SOMALIA NATIONAL
BUREAU OF STATISTICS
Federal Republic of Somalia

SDG ENVIRONMENTAL INDICATORS REPORT

December, 2025

SUSTAINABLE DEVELOPMENT GOALS


01
NO POVERTY
02
ZERO HUNGER
03
GOOD HEALTH
& WELL-BEING
04
QUALITY
EDUCATION
05
GENDER
EQUALITY
06
CLEAN WATER
AND SANITATION
07
AFFORDABLE
AND CLEAN ENERGY
08
DECENT WORK
AND ECONOMIC
CROWTH
09
INDUSTRY, INNOVATION
AND INFRASTRUCTURE
10
REDUCED
INEQUALITIES
11
SUSTAINABLE CITIES
AND COMMUNITIES
12
RESPONSIBLE
CONSUMPTION AND
PRODUCTION
13
CLIMATE ACTION
14
LIFE BELLOW
WATER
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PEACE, JUSTICE AND
STRONG INSTITUTIONS
17
PARTNERSHIPS
FORTHE GOALS
SUSTAINABLE
DEVELOPMENT
GOALS

FOREWORD

It is with great pride that I present the first-ever Somalia SDG Environmental Indicators Report, a landmark achievement for the Somalia National Bureau of Statistics (SNBS), the national statistical system and a pivotal moment in the advancement of environmental statistics in the country. This report is a testament to the strong collaboration and trust-based partnerships that SNBS continues to build with administrative data producers across government.

I extend my sincere appreciation to the Ministry of Environment and Climate Change, the Ministry of Livestock, Forestry and Range, the Ministry of Health and Human Services, the Ministry of Energy and Water Resources, Ministry of Fisheries and Blue Economy, the Somalia Disaster Management Agency, and all institutions that worked closely with SNBS and shared essential administrative data. Your contributions were critical in producing this report, and they highlight what is possible when national institutions work together with a shared purpose.

This publication is especially significant as Somalia prepares for its 2026 Voluntary National Review (VNR). Environmental indicators have historically been among the most challenging to measure, yet they are central to understanding the country's development trajectory. This report provides available data for key SDG indicators under Goals 6- Clean Water and Sanitation, 13- Climate Action, 14- Life Below Water, and 15- Life on Land, addressing long- standing gaps and laying the groundwork for a far more comprehensive and credible VNR cycle.

Continued investment in SDG data, particularly administrative data is essential. Strengthening these systems will enable better reporting and also ensure that environmental issues, which disproportionately affect Somalia and its communities, are understood and addressed through accurate, timely, and reliable evidence. Environmental challenges cannot be confronted without sound data and this report brings us one step closer to building the evidence base required for informed policymaking and effective national planning.

As we look ahead, I am confident that this report will contribute significantly to the 2026 VNR, supporting Somalia's ambition to achieve 100% SDG data coverage by the 2026 VNR. Together, we are building a statistical system capable of driving sustainable development, protecting our environment, and shaping a more resilient future for our nation.

Dr. Abdisalam Abdirahman Mohamed
Director General

Somalia National Bureau of Statistics

ACKNOWLEDGMENTS

The Somalia National Bureau of Statistics (SNBS) extends its deepest appreciation to all those who played a vital role in the preparation of the SDG Environmental Indicators Report. This publication is the result of dedicated teamwork, strong collaboration, and a shared commitment to strengthening Somalia's environmental statistics and SDG reporting.

We extend special recognition to the Director-General, Dr. Abdisalam Abdirahman Mohamed, and the Deputy Director-General, Mr. Abdirahman Omar Dahir, for their vision and unwavering support in prioritizing this report. Their leadership has been instrumental in recognizing the importance of environmental indicators within the SDG framework, particularly as Somalia prepares for the 2026 Voluntary National Review (VNR). Both the DG and DDG have consistently championed the goal of achieving near-complete SDG indicator coverage by 2026, emphasizing that environmental data is essential for reporting as well as for shaping policies that address the climate and ecological challenges disproportionately affecting Somalia.

