifies agriculture, energy,

fisheries, and ICT as investment priority sectors.

2. **National Development Plan (NDP9)**: Emphasizes job creation, economic diversification, and sustainable infrastructure—all of which depend on research-informed policymaking.
3. **Higher Education Reform Agenda**: Led by the Somaliland Commission for Higher Education, this initiative promotes stronger university-industry linkages and prioritizes the creation of a **National Knowledge Center and Research Portal** (scheduled for launch in 2025) to centralize academic and sectoral research outputs.
4. **Ministry-Led Sectoral Plans**: Several ministries (Energy, Fisheries, Investment) are initiating legal and institutional reforms to establish data-sharing platforms and promote transparent research practices.

5.3 Stakeholder Mapping and Roles

A successful national research framework is fundamentally dependent on a well-coordinated, multi-actor system that brings together leadership, expertise, institutional capacity, and implementation capability. This assessment categorized stakeholders by their organizational roles and institutional affiliations to determine their respective contributions to the research ecosystem in Somaliland. The diversity of positions represented in the assessment indicates both the breadth of engagement and the systemic potential for coordination, if properly structured.



Graph 1: Respondent Distribution by Position or Category

The table and chart illustrate the **broad and inclusive stakeholder representation** engaged in the Research Needs and Priorities Assessment.
The largest group of respondents (**25%**) were from **Director roles**, reflecting the critical engagement of mid-to-senior management technical leadership across government, academia, and private sector institutions.

Executive leadership (Presidents, Executive Directors, Deputy Directors) accounted for **12.5%** of respondents, highlighting the strategic alignment between national research planning and top-level decision-making structures.

Respondents from **heads of departments/sections** and **program/project management** roles collectively formed a significant share, demonstrating strong participation from operational managers who oversee day-to-day research, projects, and service delivery processes.

Institutional support roles, including **human resources**, **finance**, and **officer-level technical staff**, also participated, ensuring that operational realities and organizational needs were captured in the assessment. Notably, representation was also secured from **research assistants**, **academic institutions** (such as Hargeisa University, Amoud University and the University of Burao), **policy experts**, and **innovation engagement officers**, reinforcing the diverse expertise integrated into the consultation process.

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The stakeholders who participated in the research assessment and outlines their strategic roles within the future National Research Priorities (NRP) Framework:

Stakeholder Category	Examples	Strategic Role in the Research Ecosystem
Executive Leadership	Executive Directors, Deputy Ministers, Board Advisors	Provide national vision, institutional legitimacy, and high-level commitment for research-driven development and policy integration.
Director Roles	Directors of Research, Compliance, Data, or Policy	Lead technical oversight of institutional research strategies, ensure compliance with ethical standards, and coordinate cross-departmental research initiatives.
Heads of Academic Departments	Departmental Heads at Universities	Oversee curriculum development, guide faculty-led research agendas, and align academic inquiry with national development priorities.
Universities/Academic Institutions	Hargeisa University, Amoud University, University of Burao	Serve as research engines for knowledge generation, methodological innovation, data analysis, and capacity building of early-career researchers.
Admin & Finance Directors	Institutional Financial Officers	Ensure proper allocation and oversight of research funding, manage grant compliance, and promote accountability in resource utilization.
Program & Project Management	MEAL Officers, Project Coordinators	Translate research into development interventions, design project-level studies, monitor performance indicators, and apply findings to programmatic decision-making.
Research & Assistant Roles	Junior Researchers, Research Assistants	Provide technical and logistical support in data collection, analysis, and reporting; represent the next generation of national research capacity.
Officer Roles	Senior Officers, DRR Officers	Act as technical focal points in specific sectors (e.g., disaster response, infrastructure), contributing field-level knowledge to applied research.
Human Resources Managers	HR Directors	Facilitate institutional staffing, professional development for researchers, and incentives for performance and retention in public research institutions.
Policy & Governance Experts	Policy Advisors, Legislative Analysts	Link research outputs with public policy formulation; shape evidence-based legal frameworks and regulatory instruments.
Innovation & Engagement Experts	Innovation Managers, Private Sector Champions	Bridge academic research with market solutions; support commercialization, co-creation, and knowledge translation into the private sector.
Ministry and Government Officials	Ministry of Trade and Tourism, Energy, Investment	Lead public-sector research integration, oversee regulatory reform, and align research with national development strategies and planning cycles.
Site Management Roles	Site Coordinators, Regional Officers	Act as on-the-ground facilitators for research fieldwork, data verification, community engagement, and logistics coordination in decentralized regions.

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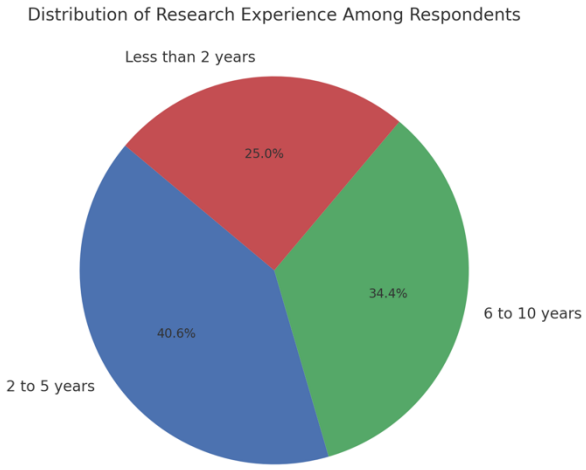
This multi-layered stakeholder map highlights the importance of building a **coordinated research governance structure** that allows each category to contribute effectively and meaningfully to the national research agenda. The **Ministry of Investment and Industrial Development (MoIID)**, through its Research and Development Department, will act as the principal convener to harmonize these actors within the framework of the **National Research Coordination Forum (NRCF)** and the implementation of the **National Research Priorities 2025–2030**.

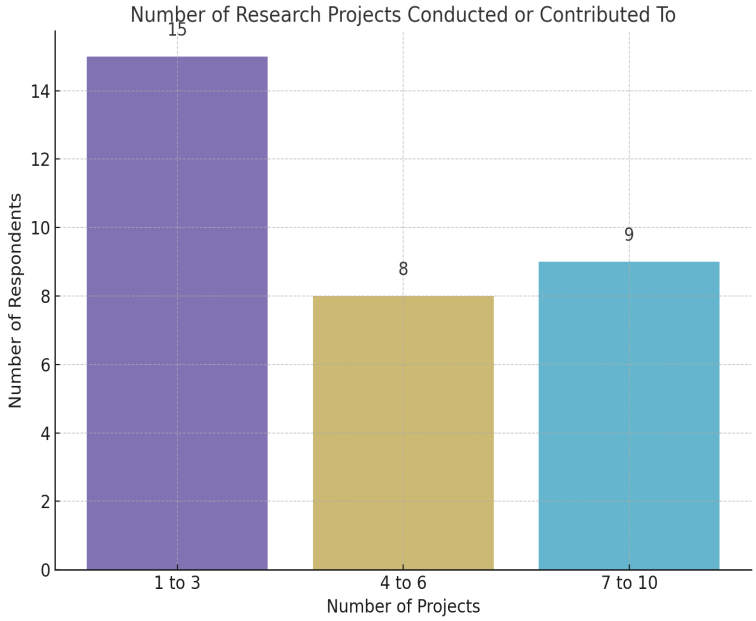
Graph 2: Distribution of Research Experience Among Respondents

This pie chart illustrates the range of research experience among participants in the national assessment. A significant proportion of respondents (41%) have between 2 to 5 years of research experience, followed by 34% with 6 to 10 years, and 25% with less than 2 years. These findings suggest a moderately experienced research community, with a balanced mix of early-career and mid-level professionals contributing to Somaliland's research ecosystem.



Graph 3: Number of Research Projects Conducted or Contributed To

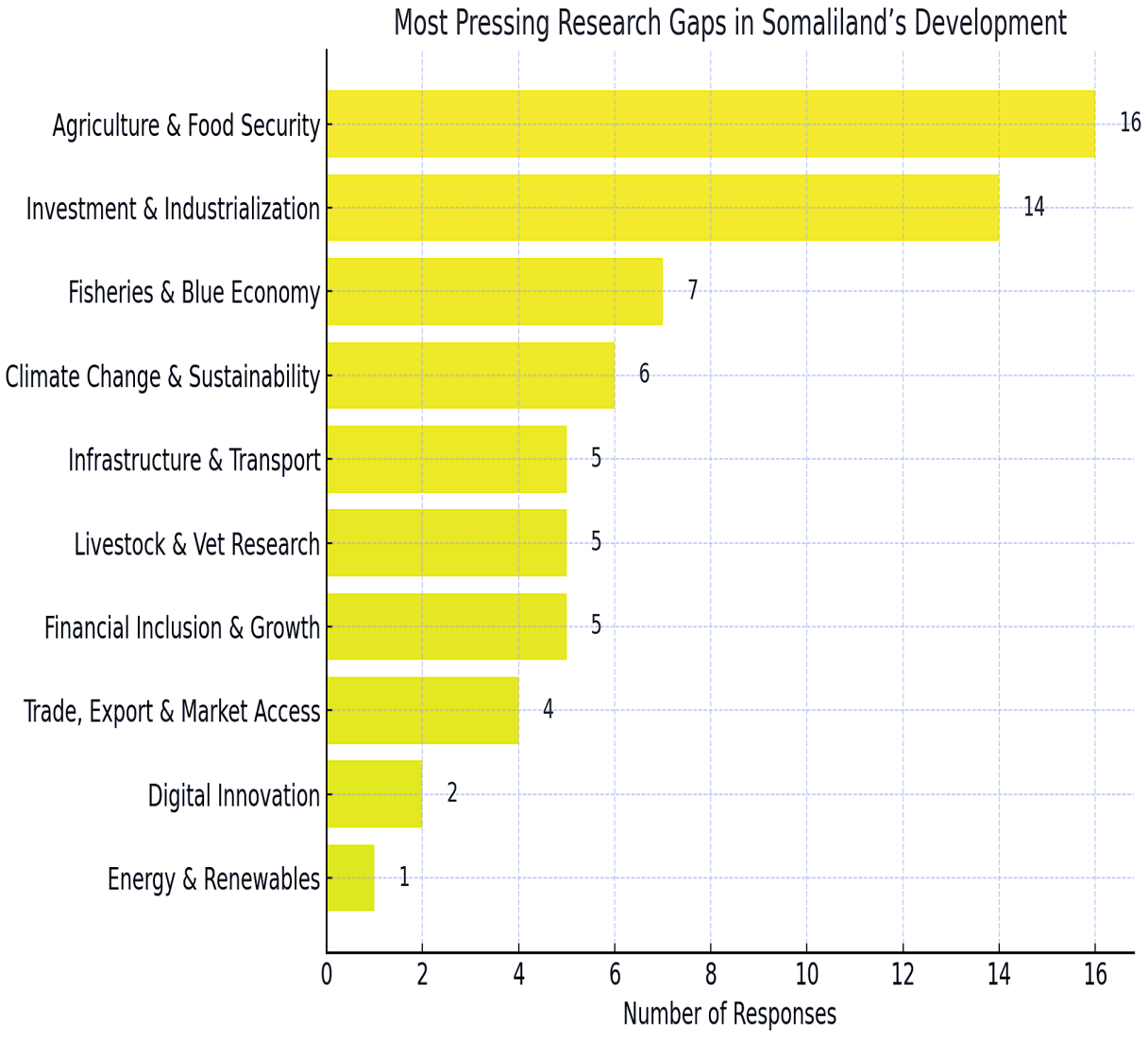
This bar chart shows the distribution of respondents based on their involvement in research projects. The majority (47%) have contributed to 1 to 3 projects, indicating an active but early-stage engagement in research. A further 28% have contributed to 7 to 10 projects, while 25% fall in the mid-range of 4 to 6 projects. This demonstrates a developing research community with a solid foundation for scaling future contributions, particularly as national frameworks like the NRP are institutionalized.

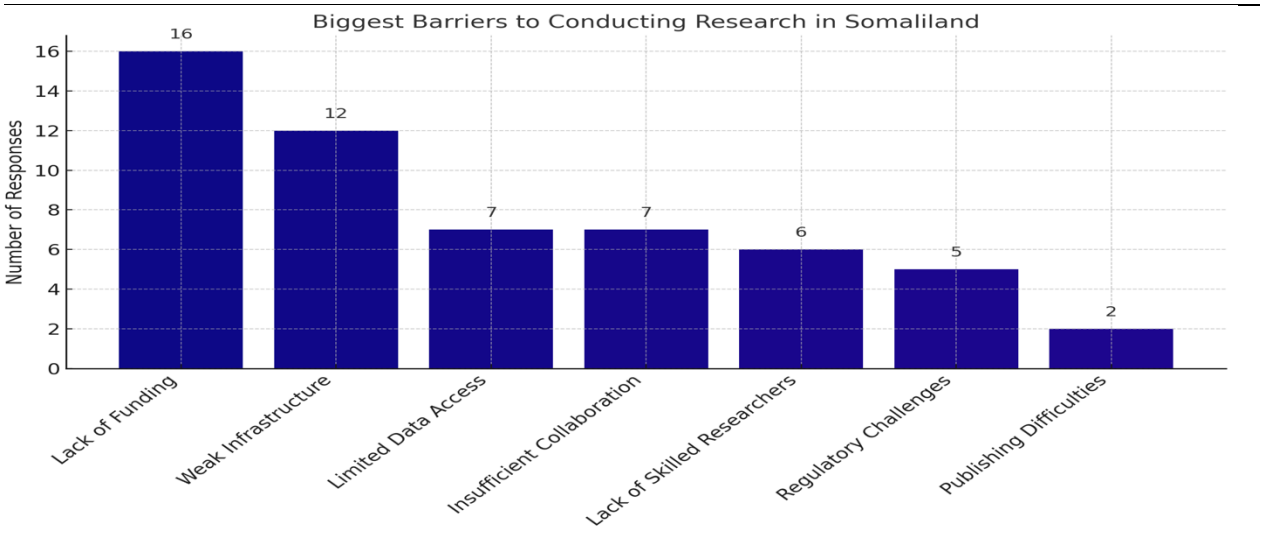


Graph 4: Research priorities and challenges: Most Pressing Research Gaps in Somaliland's Development

This horizontal bar chart highlights the top research gaps as perceived by stakeholders in Somaliland. The most urgent area is **Agriculture and Food Security**, identified by 25% of responses, followed closely by **Investment and Industrialization** at 22%. Other significant gaps include **Fisheries and Blue Economy**, **Climate Change**, and **Infrastructure & Transport**. Lower-priority but emerging areas include **Digital Innovation** and **Energy & Renewable Resources**.

The diversity of responses demonstrates a broad recognition of sectoral needs and provides a clear agenda for targeted research investments under the National Research Priorities framework.



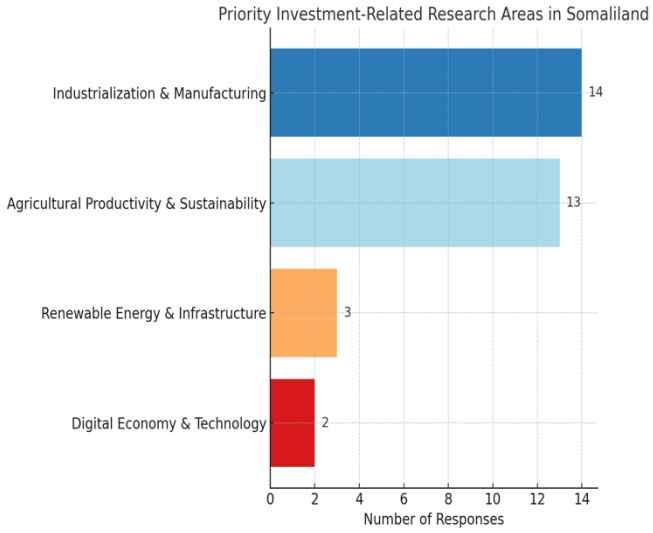


Graph 5: Biggest Barriers to Conducting Research in Somaliland

This bar chart presents the most significant challenges that hinder research productivity and effectiveness in Somaliland. The leading barrier, reported by 29% of respondents, is **lack of funding and financial support**, followed by **weak research infrastructure** (22%). Other notable constraints include **limited access to quality data** and **insufficient collaboration**, each cited by 13% of respondents. Lower, but still relevant, barriers include the **lack of skilled researchers**, **regulatory constraints**, and difficulties in **publishing and disseminating findings**.

Graph 6: Priority Investment-Related Research Areas in Somaliland

This horizontal bar chart outlines the investment-related research areas identified as top priorities by stakeholders. **Industrialization and Manufacturing** ranks highest (44%), closely followed by **Agricultural Productivity and Sustainability** (41%). **Renewable Energy and Infrastructure** and the **Digital Economy** received lower prioritization, though they remain important for long-term economic diversification and modernization.

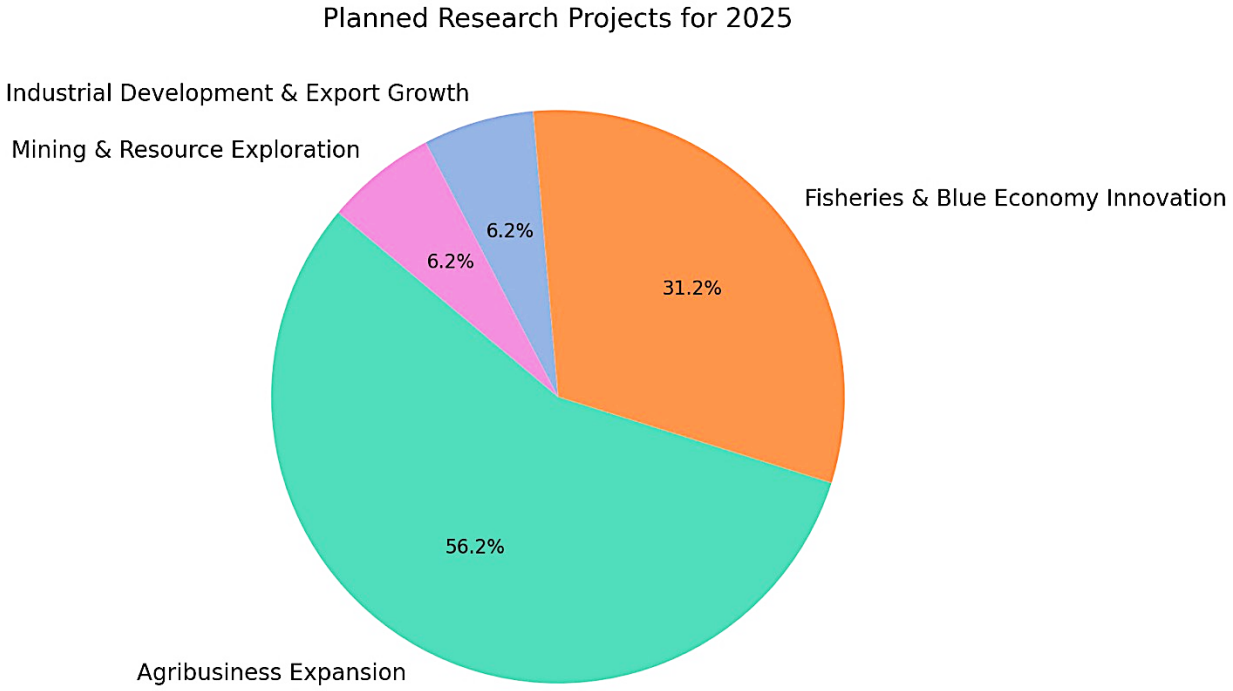


These results align closely with Somaliland's national development goals, highlighting a clear strategic direction for research funding, institutional focus, and policy support in driving industrial transformation and agricultural resilience.

Graph 7: Planned Research Projects for 2025

This pie chart illustrates the distribution of research projects planned for 2025 across key development sectors. **Agribusiness Expansion** dominates the agenda, accounting for 56% of planned projects, followed by **Fisheries and Blue Economy Innovation** at 31%. **Industrial Development and Export Growth** and **Mining & Resource Exploration** each represent 6%, indicating emerging but comparatively smaller research focus areas.

The data signals a strong national drive toward agricultural transformation and marine sector innovation, critical for strengthening Somaliland's economic base and export potential.



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Section 1: What research is needed to address challenges in the fisheries & marine resources sector?

Research Area	Focus Themes
1. Marine Resource Exploration & Utilization	a. Identification and classification of marine resources in Somaliland's waters.
	b. Research on different types of marine creatures and fish stock assessments.
	c. Understanding the potential of the fisheries sector for sustainable utilization.
2. Fisheries Sector Performance & Development	d. Evaluation of the current performance of the fishery sector in Somaliland.
	e. Research on fisheries infrastructure, value chain development, and industry expansion.
	f. Identifying the required investment, funding, and equipment needed for sustainable growth.
3. Conservation & Environmental Protection	g. Studies on illegal fishing and marine pollution.
	h. Research on conservation strategies and environmental sustainability.
	i. The impact of climate change on fish populations and marine ecosystems.
4. Capacity Building & Technology Adoption	j. Assessment of the lack of fishing tools, equipment, and training in the sector.
	k. Research on innovative approaches to fisheries and the blue economy.
	l. Scientific studies to enhance knowledge and academic understanding of marine resources.
5. Infrastructure & Policy Development	m. Research on transportation and infrastructure needed to support fisheries.
	n. Sustainable fisheries management strategies and policy recommendations.
	o. Action research to improve governance and regulations in the sector.

In summary the finding shows to address the challenges in Somaliland's fisheries and marine resources sector, comprehensive research is needed across several key areas. This includes the exploration and classification of marine resources, fish stock assessments, and understanding their sustainable use. Evaluating the performance of the fisheries sector is vital, focusing on infrastructure, value chains, and investment needs. Conservation research should address illegal fishing, pollution, and the effects of climate change on marine ecosystems. Building sector capacity through training, modern equipment, and innovative technologies is also essential. Additionally, studies on infrastructure development, policy formulation, and governance improvements are crucial for promoting a sustainable and resilient fisheries industry.

Section 2: How can research improve Somaliland's energy and renewable resources sector?

Table: Research Contributions to Strengthen Somaliland's Energy and Renewable Resources Sector

Research Focus Area	Key Contributions
Policy Development and Climate Change	Enables the formulation of evidence-based policies to address climate change and support the transition to renewable energy sources.
Budget Allocation and Academic Utilization	Guides financial prioritization and leverages academic expertise to identify critical areas for investment in the energy sector.
Identifying Gaps and Solutions	Detects deficiencies in current energy systems and supports targeted interventions to strengthen renewable energy adoption.
Capacity Building and Data Collection	Enhances technical expertise, promotes institutional development, and improves access to accurate energy data for planning and investment.
Specialization and Investment	Supports the development of a skilled energy workforce, increasing Somaliland's attractiveness to domestic and foreign energy investors.
Renewable Energy Benefits and Environment	Demonstrates environmental and economic advantages of renewable energy sources, such as solar and wind, for public and policy engagement.
Sustainability and Economic Growth	Promotes the use of sustainable energy systems that contribute to economic diversification and reduce reliance on non-renewable resources.
Strategic Planning and Infrastructure Redesign	Informs the restructuring of energy systems and supports the development of frameworks for new and improved infrastructure investments.
Renewable Energy Potential and Resource Mapping	Provides vital information on Somaliland's solar and wind capacity to guide national energy planning and project development.
Knowledge Contribution and Guidelines	Facilitates the dissemination of best practices and enhances stakeholder understanding of renewable energy systems, regulations, and technologies.

Summary: The above research areas represent the foundational elements required to transform Somaliland's energy sector. They emphasize that research is not only a tool for policy formulation but also a **driver of investment readiness, sustainability, and long-term infrastructure planning**. When systematically implemented, these research priorities will support Somaliland's transition toward an inclusive, resilient, and low-carbon energy economy.