We also acknowledge with sincere gratitude the SNBS team, whose professionalism and determination made this report possible. Namely, Miss Fadumo Mumin, Director of Policy, Planning and Coordination Services, and Sakariye Ahmed- NSDS, M&E and SDG Head of Section, Zakariye Hashi- Governance Statistics Head of Section and Abdirazak Dahir Statistician within the Governance Statistics Section and Iman Jama- Head of Section for Coordination and FMS Services. The team worked diligently to assemble, validate, and analyses the environmental indicators presented in the report. Their efforts reflect SNBS's growing technical capacity and our commitment to advancing high-quality SDG data for national development.

SNBS further expresses its heartfelt appreciation to the administrative data producing ministries and institutions whose contributions were essential to this report. We acknowledge the valuable collaboration of the Ministry of Livestock, Forestry and Range Mr. Abdirahman Mohamed the Director of Planning, the Ministry of Health and Human Services- Mr Hassan Aden Nur, WASH and Environmental Data manager, the Ministry of Fisheries and Blue Economy- Mr. Kenadid Ali- the Director of Marine Environment and Protection, the Ministry of Environment and Climate Change Ms. Hafsa Omar-the Director of Climate Change as well as the Ministry of Energy and Water Resources and the Somalia Disaster Management Agency (SoDMA), and all related agencies that provided crucial datasets and technical inputs. Your partnership has been central to filling long-standing environmental data gaps and building a stronger evidence base for SDG monitoring.

Finally, SNBS appreciatively acknowledges the financial and technical support of UNDP and the Swiss Agency for Development and Cooperation (SDC) in advancing Somalia's environmental statistics and SDG reporting agenda. Their recognition and prioritization of environmental and climate data as a national development imperative has contributed to expanding SDG data availability and coverage in Somalia by enabling consultations, coordination with administrative data producers, and the compilation and validation of key environmental indicators. This support has strengthened the national evidence base needed for climate-responsive policy planning, improved transparency and accountability in SDG monitoring, and reinforced longer-term efforts to institutionalize routine, high-quality environmental data production and reporting as Somalia prepares for the 2026 Voluntary National Review (VNR).

Together, these collective efforts have made this report a significant step forward in strengthening the SDG data availability, quality, and use of environmental data in Somalia. It represents a foundation upon which the country can continue building toward a robust 2026 VNR and a national statistical system capable of supporting sustainable and resilient development.

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LIST OF ABBREVIATION

CO	Carbon Dioxide
COVID-19	Coronavirus Disease, 2019
DRR	Disease Risk Reduction
EEZ	Exclusive Economic Zone
FOA	Food and Agriculture Organization
GIS	Geographic Information System
GtCOe	Gigatonnes of Carbon Dioxide Equivalent
GHG	Greenhouse Gas
GDP	Gross Domestic Product
HFCs	Hydrofluorocarbons
IUU	Illegal, Unreported and Unregulated
LDN	Land Degradation Neutrality
LSCI	Liner Shipping Connectivity Index
LMIS	Livestock Market Information System
MDAs	Ministries, Departments and Agencies
MoECC	Ministry of Environment and Climate Change
MFBE	Ministry of Fisheries and Blue Economy
NEC	National Economic Council
NOAA	National Oceanic and Atmospheric Administration
NTP	National Transformation Plan
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
PPM	Parts Per Million
PFCs	Perfluorocarbons
QGIS	Quantum Geographic Information System
SoDMA	Somalia Disaster Management Agency
SWALIM	Somalia Water and Land Information Management
SDG	Sustainable Development Goal
SNBS	Somalia National Bureau of Statistics
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
NDP	United Nations Development Program
WASH	Water, Sanitation and Hygiene

EXECUTIVE SUMMARY

This Progress, Opportunities and Gaps in SDG Environmental Indicators report, provides a data-driven snapshot of Somalia's progress toward key environmental goals under the 2030 Agenda for Sustainable Development. It focuses on four priority areas; SDG 6 on Clean Water and Sanitation, SDG 13 on Climate Action, SDG 14 on Life Below Water and SDG 15 on Life on Land. The analysis draws primarily from administrative data from key national ministries, departments and agencies to evaluate progress, identify gaps and support policy planning for sustainable development and environmental resilience.