Section 3: What role should research play in enhancing food security in Somaliland?

Table: Research Contributions to Enhance Food Security in Somaliland

Research Role Area	Key Contributions
Defining Risks and Nutritional Information	Identify health and dietary risks; assess nutritional values to support better public health and food consumption patterns.
Exploring Food Security	Analyze vulnerabilities in the food system and inform long-term strategies for food system resilience.
Providing Solutions to Enhance Food Security	Detect gaps in food supply chains and recommend actions to ensure food affordability and availability.
Establishing Research Centers	Establish specialized centers to research sustainable agricultural techniques, including solar-based agriculture.
Supporting Agricultural Development and Policy	Inform national policy and budgeting for agriculture with data on production, investments, and food security goals.
Raw Material Availability and Agricultural Development	Ensure access to essential agricultural raw materials; improve output quality and supply continuity.
Effective Strategies for Food Security	Evaluate and propose strategies for increasing food access, reducing hunger, and promoting nutrition security.
Improving Productivity	Boost productivity through innovative and modern farming techniques tailored to local contexts.
Building Knowledge and Awareness	Disseminate agricultural knowledge to farmers and stakeholders to promote investment and sustainability.
Improving Agricultural Productivity and Water Management	Enhance productivity and water use through research in irrigation, drought resistance, and climate-smart farming.
Climate-Resilient Agriculture and Livestock Management	Develop adaptive strategies to minimize climate change impacts on crops and livestock systems.
Self-Sustainability and Cost Management	Promote cost-effective, self-sustaining farming systems by leveraging local technologies and inputs.
Clarifying Best Practices for Seeds and Soil	Identify optimal seeds and soils to increase crop yields and farming efficiency in diverse environments.

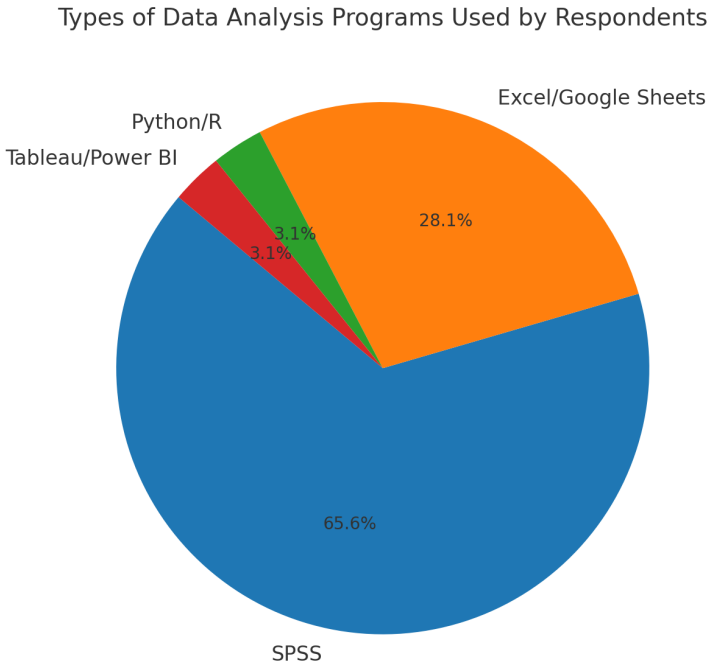
Summary

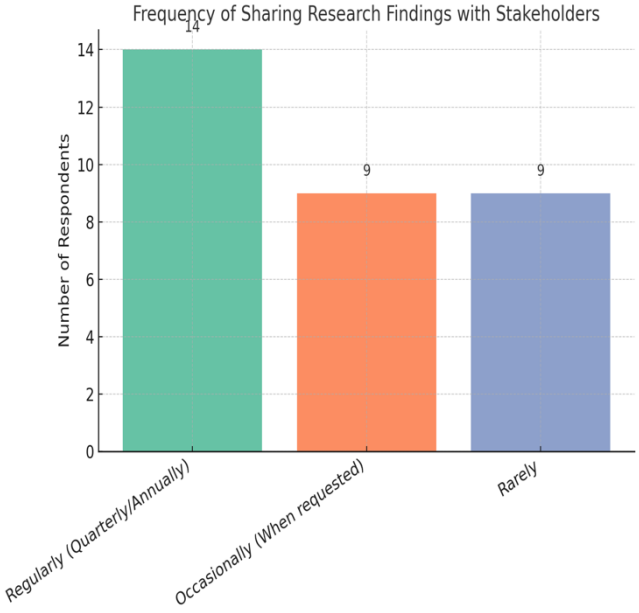
This table synthesizes critical research roles that contribute to building a resilient, sustainable, and self-sufficient food system in Somaliland. Research in these areas not only supports the formulation of national food security strategies but also enables innovation in agricultural practices, climate resilience, water use efficiency, and cost reduction—all of which are vital for ensuring long-term food availability and rural development.

Graph 8: Types of Data Analysis Programs Used by Respondents

This pie chart displays the distribution of data analysis tools used among survey respondents. **SPSS** dominates usage at **66%**, followed by **Excel/Google Sheets** at **28%**. Advanced analytics platforms such as **Python/R** and **Tableau/Power BI** are significantly underutilized, each with only **3%** adoption.

This trend suggests a heavy reliance on traditional statistical packages, highlighting a major opportunity for capacity-building programs to introduce modern, scalable, and more powerful analytics tools into Somaliland's research community.





Graph 9: Frequency of Sharing Research Findings with Stakeholders

This bar chart illustrates how often research findings are shared with stakeholders. **43.8%** of respondents report sharing research findings **regularly** (quarterly or annually), while **28.1%** share **occasionally** when requested, and another **28.1%** share **rarely**.

The results reveal a significant opportunity to enhance stakeholder engagement and knowledge dissemination practices across research institutions in Somaliland, particularly through structured and consistent reporting mechanisms.

Graph 10: Challenges in Accessing Reliable Data for Research

The dominant barrier, reported by **75%** of respondents, is the **lack of updated datasets**. This finding underscores a major systemic weakness: the absence of continuous, structured data collection and management in Somaliland's government institutions and research bodies. Without access to current datasets, researchers are limited in their ability to produce timely, relevant analyses to support policy development, investment strategies, and sectoral planning.

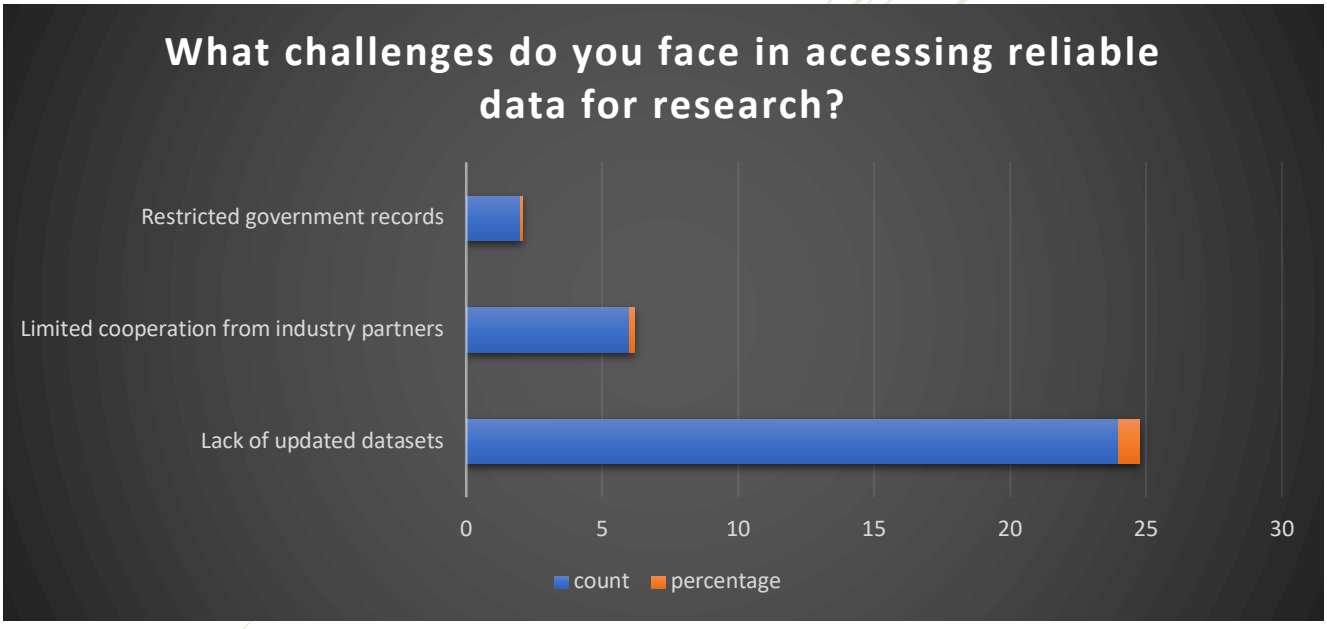
Limited cooperation from industry partners was identified by **18.8%** of respondents. This points to the fragmentation between private sector actors and the research community, suggesting a need for stronger frameworks that encourage data sharing while protecting business interests and intellectual property.

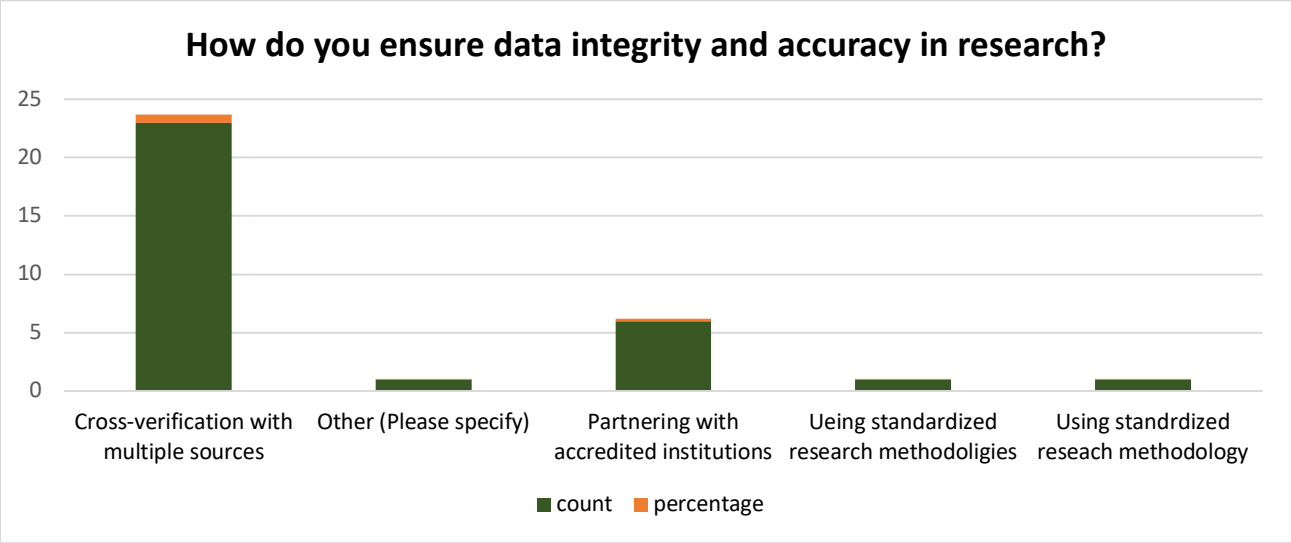
A smaller proportion, **6.2%**, cited **restricted access to government records** as a barrier. While less common compared to other challenges, this issue indicates that bureaucratic opacity and unclear data governance policies still hinder research in specific fields, particularly in sectors involving sensitive or regulatory data (e.g., energy, mining, security).

These results highlight an urgent need for Somaliland to prioritize:

- The creation of a **national, centralized digital data repository**;
- The modernization of public data management systems;
- The development of **clear data-sharing policies and legal frameworks** to enable secure, ethical access to information for research purposes.

Without addressing these challenges, the broader vision for a knowledge-driven economy will be severely constrained.





Graph 11: Methods to Ensure Data Integrity and Accuracy in Research

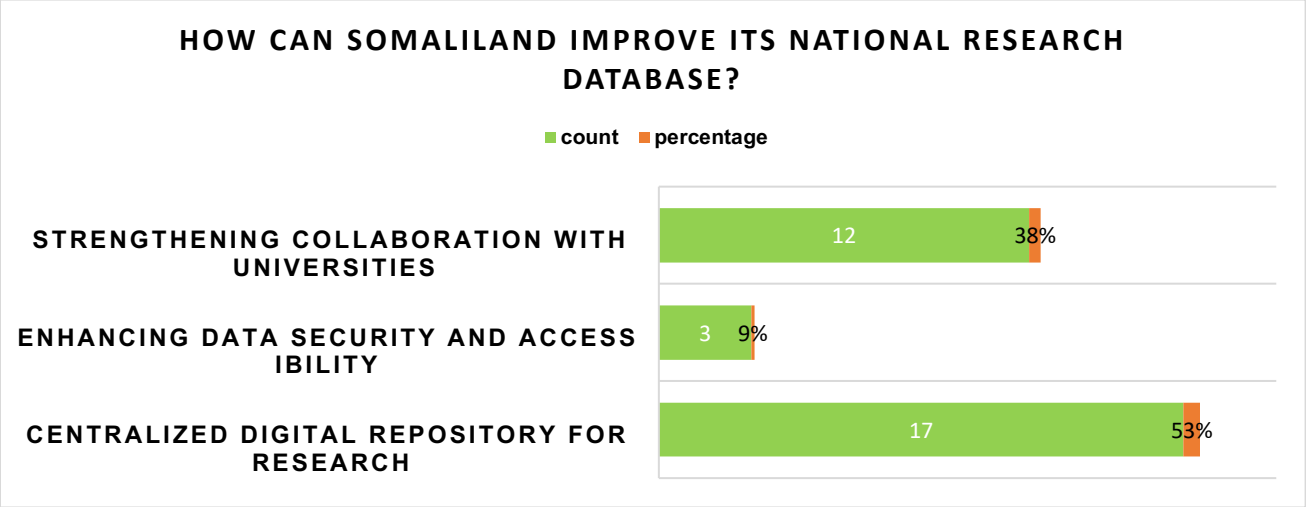
The findings demonstrate that **cross-verification with multiple sources** is by far the most widely practiced method for ensuring data integrity, reported by **72%** of respondents. This reflects a strong emphasis on triangulation and the use of comparative validation across independent data sets—a positive indication of grassroots quality control even in the absence of fully institutionalized research standards.

Partnering with accredited institutions accounts for **19%** of practices, highlighting that while collaboration with formal, certified research bodies exists, it remains underutilized. This indicates an opportunity to expand strategic partnerships with universities, think tanks, and international agencies to strengthen research rigor and credibility.

The comparatively low use of **standardized research methodologies** (only **6%**) points to a significant structural gap. Standardization is critical for ensuring consistency, comparability, and reproducibility of research findings. The reliance on ad hoc practices rather than formal methods suggests that national training initiatives and institutional policy reforms are needed to promote the widespread adoption of research standards.

Lastly, **"Other" methods** were mentioned by only a small proportion of respondents (**3%**), further emphasizing that the national research system presently lacks diversity in methodological approaches.

Overall, while individual efforts at maintaining quality are evident, the results call for a **more systematic, institutionalized approach** to data integrity—centered on standardization, professional development, and stronger institutional collaboration.



Graph 12: Ways to Improve Somaliland's National Research Database

The majority of respondents (**53%**) identified the need for a **centralized digital repository for research** as the most critical improvement. This indicates a strong demand for an integrated, easily accessible national platform where datasets, research reports, and publications can be systematically collected, curated, and shared. Such a platform would address the longstanding challenges of data fragmentation and limited institutional memory across Somaliland's ministries, universities, and development organizations.

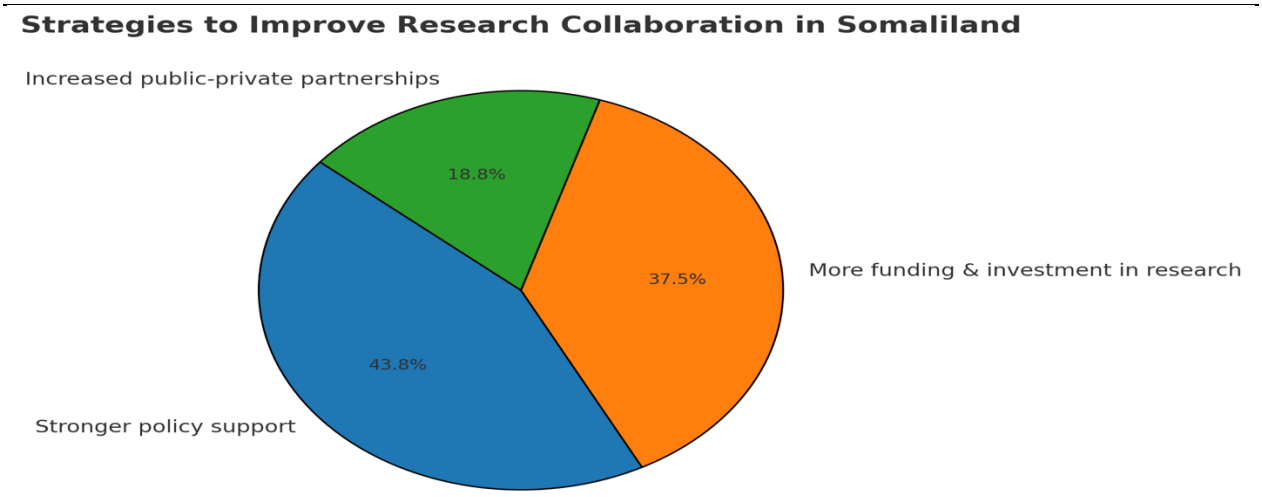
Strengthening collaboration with universities was cited by **38%** of participants, emphasizing the role of academic institutions not only as knowledge producers but also as strategic partners in national data management. Enabling universities to contribute, access, and utilize national datasets will ensure that research efforts are relevant, coordinated, and aligned with development priorities.

Only **9%** of respondents emphasized **enhancing data security and accessibility** as a stand-alone priority. Although fewer participants highlighted this aspect, it remains a foundational requirement. Without secure, properly governed systems, centralized repositories risk losing credibility or facing compliance issues.

Collectively, these findings suggest that Somaliland must urgently invest in:

- **Building a National Research Repository** (as part of initiatives like the upcoming National Research Portal),
- **Formalizing partnerships between government and academic institutions**,
- **Ensuring that data protection laws and open access principles are harmonized**.

By institutionalizing these improvements, Somaliland can create a sustainable knowledge infrastructure that supports innovation, policy formulation, investment planning, and academic research excellence.



Graph 13: Ways to Improve Somaliland's National Research Database

The leading recommendation, cited by **44%** of respondents, is the need for **stronger policy support** to institutionalize research collaboration. This underscores the critical role of the government in creating a conducive environment through legislative reforms, regulatory frameworks, and formal agreements that promote joint research initiatives. Without clear and enforceable policy mechanisms, collaboration often remains informal, fragmented, and unsustainable.

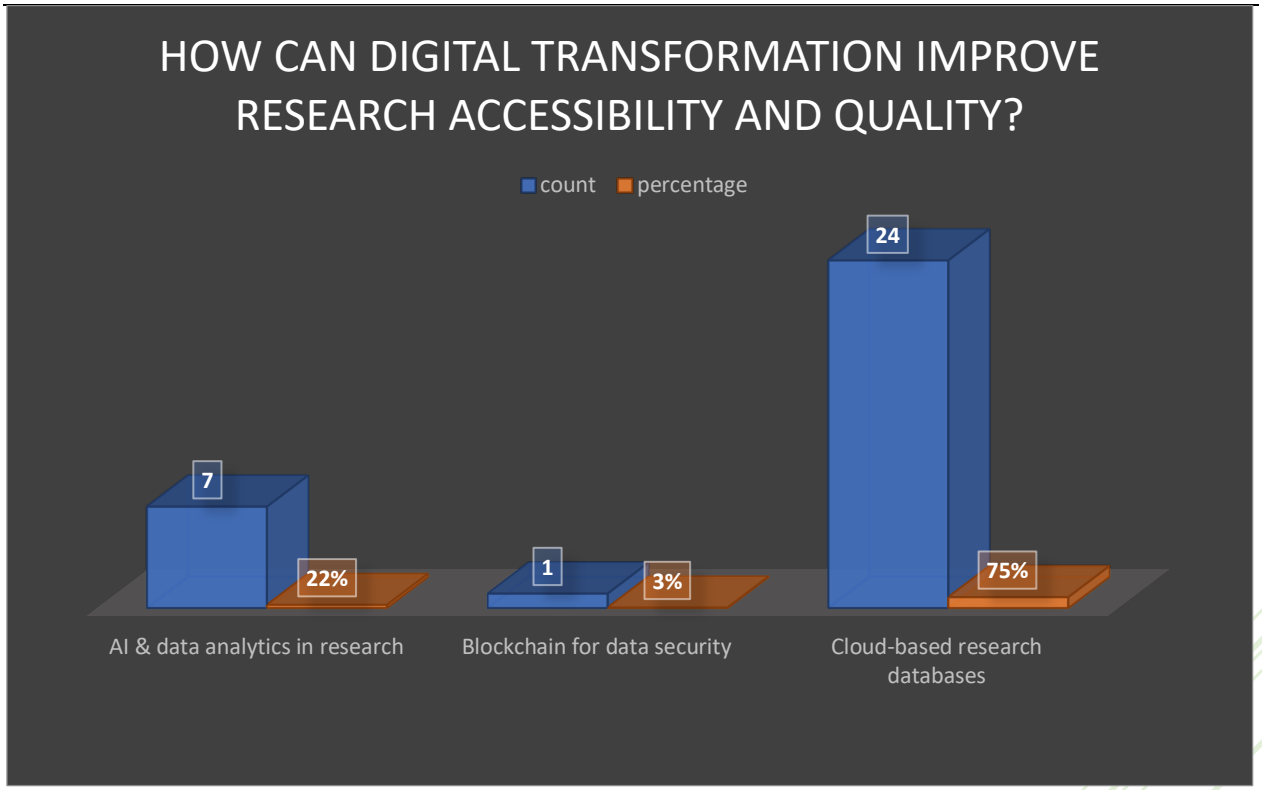
More funding and investment in research were prioritized by **38%** of respondents, reflecting the widely recognized reality that financial constraints are a major bottleneck. Sustainable research collaboration requires not only willingness among actors but also tangible resources to support joint projects, infrastructure development, researcher mobility, and innovation programs.

Increased public-private partnerships (PPPs) were emphasized by **19%** of respondents. While less cited than policy and funding needs, this remains a vital pathway. Strengthening PPPs can accelerate applied research, promote commercialization of research outputs, and link academic innovations with real-world market demands.

Overall, the findings suggest that improving research collaboration in Somaliland demands a **three-pronged strategy**:

- Enacting **strong policy frameworks** to formalize and protect collaboration efforts;
- Securing **adequate, diversified funding mechanisms** to support sustained joint research;
- Facilitating **institutionalized partnerships** that connect universities, industries, and government bodies in a coherent and structured manner.