Somalia's unique geography and ecology, spanning arid lands, rangelands, river valleys and the longest coastline in mainland Africa; present both opportunity and challenges. While natural resources form the backbone of the national economy, they are increasingly threatened by recurrent droughts, deforestation, land degradation and the growing impacts of climate change. Strengthening data systems and institutional coordination is therefore essential for effective monitoring and long-term environmental protection.

KEY FINDINGS

1.Clean Water and Sanitation

Between 2021 and 2024, Somalia made measurable gains in access to basic drinking water. Rural access increased from 57 percent to 68 percent, while urban coverage rose from 81 percent to 84 percent, gradually narrowing the rural-urban gap. However, sanitation remains a critical challenge; with only 15-17 percent of the population using safely managed sanitation services, open defecation has declined over time in both rural and urban areas; despite over a quarter of the rural communities still practicing it. The reduction in open defecation is a positive improvement and suggests some effectiveness in sanitation campaigns, particularly in rural setting. Access to hygiene facilities has deteriorated sharply, particularly in rural areas, where the share of households with no facility rose from 42 percent in 2021 to 76 percent in 2024. These findings highlight urgent need for tackling infrastructure, maintenance and behavioral challenges in the WASH sector.

2.Climate Action

Greenhouse gas emissions almost doubled between 2021 and 2024, surpassing 50,000 GtCO2e, with land use and agriculture identified as the main contributors. Despite this rise, Somalia has demonstrated a strong policy response through the Nationally determined Contribution, the National Adaptation Plan and so on. National efforts to integrate climate action into the NTP and improved disaster preparedness through SoDMA show growing alignment with the Sendai Framework. Yet, capacity gaps, limited financing and weak data integration hinder the translation of policy into measurable outcomes.

3.Life Below Water

Somalia's fisheries sector shows positive recovery trends. Domestic fish consumption has increased steadily since 1990, and the country achieved a 4 out 5 score on FOA's index for implementing anti-IUU fishing measures. The progress reflects stronger legal frameworks, better licensing systems and enforcement of maritime regulations. Somalia's Liner Shipping Connectivity Index also improved significantly from 143 in 2015 to 93 in 2024; a trend that signals enhanced maritime trade integration. Nonetheless, IUU fishing, marine pollution and limited infrastructure continue to constrain full realization of the blue ecosystem's potential.

4.Life on Land

Terrestrial ecosystems remain under severe stress. Biological degradation with 38 percent and soil erosion by water with 34 percent affect over 70 percent of Somalia's degraded land area. Livestock production, contributing nearly half of the GDP, underscores the economy's dependence on natural resources but also its exposure to environmental degradation from overgrazing and deforestation. Somalia's commitment to Land Degradation Neutrality and ongoing reforestation and soil conservation programs are positive steps toward ecological restoration. However, scaling these interventions requires stronger data systems, land-use monitoring and cross-sectoral coordination.

CROSS-CUTTING DATA CHALLENGES

The most significant limitation identified across all environmental indicators is the fragmentation of data among government institutions. The absence of a unified data-sharing framework, inconsistent indicator definitions and weak coordination mechanisms impede the effective monitoring of SDG targets. Many institutions collect fragmented data, resulting in data silos, inconsistencies and underutilized resources. These issues limit evidence-based policy formulation and weaken Somalia's ability to report reliably on regional and global SDG platforms.

RECOMMENDATIONS

Reliable and coordinated data systems are essential for tracking Somalia's progress toward the SDGs. To address data gaps, the report proposes the following recommendations:

» Strengthening Somalia's sustainable development data ecosystem requires a unified, technology-driven approach anchored within the Somalia National Bureau of Statistics. A key priority is developing the centralized digital platform; building on the existing SDG Goal Tracker, to aggregate all SDG-related data from government institutions and international organizations. This will ensure the platform accurately reflects the national availability of administrative and survey-based SDG indicators, enabling a more transparent measurement of progress. To support seamless collaboration, the system should be designed for full interoperability, using share data standards, comprehensive metadata catalogues and open APIs that allow datasets to be exchanged, compared and integrated across institutions.