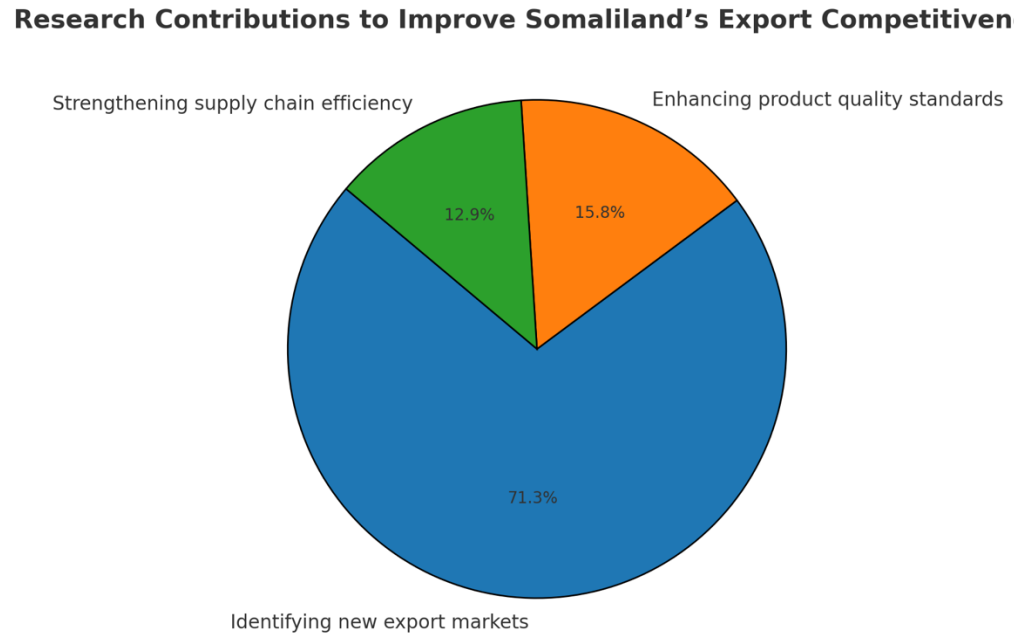
Without strategic action across all three areas, Somaliland risks missing the opportunity to fully leverage research as a driver of socio-economic transformation.



Graph 14: Technologies to Improve Research Accessibility and Quality in Somaliland

The table demonstrates that **cloud-based research databases** are overwhelmingly perceived as the most effective technology for improving research accessibility and quality, with **24 responses (75%)**.
This preference is significantly higher compared to the second-ranked technology, **AI & data analytics in research**, which garnered **7 responses (22%)**.
Blockchain for data security was regarded as the least impactful, receiving only **1 response (3%)**, indicating minimal current prioritization of blockchain technologies within Somaliland's research context.

These findings suggest that immediate investment should focus on building **cloud-based digital repositories** for research, while medium- to long-term strategies could include scaling up the use of **artificial intelligence** in research workflows. Blockchain technologies, though currently deprioritized, may be revisited later as digital security concerns and data governance structures evolve.



Graph 15: Research Contributions to Improve Somaliland's Export Competitiveness

The table highlights that **identifying new export markets** is overwhelmingly viewed as the most critical area where research can strengthen Somaliland's export competitiveness, accounting for **72%** of responses.
This suggests a clear national priority for market intelligence, trade research, and export diversification strategies, especially for sectors like livestock, fisheries, and agribusiness.

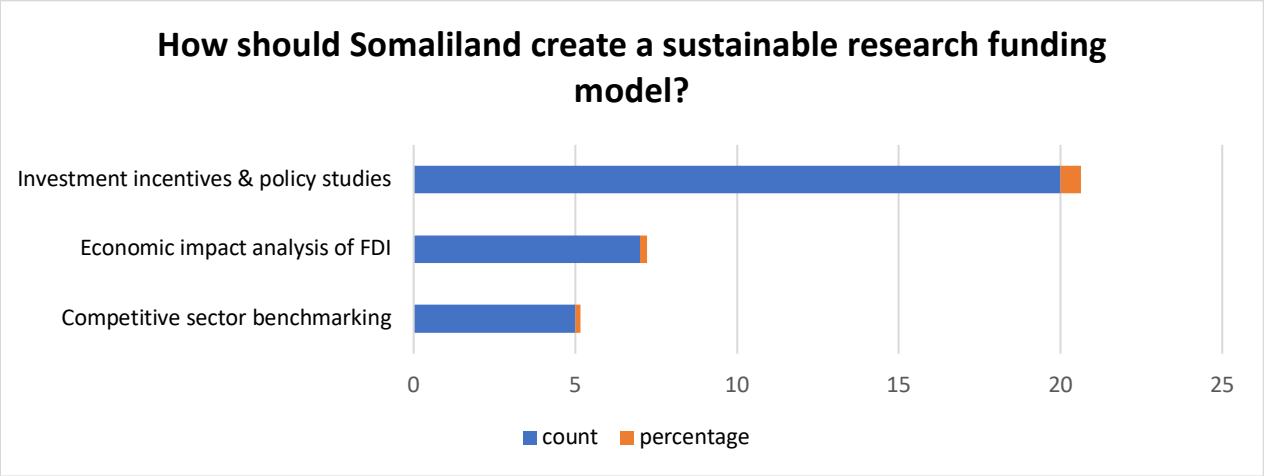
Enhancing product quality standards follows, but at a much lower rate (**16%**). While quality improvement is essential for sustaining access to international markets and meeting regulatory standards, it is currently perceived as secondary to market identification.

Strengthening supply chain efficiency was selected by **13%** of respondents, indicating that while logistical improvements are recognized as important, they are less prioritized compared to market expansion efforts.

Overall, these findings emphasize that Somaliland's research and development strategies should first focus on:

- **Expanding knowledge of international market demands**,
- **Mapping opportunities in regional, Middle Eastern, and global trade markets**,
- **Supporting businesses to access and penetrate new export destinations**.

Concurrently, secondary strategies should be developed to improve product quality and optimize supply chains, thereby ensuring that new market access can be sustained over the long term.



Graph 16: Strategies for Creating a Sustainable Research Funding Model in Somaliland

The table clearly illustrates that **government-backed research grants** are seen as the most critical pillar for establishing a sustainable national research funding model, with **59%** of respondents supporting this approach.
This reflects the broader understanding that government leadership and ownership are essential for long-term research system stability, ensuring that research agendas align with national priorities rather than donor-driven objectives.

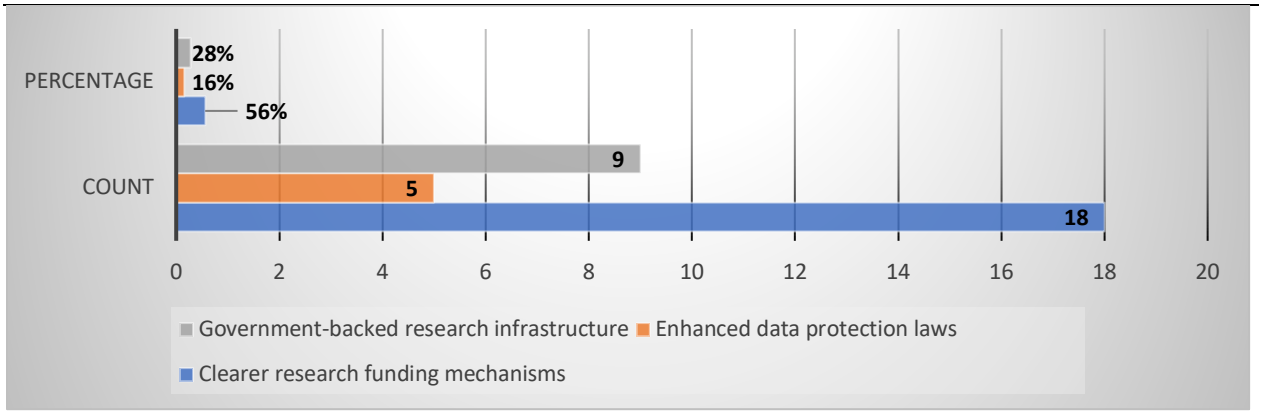
Private sector investment in research and development (R&D) was identified by **31%** of respondents. This indicates growing awareness of the importance of leveraging corporate innovation potential and encouraging businesses to co-invest in research, particularly in areas such as technology, agriculture, and industrialization.

International donor funding was seen as the least preferred primary source, with only **9%** of respondents emphasizing it. While international funding can complement domestic efforts, over-reliance on external sources risks sustainability and national policy autonomy.

The findings collectively emphasize that Somaliland should prioritize:

- **Establishing a national research grant system** anchored in the state budget;
- **Developing public-private research partnerships** to attract corporate investment;
- **Strategically using international funding** as supplementary, rather than primary, support.

Building a diversified and resilient funding model will be crucial to ensuring that Somaliland's research sector can thrive and contribute consistently to development goals.



Graph 17: Policy Reforms Needed to Strengthen Research Governance in Somaliland

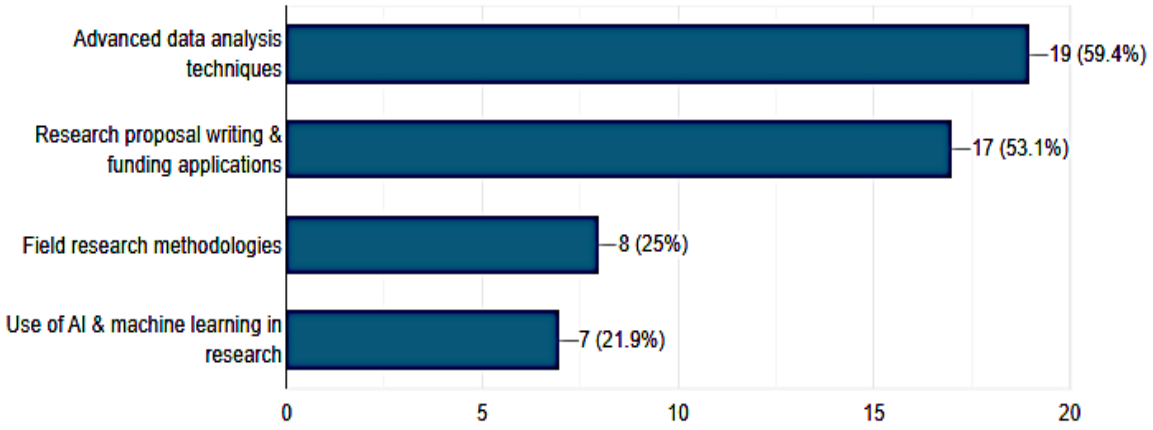
The results show that the most urgent policy reform needed to strengthen research governance in Somaliland is the establishment of **clearer research funding mechanisms**, identified by **56%** of respondents.
This underscores the widespread perception that sustainable and transparent funding structures are the foundation for building a credible and functional national research system. Without reliable funding pathways, even well-designed research agendas and initiatives will struggle to materialize.

Government-backed research infrastructure ranks second, with **28%** of respondents emphasizing the need for state-supported facilities, laboratories, data centers, and digital repositories.
This finding reflects the critical infrastructure gaps that currently hinder high-quality, scalable research in Somaliland and highlights the government's role in laying the groundwork for long-term capacity development.

Enhanced data protection laws were selected by **16%** of respondents. Although ranked third, data governance is increasingly vital to protecting the integrity of research, securing sensitive information, and fostering public trust in research processes. Strengthened data protection frameworks will also be essential for attracting international research collaborations and investment.

Collectively, the findings recommend that Somaliland's policy reforms should focus on:

- **Establishing transparent, accessible national research funding models**,
- **Investing in state-led research infrastructure development**, and
- **Modernizing legal frameworks around data management and research security**.



Graph 18: Priority Training Areas Needed for Researchers in Somaliland

The data shows that **advanced data analysis techniques** are the most critical training need for researchers in Somaliland, cited by **59.4%** of respondents.
This underscores the urgent requirement to build technical skills in statistical software, data visualization, and computational analysis—essential capabilities for producing robust and credible research outputs.

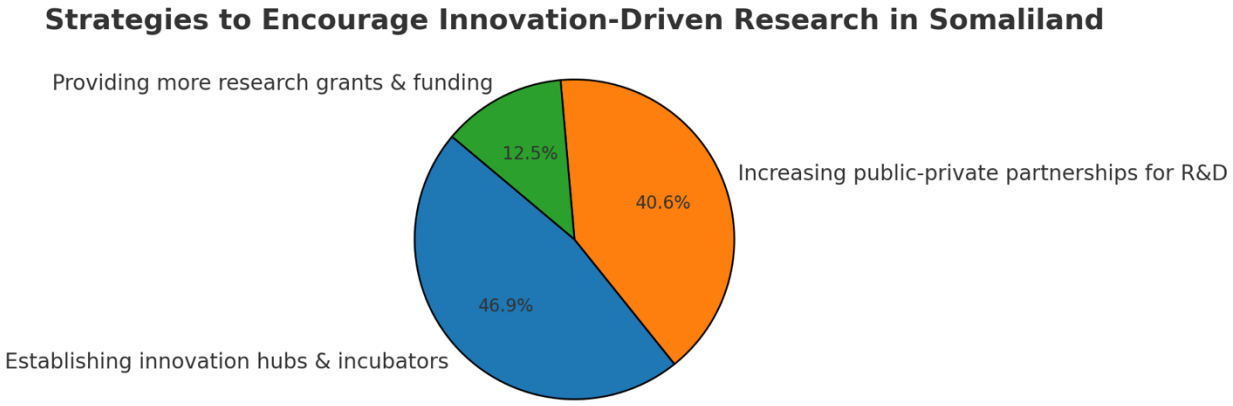
Research proposal writing and funding applications follow closely, with **53.1%** highlighting the need for capacity-building in designing projects and securing research grants. This reflects the recognition that technical skills alone are insufficient without the ability to mobilize financial resources and frame research within fundable priorities.

Field research methodologies were selected by **25%** of respondents. While relatively lower, the ability to conduct high-quality primary research through surveys, interviews, and case studies remains a core competency, particularly for development-focused and sectoral research projects.

Use of AI and machine learning in research was identified by **21.9%** of respondents, suggesting emerging awareness of the potential for digital and automated tools to enhance research quality. Although current adoption remains limited, building AI capacity represents a forward-looking investment that will position Somaliland researchers competitively in the global knowledge economy.

In summary, the findings highlight that training programs should prioritize:

- **Technical data analysis proficiency**, including modern software and modeling tools;
- **Competency in proposal development and fundraising**;
- **Core field research skills**, and
- **Introduction to AI and machine learning applications** for research innovation.



Graph 19: Strategies to Encourage Innovation-Driven Research in Somaliland

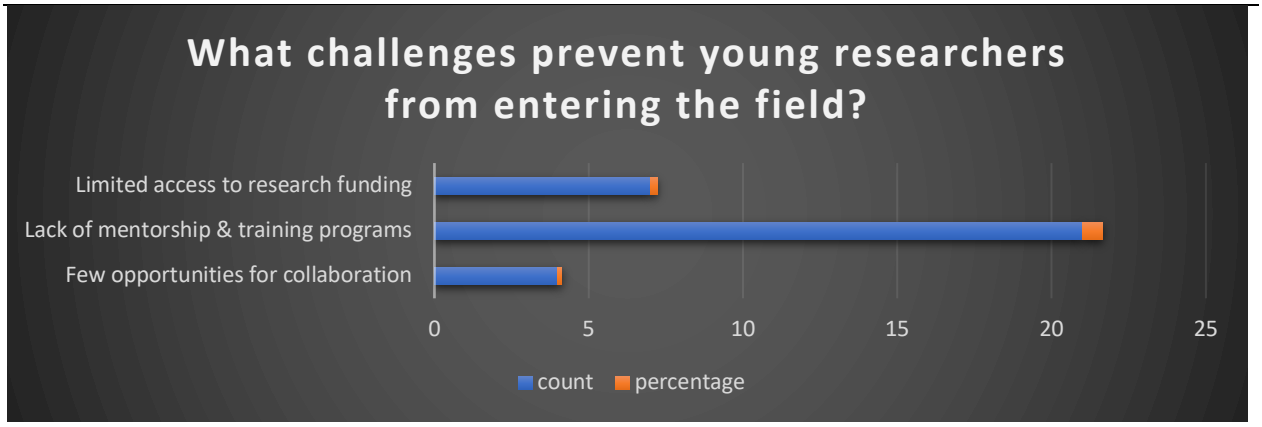
The data shows that **establishing innovation hubs and incubators** is considered the most effective strategy to encourage innovation-driven research in Somaliland, selected by **47%** of respondents.
This indicates strong support for the creation of physical spaces and institutional frameworks that foster collaboration, entrepreneurship, and technology development—key factors in cultivating a vibrant innovation ecosystem.

Increasing public-private partnerships for research and development (R&D) was also strongly emphasized, garnering **41%** of responses. This reflects recognition that sustainable innovation requires close collaboration between academic institutions, businesses, and government agencies, aligning research efforts with market needs and national development priorities.

Providing more research grants and funding was cited by **13%** of respondents. While less frequently selected, this remains a fundamental enabler for innovation, highlighting the need for both baseline funding for research activities and targeted grants for technology-focused initiatives.

In conclusion, the findings suggest that Somaliland should prioritize:

- **Developing and operationalizing innovation hubs and research incubators** in major cities;
- **Strengthening public-private R&D partnerships** to bridge the gap between research outputs and economic applications;
- **Expanding innovation-specific grant opportunities** to fund high-impact research projects, especially in emerging sectors.



Graph 20: Challenges Preventing Young Researchers from Entering the Field in Somaliland

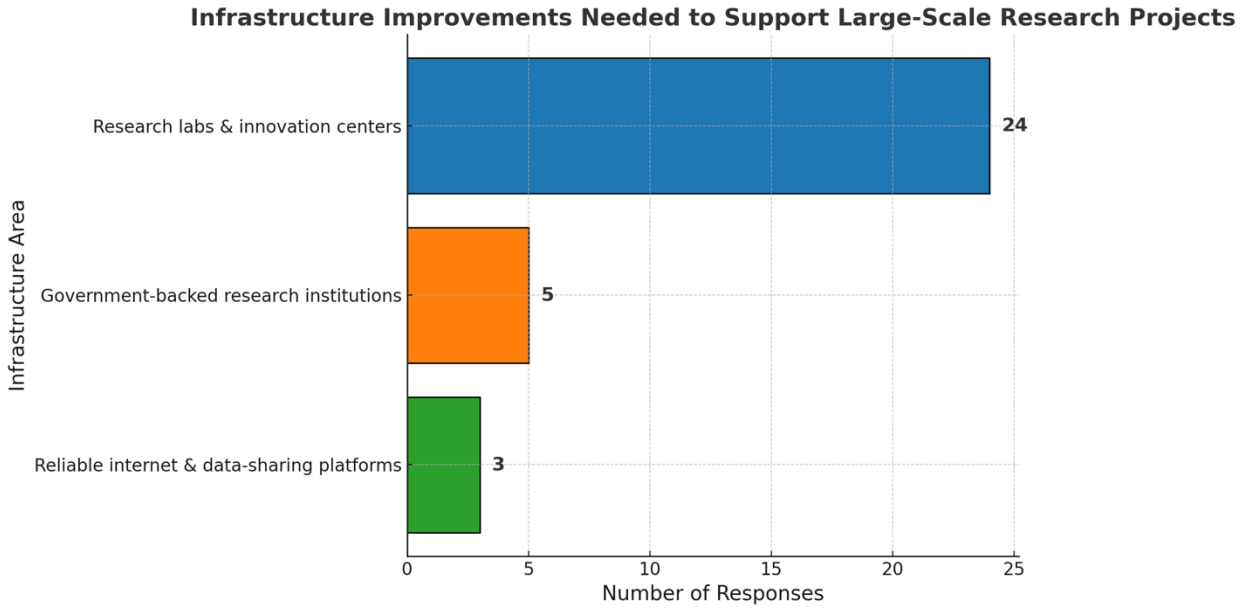
The table highlights that the **lack of mentorship and training programs** is overwhelmingly the most significant barrier preventing young researchers from entering the field in Somaliland, with a reported count of **21 responses**.
This suggests that while technical interest exists among youth, structured programs to guide skill development, academic growth, and professional research engagement are severely lacking.

Limited access to research funding was cited **7 times**, making it the second most critical challenge. Without accessible grants or seed funding, emerging researchers face high entry barriers that limit their ability to develop independent research projects or pursue advanced study opportunities.

Few opportunities for collaboration received **4 responses**, reflecting a perception that networking platforms, cross-institutional partnerships, and collaborative research initiatives are underdeveloped, further isolating young researchers.

In conclusion, to encourage greater participation by young researchers, Somaliland should prioritize:

- **Developing structured mentorship and training pipelines** in universities and research centers;
- **Establishing youth-targeted research funding schemes**;
- **Facilitating platforms and consortia for early-career researchers to collaborate** across institutions, sectors, and regions.



Graph 20: Infrastructure Improvements Needed to Support Large-Scale Research Projects in Somaliland

The results show that **research labs and innovation centers** are overwhelmingly recognized as the most critical infrastructure need to support large-scale research projects in Somaliland, selected by **75%** of respondents.
This finding highlights a national priority for creating physical environments where researchers can access modern equipment, collaborate across disciplines, and develop technology-based solutions to key development challenges.

Government-backed research institutions were cited by **16%** of respondents, indicating the need for formal public institutions tasked with coordinating, funding, and managing national research efforts. Strong, government-supported institutions would also help ensure continuity, policy alignment, and long-term strategic planning for research development.

Reliable internet and data-sharing platforms were identified by only **9%** of respondents. Although lower in ranking, digital infrastructure remains an important enabler for research efficiency, collaboration, and access to global research networks.

Collectively, these findings suggest that Somaliland's research infrastructure strategy should prioritize:

- **Investment in state-of-the-art research laboratories and multi-sector innovation centers**;
- **The establishment and operationalization of national public research institutions**;
- **Modernizing digital networks to facilitate seamless research collaboration and data access**.

Section 4: Policy, Governance and National development (Qualitative): What research-based policy recommendations would help drive economic growth?

Codes	Themes
1. Public-private partnership	• Collaborative policy development
2. Research institutions	• Investment in research capacity
3. Innovation	• Technology and modernization
4. Evidence-based policymaking	• Data-driven decision making
5. Sector-specific focus	• Targeted economic development
6. Financial support	• Sustainable funding mechanisms
Summary	To boost economic growth, participants suggest adopting evidence-based policymaking supported by public-private collaboration. Establishing research centers, investing in innovation, and ensuring clarity in national research agendas are also key. Additionally, financial support for research and focusing on sector-specific development (like energy and industry) are recommended.

Section 5: How should Somaliland create a sustainable research funding model?

Codes	Themes
1. Government allocation	• Public funding commitment
2. National research fund	• Institutionalized financing
3. International donor support	• External funding
4. Private sector involvement	• Diversified funding sources
5. Sector-specific contributions	• Strategic funding allocation
6. Research commercialization	• Revenue-generating research
Summary:	Creating a sustainable funding model requires government budget allocation, the establishment of a national research fund, and fostering public-private partnerships. Respondents also emphasize diversifying funding sources, such as international donors and sector-specific investments, to ensure consistent financial support for research activities.

Section 6: What mechanisms should be put in place to monitor and evaluate research impact?

Codes	Themes
1. Impact assessment tools	• Evaluation frameworks
2. National M&E system	• Institutional mechanisms
3. Performance indicators	• Measurement metrics
4. Periodic reviews	• Continuous improvement
5. Research feedback loops	• Learning and adaptation
6. Data systems	• Evidence tracking
Summary	To effectively monitor and evaluate research impact, respondents recommend a national M&E framework, regular data collection, and clear performance indicators. The use of standardized tools, impact analysis techniques, and

	feedback mechanisms ensures that research outcomes align with policy and development goals.

Section 7: What role do government incentives play in encouraging private sector-led research?

Codes	Themes
1. Tax incentives	• Financial motivation
2. Research grants	• Direct funding support
3. Innovation hubs	• Infrastructure development
4. Public-private dialogue	• Policy engagement
5. Risk-sharing mechanisms	• Investment security
6. Regulatory frameworks	• Enabling environment
Summary	Government incentives are seen as essential for motivating the private sector to engage in research. Financial grants, tax relief, and policy support can significantly reduce risks and encourage innovation. Respondents also highlight the importance of coordination, collaboration, and clearly defined roles in fostering a productive research environment.

Section 8: How can Somaliland ensure long-term research sustainability?