» Advancing data accuracy and real-time insight also demands the integration of geospatial technologies, including GIS and remote-sensing layers, to support dynamic monitoring of progress in SDG environmental indicators. This effort should be embedded within national development frameworks, such as the NTP and the Centennial vision 2060, ensuring long-term environmental monitoring and sustainability. Equally important is the institutionalization of an Inter - ministerial SDG Data Coordination Team, this allows smooth data collection, validation, sharing and dissemination. Clear mandates, standardized reporting schedules and agreed- upon data sharing protocols will also help reduce duplication, minimize data silos and promote accountability.

» To uphold international comparability and methodological rigor, Somalia should adopt national standard for SDG data collection aligned with the UNSD's indicator methodologies. Regular data-quality audits will be essential for identifying inconsistencies and implementing correction mechanisms across ministries and agencies. Building institutional capacity is another critical pillar; continues technical training for data analytics, data management, GIS skills and SDG reporting requirements. Providing government institutions with the necessary analytical tools, such as license for Tableau, Stata and ArcGIS, will expand the country's analytical capabilities and promote evidence-based decision-making.

» Finally, promoting transparency and broad stakeholder engagement requires adopting an "open data by default". Ensuring that data produced by government institutions and donor-funded projects adhere to national standards and are shared directly with SNBS will perhaps strengthen coordination and enhance the national data ecosystem. Together, these reforms will create a coherent, reliable and future-ready SDG data ecosystem that empowers Somalia to monitor progress effectively and drive sustainable development outcome nationwide.

1.0. INTRODUCTION

1.1. BACKGROUND

Somalia, located in the horn of Africa, is gifted with rich biodiversity and a distinctive climate characterized by varied weather patterns, from the highlands of the North to the vast arid and semi- arid lands in the central and southern regions and extending to extensive coastline of 3,333 kilometers along the Indian Ocean and Gulf of Aden, Somalia hosts a wide range of ecosystems.

This ecological diversity supports a wealth of flora and fauna, many of which are unique to the region and underpins critical opportunities for sustainable human, social and economic development. These ecosystems contribute to the economic growth of the country and are fundamental to livelihoods, food security and climate resilience in Somalia.

Due to the increasing impact of global warming, Somalia faces a wide range of environmental challenges. These are motivated by a combination of natural and human-induced factors, including recurring droughts, socio-political instability and inadequate infrastructure. In light of these challenges, the Somalia National Bureau of Statistics prioritized the monitoring and reporting of the SDGs as they are essential for tracking the country's progress, identifying key challenges and supporting the country's long-term development, the wellbeing of its citizens and the protection of its fragile ecosystem.

This report focuses on Somalia's progress toward achieving environmental sustainability as outlined by the SDGS. It provides an analysis of various environmental indicators under SDG 6, SDG 13, SDG 14 and SDG 15, which form the foundation of Somalia's commitment to greener and more resilient future. Analyzing these indicators, this report seeks to highlight both the challenges and the opportunities present in Somalia's efforts to achieve environmental sustainability.

This report represents one of the SNBS' commitments to monitor and present Somalia's progress toward achieving the 2030 Agenda."

GLOBAL PROGRRESS ON CLEAN WATER AND SANITATION

The SDG 6 aims to ensure the availability and sustainability management of clean water and sanitation for all. Access to safe water and sanitation is the most basic human need for health, dignity and economic development, yet billions of people still lack these basic services[1]. The Goal emphasizes improving water quality, increasing water-use efficiency, protecting water ecosystems and ensuring equitable access for all communities.

The global progress of the Goal has been uneven and climate change has intensified water scarcity in many regions, making SDG 6 one of the most urgent and cross-cutting development challenges in the world. The share of the population with access to safely managed drinking water increased from 68% to 74%, while coverage for sanitation rose from 48% to 58%. Access to basic hygiene services also improved, growing from 66% to 80%. Despite these improvements, significant challenges remain. In 2024, 2.2 billion people still did not access safely managed drinking water, 3.4 billion were left without proper sanitation and 1.7b billion were without basic hygiene services at home[2].

In Somalia, achieving SDG 6 seems a bit difficult due to the increasing water scarcity, poor infrastructure and weak governance. The country faces frequent droughts and floods, erratic river flows and widespread dependence on private water vendors; leading to high costs and unsafe water. The sanitation is also a major concern, with open defecation common and waterborne diseases recurring in urban, rural and internally displaced communities. Despite these challenges, Somalia has several promising opportunities to mitigating the risks associated with water and sanitation. These include the adoption of solar-powered systems, the expansion of rainwater harvesting initiatives and support from international partners; all of which are positively contributing to improved access to and management of clean water and sanitation, positioning Somalia to make significant progress toward universal access to clean water and sanitation by 2030.

According to UN, 2.2 billion which is roughly 28% of the world population lack safely managed drinking water and 3.5 billion which is around 44% lack safely managed sanitation

1 United Nations, 2025. Goal 6: Water and Sanitation

2 United Nations. 2025. The sustainable Development Goals Report

GLOBAL PROGRRESS ON CLIMATE ACTION

The SDG 13 focuses on taking urgent action to combat climate change and its impacts on our ecosystems. Climate change is one of the greatest challenges that mankind ever encountered, threatening ecosystems, economies and human livelihoods. Raising global temperatures, extreme weather events, droughts and floods are intensifying, creating immense pressure on food systems, water resources and health services. The Goal also emphasizes the need for countries to strengthen resilience, integrate climate measures into policies and improve education and awareness about climate adaptation and mitigation. Achieving this Goal requires collective effort technological innovation and transition to low-carbon development pathways. It aligns closely with Paris Agreement, which aims to limit global warming to well below 2°C and pursue efforts to limit it to 1.5°C above pre-industrial levels.

Climate change is rapidly worsening, with 2024 becoming the hottest year ever recorded; about 1.55°C warmer than pre-industrial times. Extreme intensifying weather have caused the highest level of climate-related displacement in 16 years, while also deepening insecurity, economic losses and global instability[3].

In the context of Somalia, the effects of climate change are profound and far-reaching, compounding existing challenges such as poverty, conflict and weak infrastructure. The country faces recurrent droughts, erratic rainfall and frequent flooding, all of which undermine agricultural productivity and threaten food and water security. Pastoralist and farming communities are particularly valuable, as changing weather patterns disrupt traditional livelihoods and contribute to displacement and conflict over scarce resources. Despite these challenges, Somalia has opportunities to advance climate action. The government has developed the Nationally Determined Contribution and the National Adaptation programmer of Action, outlining strategies for renewable energy adoption, sustainable land management and climate- resilient infrastructure. International partners are also supporting community-based adaptation, reforestation projects and expansion of renewable energy systems.

According to NOAA, global average atmospheric carbon dioxide was 422.8 ppm, in 2024, a new record high. This made 2024 the hottest year ever recorded.

3 United Nations. 2025. The sustainable Development Goals Report

GLOBAL PROGRRESS ON LIFE BELOW WATER

The SDG 14 on Life Below Water, aims to promote the conservation and sustainable use of the oceans, seas and marine resources. It recognizes that oceans are essential to human existence, food security, climate regulation and biodiversity. The Goal targets the reduction of marine pollution, the protection marine and coastal ecosystems, the regulation of fishing activities and the promotion of scientific research and technology transfer to enhance ocean well-being. The Goal underscores the need for global cooperation to combat overfishing, marine pollution and ocean acidification; issues that threaten both environmental balance and economic stability, especially in developing coastal nations.

The ocean takes in roughly 23% of the carbon dioxide emissions produced by human activities each year, helping to reduce the effects of climate change. It has also absorbed over 90% of the excess heat in the Earth's climate system. As a result, ocean temperatures have reached record levels, leading to widespread marine heatwaves that endanger diverse ecosystems and are causing the death of coral reefs around the globe[4].