Codes	Themes
1. Institutional capacity	• Organizational resilience
2. Long-term funding strategies	• Financial sustainability
3. Research culture	• Academic engagement
4. Policy continuity	• Consistent support
5. Research collaboration	• Stakeholder partnerships
6. Infrastructure investment	• Resource availability
Summary	Long-term research sustainability depends on strong institutions, continuous funding, and supportive policies. Building researcher capacity, fostering university-industry collaboration, and investing in infrastructure are vital. Ensuring coordination among stakeholders and consistent policy implementation will help maintain research relevance and impact over time.

Section 9: Final Recommendations:

1. Ensuring Research Findings Lead to Actionable Policies

Approach	Key Steps or Methods
1. Evidence-Based Policies	• Use research to inform decision-making and policy creation, ensuring alignment with national priorities
2. Government Collaboration	• Strengthening partnerships between the government, academic institutions, and development agencies
3. National Framework for Monitoring	• Establish a system to track the implementation of research findings from inception to action
4. Strengthening Policymaker Capacity	• Enhancing policymakers' ability to apply research outcomes effectively in decision-making
5. Capacity Building	• Building technical capacity at all levels of government to interpret and implement research findings
Summary:	Somaliland can ensure that research findings translate into actionable policies by fostering collaboration between stakeholders, strengthening government frameworks, and building the capacity of policymakers to use research insights effectively.

2. Planned or Ongoing Researches

Research Area	Specific Topics/Studies
1. Education Sector	• Research on factors affecting secondary school education, impact of value-added tax on education
2. Health Sector	• Research on chronic diseases (cancer, hypertension, diabetes), childhood diarrhea, health service utilization
3. Fisheries Sector	• Analysis of the fish value chain, fish biodiversity in Berbera, fishing and export opportunities
4. Agriculture and Livestock Research	• Agricultural productivity, fodder production, livestock productivity, impacts of climate change on agriculture
5. Technology and Energy Sector	• Renewable energy sources, energy consumption, and its impact on industrial production
6. Food Security and Nutrition	• Food security challenges, agricultural extension, and nutrition-related studies
Summary:	Various research projects are underway or planned across different sectors. These studies aim to address sector-specific challenges, such as improving education quality, boosting agricultural productivity, enhancing health outcomes, and investigating the fisheries and energy sectors.

4. Most Impactful Research for Somaliland's Priorities

Sector	Impactful Research Priorities
1. **Fisheries and Blue Economy**	• Fish stock assessments, fish biodiversity studies, and sustainable fishing practices
2. **Energy and Technology**	• Research on renewable energy, energy efficiency, and sustainable infrastructure solutions
3. **Agriculture and Food Security**	• Research into agricultural productivity, climate change impacts, and food security solutions
4. **Health and Nutrition**	• Addressing chronic diseases, childhood health challenges, and improving healthcare services
5. **Livestock Sector**	• Research focused on livestock productivity, disease management, and sustainable practices
6. **Peace and Conflict Studies**	• Research on peacebuilding strategies, national security, and conflict resolution
Summary	Among the various research areas, the most impactful studies for Somaliland's growth revolve around fisheries, energy, agriculture, health, and livestock. These areas hold immense potential to improve livelihoods, boost economic development, and ensure environmental sustainability.

Final Thoughts by the assessment participants

Sector	Final Thought
1. **Agriculture and Livestock**	• Research in agriculture and livestock should be prioritized due to their crucial role in food security and economic stability
2. **Energy and Technology**	• Investing in renewable energy technologies will be pivotal for industrial growth and reducing reliance on expensive energy
3. **Fisheries and Blue Economy**	• Sustainable fisheries management and value chain optimization should be a national research priority
4. **Health and Nutrition**	• Improving healthcare infrastructure and addressing chronic diseases should be central to research efforts
5. **Education**	• Research into secondary and higher education systems will lead to better-trained graduates contributing to national growth
Summary	**Prioritizing research in agriculture, energy, fisheries, health, and education is critical for Somaliland's future growth. These sectors are intertwined with the country's core development goals and should be supported with strategic, long-term research investments.**

6. Findings

This assessment presents a synthesis of both quantitative and qualitative findings derived from the national research assessment conducted by the Ministry of Investment and Industrial Development (MoIID), in collaboration with the Somaliland Commission for Higher Education and relevant stakeholders.

6.1 Quantitative Data Results

a. Research Experience and Engagement

- **41%** of respondents had between **2–5 years** of research experience, while **34%** had **6–10 years**, suggesting a moderately experienced research community.
- **47%** had worked on **1–3 research projects**, while **28%** had contributed to **7–10 projects**, indicating limited but active participation in applied research.

b. Priority Research Gaps: *Respondents ranked the top research gaps in Somaliland's development as follows:*

- **Agriculture and Food Security – 25%**
- **Investment and Industrialization – 22%**
- **Fisheries and Blue Economy – 11%** These responses reflect national concerns around food systems, production efficiency, and economic diversification.

c. Investment-Related Research Priorities

- **Industrialization and Manufacturing – 44%**
- **Agricultural Productivity – 41%**
- **Renewable Energy – 9%**
- **Digital Economy – 6%**

d. Planned Research Projects for 2025

- **Agribusiness Expansion – 56%**
- **Fisheries Innovation – 31%**
- **Mining and Export Development – 12%**

e. Research Barriers

Top obstacles to conducting research in Somaliland were:

- **Lack of funding and financial support – 29%**
- **Weak research infrastructure – 22%**
- **Limited access to quality data – 13%** These findings suggest systemic constraints across financial, technological, and institutional levels.

f. Research Tools and Sharing Practices

- **SPSS** was the most commonly used data analysis tool (**66%**), followed by **Excel/Google Sheets (28%)**.
- Only **43.8%** of institutions shared findings regularly, while **56.2%** did so rarely or only upon request—highlighting limited dissemination and policy integration.

6.2 Qualitative Insights

a. Perceived Value of Research:
Participants consistently emphasized the importance of research in:

- Informing **policy formulation and regulatory frameworks**;
- Enhancing **sectoral planning**, especially in energy, agriculture, and fisheries;
- Attracting both **local and foreign investment** through data transparency;
- Supporting **climate-resilient strategies** and food system adaptation.

b. Sector-Specific Needs

- **Fisheries:** Calls for marine stock assessments, pollution control studies, and research on value chain development.
- **Energy:** Emphasis on renewable energy mapping, grid extension models, and the need for legal frameworks to support green energy investment.
- **Agriculture:** Priorities include climate-smart agriculture, water management, seed viability studies, and rural mechanization.

c. Institutional Gaps: *Stakeholders highlighted:*

- Weak university-industry linkages;
- Absence of a centralized, digitized research repository;
- Minimal training in advanced analytics (e.g., Python, R, GIS);
- Infrequent collaboration between ministries, academia, and the private sector.

d. Recommendations from NRIC 2025

- Launch of a **Research Portal (April 2025)** as a national knowledge hub;
- Creation of a **National Research Fund**;
- Formation of a **National Research Coordination Forum (NRCF)**;
- Integration of research into all major investment and planning units across ministries.

6.3 Key Trends and Patterns

From triangulating survey data, interviews, and event discussions, several cross-cutting trends emerged:

1. **Strategic Convergence on Sectoral Priorities**: Agriculture, fisheries, and industry consistently emerge as both current gaps and future priorities.
2. **Widespread Demand for Centralization**: There is strong consensus on the need for a **centralized digital research repository** to improve access, coordination, and policy uptake.
3. **Low Utilization of Advanced Research Tools**: Traditional tools dominate analysis (SPSS, Excel), while modern software (Python, R, Tableau) are largely absent—indicating a skills and training gap.
4. **Readiness for Collaboration**: Over **97%** of respondents expressed willingness to partner with MoIID, indicating a high potential for stakeholder engagement if institutional structures are strengthened.
5. **Funding and Data as Core Bottlenecks**: These two constraints appear consistently in all sectors and stakeholder categories, confirming their systemic nature.

7. Discussion

7.1 Interpretation of Findings

The findings from this assessment reveal a consistent and compelling narrative: Somaliland's research ecosystem is characterized by **strong potential**, **clear strategic interest**, and **a high level of stakeholder commitment**, yet it remains constrained by systemic barriers such as **inadequate funding**, **poor infrastructure**, and **fragmented coordination**.

The prioritization of **agriculture and food security (25%)**, **investment and industrialization (22%)**, and **fisheries and the blue economy (11%)** reflects the nation's urgent development priorities—especially in sectors linked to livelihoods, export diversification, and economic transformation. These results affirm that stakeholders understand the nexus between **research, evidence, and development planning**.

The dominance of **basic data tools (SPSS and Excel)**, coupled with a **limited culture of sharing research findings**, indicates a nascent but evolving research culture. Meanwhile, the overwhelming support for **collaborative platforms**, **centralized digital repositories**, and **national coordination forums** demonstrates readiness to move toward a **more institutionalized and coordinated national research framework**.

The findings also reveal that **planned research activities for 2025**, such as agribusiness expansion and fisheries innovation, are aligned with long-term economic strategies, including those articulated in the **National Investment Promotion Strategy (NIPS)** and **NDP9**. However, the weak uptake of advanced data science tools (e.g., Python, R, Tableau) exposes critical gaps in **human capital development and technical training**, particularly for research in emerging sectors like energy, climate, and digital transformation.

7.2 Comparison with Existing Literature

When benchmarked against **regional research strategies**, Somaliland's research landscape reflects similar patterns observed in countries such as **Kenya** and **Tanzania**, which have also emphasized research frameworks built on:

- National development priorities;
- Thematic sector focus (food security, industrialization, health, etc.);
- Public-private-academic partnerships;
- Integration of research outputs into policy cycles.

However, Somaliland's case presents unique features:

- The lack of a **dedicated national research fund** places it behind countries that have already institutionalized sustainable funding mechanisms.
- The proposal and upcoming launch of a **National Research Portal (April 2025)** marks a progressive step toward digital integration, similar to Tanzania's **COSTECH** platform but tailored to local constraints and capacities.
- The **NRIC 2025's emphasis on establishing a National Research Coordination Forum (NRCF)** draws from models in South Africa and Rwanda, which have embedded coordination councils within

ministries to align national research investments.

7.3 Implications of the Results

a. Policy and Institutional Reform

- A **dedicated national research funding mechanism** is essential. Without structured financing, research priorities cannot move beyond planning into implementation.
- The establishment of the **National Research Coordination Forum (NRCF)** is a necessary governance mechanism to align ministries, universities, and the private sector.

b. Investment Strategy

- Research must become an **integral part of investment promotion and industrial planning**, not a parallel or afterthought process. Sectoral ministries must mainstream research into feasibility studies, project planning, and regulatory development.
- Findings from fisheries, mining, agriculture, and energy research should directly inform **sector investment roadmaps**, creating a feedback loop between policy and practice.

c. Higher Education and Capacity Building

- Universities must be supported to **modernize research tools and curricula**, especially in analytics, data science, and interdisciplinary methodologies.
- National training programs should be launched to expand use of **advanced tools (Python, R, GIS, AI)** and facilitate **evidence-based planning** across all sectors.

d. Digital Infrastructure

- The proposed **National Research Portal** must be robust, interoperable, and widely accessible, with institutional mandates requiring data sharing and integration.
- Long-term data governance policies must ensure data accuracy, security, ethical use, and transparency.

e. International Cooperation

- Donors and development partners should align support with Somaliland's national research agenda to avoid duplication and strengthen country ownership of the research-to-policy ecosystem.

8. Challenges and Limitations

This section outlines the principal constraints encountered during the assessment process, categorized into data-related limitations, methodological issues, and logistical or operational barriers. Recognizing these challenges is critical for both interpreting the results accurately and informing the design of future assessments and national research planning processes.

8.1 Data Limitations

a. Lack of Updated and Reliable Datasets

A substantial proportion of respondents (75%) cited the **absence of updated datasets** as the most pressing constraint in conducting reliable research. Many government departments and academic institutions lack accessible, timely, and standardized data repositories. This undermines the ability to produce longitudinal analyses or cross-sectoral assessments with confidence.

b. Fragmented Data Systems

Data storage and usage remain **dispersed across institutions**, often in non-digitized formats or informal archives. Without a centralized system, duplication of efforts and data inconsistencies are common, limiting national-level research integration.

c. Restricted Access to Institutional and Government Records

Access to government-held data remains restricted in some cases due to bureaucratic hurdles or unclear data-sharing protocols. This limits researchers' ability to conduct in-depth policy analysis or validate findings through official records.

8.2 Methodological Constraints

a. Sample Size and Sectoral Representation

The study involved 32 respondents, representing a purposeful but **limited sample size**. While the sample included stakeholders from government, academia, and private sector entities, it may not fully capture perspectives from remote regions or underrepresented sectors such as youth-led innovation hubs or informal agricultural cooperatives.

b. Self-Reported Data Bias

Much of the information collected, particularly regarding institutional capabilities and research practices, is **self-reported**, which introduces potential **social desirability or confirmation bias**. Participants may overstate engagement levels or underreport operational deficiencies.

c. Limited Longitudinal Comparisons

The absence of a previous baseline national research assessment makes it difficult to compare trends or evaluate changes over time. This constrains the ability to track progress in sectoral research investment, institutional capacity growth, or innovation system maturity.

8.3 Operational and Logistical Issues

a. Time and Resource Constraints

The assessment was conducted under **tight timelines and with limited financial resources**, which restricted the ability to expand data collection into all six regions of Somaliland. Travel and outreach to rural or less-connected areas was therefore constrained.

b. Coordination Among Stakeholders

Although the level of cooperation was generally high, **coordinating across ministries, universities, and private sector actors** proved challenging due to varied schedules, reporting structures, and communication protocols. In some cases, this led to delays in feedback or incomplete survey responses.

c. Digital Infrastructure Challenges

While some institutions had access to data analysis tools, others operated without reliable internet or digital systems to store and manage research information. This digital divide affected the **quality, depth, and formatting** of some of the submissions received.

9. Conclusions

9.1 Summary of Findings

This assessment provides a foundational analysis of Somaliland's national research landscape, identifying both priority areas for intervention and structural limitations that hinder the effective integration of research into development planning and investment facilitation. The evidence, drawn from stakeholder consultations, survey results, and event-based engagements, points to several critical insights:

- **Priority Sectors**: Agriculture and food security (25%), investment and industrialization (22%), and fisheries and the blue economy (11%) emerged as the most urgent areas requiring targeted research support. These align with Somaliland's broader development objectives and economic growth strategies.
- **Barriers to Research**: The most prominent obstacles include inadequate funding (29%), poor infrastructure (22%), and limited access to reliable data (13%). These systemic challenges are compounded by skill gaps and insufficient collaboration across institutions.
- **Tools and Practices**: SPSS (66%) and Excel (28%) are the predominant tools for data analysis, revealing a low uptake of advanced analytics platforms such as Python, R, and Tableau. Additionally, only 43.8% of institutions share research findings regularly, suggesting weak dissemination and policy integration mechanisms.
- **Stakeholder Readiness**: There is a high level of institutional willingness to engage in future research collaboration (97%), particularly with the Ministry of Investment and Industrial Development (MoIID), confirming strong momentum for national research coordination.
- **Forward Planning**: Proposed projects for 2025 prioritize agribusiness expansion, fisheries innovation, and mining development—key pillars of Somaliland's industrialization and export strategy.

- **Strategic Recommendations**: The study calls for the creation of a National Research Fund, the launch of a centralized digital research repository, and the establishment of a National Research Coordination Forum (NRCF) to streamline efforts across sectors.

9.2 Lessons Learned

The assessment process and the NRIC 2025 conference offered several key lessons that are instructive for designing and implementing the National Research Priorities (NRP) 2025–2030:

1. Research Must Be Policy-Embedded, Not Peripheral

For research to drive development outcomes, it must be directly embedded within policy frameworks, investment planning, and regulatory design. Fragmented or academic-only approaches result in low uptake and limited impact.

2. Centralized Coordination Enhances Efficiency

The lack of a national research coordination mechanism has led to duplication, data silos, and missed synergies. Establishing a centralized forum (NRCF) is essential to facilitate collaboration, harmonize efforts, and align funding with national priorities.

3. Digital Infrastructure Is Foundational

Efforts to modernize Somaliland's research ecosystem must prioritize digital systems—research portals, data repositories, and cloud-based collaboration platforms—as the infrastructure backbone of any functional R&D system.

4. Capacity Building Must Be Sector-Specific and Technology-Focused

Investment in human capital is critical, particularly in advanced research skills (e.g., statistical modeling, AI, GIS) and data interpretation techniques. Sector-specific training ensures that knowledge is contextually applicable and results in actionable outcomes.

5. Research Culture Requires Institutional Incentives

A culture of research cannot be sustained without recognition, funding, and institutional mandates. Universities, ministries, and the private sector must be supported with frameworks that reward innovation, encourage data sharing, and formalize research impact pathways.

6. Multi-Stakeholder Inclusion Is Key

Broad engagement—from policymakers to academia, and from development partners to grassroots organizations—enriches the quality, relevance, and legitimacy of national research agendas. Inclusive processes foster ownership and long-term commitment.

10. Recommendations

The findings of this national assessment reveal a decisive moment for Somaliland to institutionalize a structured, well-coordinated, and impact-oriented research framework. These recommendations provide a pathway to translate research insights into actionable development strategies, with special emphasis on natural resource governance, institutional capacity, digital infrastructure, and academic integration.

10.1 Policy Recommendations

1. Establish a National Research Fund (NRF)

Introduce a **dedicated national research funding mechanism**, underpinned by public, private, and international donor contributions, to support competitive research grants in priority areas including agriculture, industrialization, renewable energy, and blue economy. The fund should provide allocations for:

- Academic research,
- Sectoral studies,
- Innovation-driven projects,
- Institutional research partnerships.

2. Enact a National Research and Innovation Policy

Develop a **National Research and Innovation Policy Framework** that:

- Establishes regulatory standards for ethical and quality research;
- Mandates inter-ministerial data sharing;
- Guides the institutional integration of research into national development plans;
- Sets funding and collaboration benchmarks for universities and public agencies.

3. Create the National Research Coordination Forum (NRCF)

Formally establish a **National Research Coordination Forum (NRCF)**, led by the Ministry of Investment and Industrial Development, to serve as the apex body coordinating research agendas, harmonizing stakeholder efforts, and ensuring policy alignment across sectors.

4. Mainstream Research into Sectoral Policy and Investment Planning

Mandate that all sector ministries—especially those in agriculture, fisheries, industry, energy, and environment—integrate **evidence-based research components** in their policy development and investment programming cycles.

5. Establish the Somaliland Natural Resources Research and Database Center (SNRRDC)

Form the **Somaliland Natural Resources Research and Database Center** as a national institution responsible for:

- Conducting scientific research on Somaliland's natural assets (minerals, fisheries, marine ecosystems, land and water resources);
- Managing an open-access digital repository of geospatial and environmental data;

- Advising the government and investors on sustainable resource exploitation;
- Supporting compliance with environmental, energy, and mining regulations;
- Facilitating partnerships with universities, geological surveys, and international research networks.

10.2 Programmatic or Strategic Actions

1. Operationalize the National Research Portal (April 2025)

Ensure the effective launch of the **National Research Portal** to:

- Serve as a digital repository for datasets, research publications, and institutional knowledge;
- Enhance research visibility and access for decision-makers, academics, and private actors;
- Link with the SNRRDC for centralized information on natural resource data.

2. Expand National Research Capacity Development

Design a multi-tiered capacity-building strategy to equip Somaliland's researchers with skills in:

- Advanced analytics (Python, R, GIS, data visualization);
- Impact evaluation, policy brief writing, and academic publishing;
- Cloud-based research platforms and data governance.

3. Promote University–Industry–Government Research Linkages

Create institutionalized platforms to promote:

- Joint research ventures between universities and private firms;
- Applied research funding calls co-financed by government and industry;
- Innovation fellowships embedded in national development projects.

4. Institutionalize the Annual National Research and Innovation Forum

Hold an **Annual National Research Forum** to:

- Track the implementation of the National Research Priorities;
- Promote inter-sectoral dialogue and knowledge exchange;
- Recognize high-impact research contributions from national and international stakeholders.

5. Digitize Sectoral and Government Data

Support ministries and agencies to digitize, standardize, and synchronize datasets across platforms. The SNRRDC and the National Research Portal should jointly serve as digital custodians of Somaliland's knowledge and resource datasets.

10.3 Suggestions for Further Research

1. Sector-Specific Baseline Studies

Commission comprehensive baseline research in:

- Agronomic systems and food value chains;
- Mineral wealth mapping and extractive industries;
- Fish stock assessments and marine biodiversity;
- Renewable energy potential and green infrastructure feasibility.

2. Institutional Design Study for SNRRDC

Conduct a feasibility and institutional structuring study for the **Somaliland Natural Resources Research and Database Center**, focusing on:

- Legal and regulatory setup;
- Technical infrastructure and staffing;
- Inter-agency integration and international partnerships.

3. Innovation Infrastructure and Capacity Mapping

Map existing innovation ecosystems, including university labs, startup incubators, and research centers to:

- Identify resource needs;
- Prioritize investment;
- Guide innovation funding mechanisms.

4. University Student Integration in National Research

Explore strategies to actively integrate **university students into national research initiatives** through:

- Structured internships and field placements within ministries and research centers;
- Student-led research competitions on national priorities;
- Curriculum-aligned national datasets for academic projects and theses.

5. Research-to-Policy Uptake Assessment

Undertake impact assessments on how past research has influenced public policy or investment programming. This will inform future mechanisms for **translating evidence into implementation** and improving government responsiveness.

Closing Statement

The completion of the *Research Needs and Priorities Assessment Report 2025* is a critical milestone in our national pursuit of a knowledge-driven, evidence-informed development model. This assessment represents not only a diagnostic of Somaliland's research landscape, but also a strategic blueprint for building a coordinated, sector-responsive, and future-focused national research ecosystem.

Under the leadership of the Ministry of Investment and Industrial Development, this report is a formal reaffirmation that research is no longer to be viewed as an auxiliary activity or an academic afterthought. Rather, it must be fully embedded in how we plan, govern, invest, and industrialize as a nation. The Ministry will take firm responsibility for operationalizing the findings and recommendations articulated herein, through the institutional authority and coordination mandate vested in the Research and Development Department.

The report's recommendations—including the establishment of the Somaliland Natural Resources Research and Database Center (SNRRDC), the full launch of the National Research Portal, and the formation of the National Research Coordination Forum—are not mere proposals for deliberation. They are strategic imperatives. These institutions and mechanisms will be designed, implemented, and governed under the Ministry's leadership as part of our broader commitment to integrating research with economic policy, sectoral development, and investment planning.

Through this process, the Ministry will strengthen its role not just as a policymaker, but as an engine of evidence-based governance. We will lead in mobilizing resources, enforcing institutional coordination, and aligning national research priorities with our economic development goals. We will work closely with academic institutions, industry actors, civil society, and development partners to institutionalize a culture of high-impact research and innovation.

This report should be regarded by all stakeholders as a foundational framework for shaping Somaliland's research landscape between 2025 and 2030. It is a call to action, grounded in empirical evidence and developed through inclusive national dialogue. The Ministry expects all relevant actors—from universities and research centers to line ministries and investment bodies—to align their strategies and resources with this national framework.

Somaliland's future will be shaped by its ability to generate and apply knowledge in service of its people. With this report, we declare our readiness not just to reform, but to lead. The era of fragmented research is ending. We are ushering in an era where national priorities, research excellence, and policy integration converge—under coordinated leadership, with shared responsibility, and for the collective benefit of the Republic of Somaliland.

Ibrahim Abdikarim Mohamed
Director of Research and Development Department

NATIONAL RESEARCH NEEDS & PRIORITIES ASSESSMENT REPORT 2025

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Ministry of Investment & Industrial Development