In the context of Somalia, SDG 14 presents both significant challenges and opportunities. Somalia has the longest coastline in mainland Africa; stretching 3,333-km, it offers vast marine resources, yet decades of conflict, weak governance and limited enforcement have led to illegal, unreported and unregulated fishing, marine pollution and degradation of coastal ecosystems. Local fisheries often lack the infrastructure, modern fishing technologies, regulatory and enforcement support to engage in sustainable practices, Climate change and rising sea temperatures on the other hand pose significant challenges, affecting fish stocks and coral habitats. Apart from the challenges, Somalia's strategic presences in the Indian Ocean provides immense potential for sustainable fisheries, blue economy initiatives and maritime trade. With Somalia's most recent projects aimed to promote life below water, investment in fisheries and strengthening regional cooperation, the country is on the way to effectively utilize its marine resources to promote food security, employment and economic growth while contributing to the global efforts of SDG 14.

According to UNEP, around 11 million tons of plastic enters the ocean every year. That's the equivalent of us dumping 2,000 garbage trucks full of plastic into the world's oceans, rivers and lakes every single day.

4 United Nations. 2020. Life Below Water: Why it matters.

GLOBAL PROGRRESS ON LIFE ON LAND

The SDG 15 on Life on Land aims to promote the protection, restoration and sustainable use of terrestrial ecosystems, with special focus on combating desertification, halt biodiversity loss and manage forests responsibly. This goal emphasizes the importance of preserving ecosystems like forests, grassland and wetlands; which are critical for regulating the climate, supporting biodiversity and providing resources such as food, water and medicine. The key priorities of the goal include halting land degradation, promoting sustainable agriculture and restoring ecosystems through reforestation and improved land management practices; while leveraging indigenous skills and ensuring the rights of local communities.

Forests cover about 31% of the Earth's land surface and are vital to life; they provide the air we breathe, the water we drink and the food we eat. They are also home to over 80%of all terrestrial species of animals, plants and insects. Yet, biodiversity is disappearing faster than at any other time in human history. Around one-fifth of the Earth's land; over 2 billion hectares is degraded. This degradation threatens the well-being of 3.2 billion people, accelerates the extinction of species and worsens climate change[5].

In Somalia, SDG 15 presents both opportunities and significant challenges such as widespread land degradation, deforestation and the overwhelming impact of climate change and conflicts over scarce resources. Overgrazing, illegal logging and drought have worsened desertification; while instability has hindered effective environmental governance. On the other hand, the government of Somalia in collaboration with its development partners is actively implementing programs aimed to promote sustainable agriculture, agroforestry and land restoration. These efforts are designed to support the restoration of ecosystems, safeguard biodiversity and the sustainable management of land use across the country.

According to UNSTATS, between 2015 and 2019 only, at least 100 million hectares of productive land were degraded annually, adversely impacting global food and water security.

5 United Nations. 2020. Life Below Water: Why it matters.

1.2. OBJECTIVES OF THE REPORT

1. To assess Somalia's current progress toward achieving selected SDG environmental indicators, including SDG 6, 13, 14 and 15.
2. To identify key environmental challenges and opportunities related to the specified SDG indicators.
3. To strengthen national statistical capacity by promoting the integration, analysis and visualization of administrative data for SDG monitoring and reporting.
4. To generate evidence-based insights that inform policy decisions and guide program interventions for sustainable environmental management.

1.3. STRUCTURE OF THE REPORT

This report is structured into several key sections that systematically present the introduction, data analysis, conclusion and recommendations. The following description is provided to assist readers in navigating the report and understand the flow of information.

i. Executive Summary

This section provides a concise overview of the report's key messages, findings and conclusions. It highlights the data analysis, indicating where progress is on track, where it is lagging and where data is not yet available. Additionally, it provides a brief overview of the methodology, data sources, the purpose of the report, conclusion and recommendations of the report to give readers a quick understanding of the report's scope and relevance.

ii. Introduction

This section sets the foundation for the report by providing an overview on the SDGs 6, 13, 14 and 15. It explains the relevance of SDGs to environmental sustainability and outlines how these goals are interconnected and critical to Somalia's development priorities. It highlights challenges encountered in collecting and reporting of the specified indicators and the need to strengthen data collection systems, build capacity within the government institutions and promote a culture of data sharing and integration. The introduction also describes the scope of the report and methodology employed in compiling and analyzing the report.

iii. Data analysis

This chapter presents a detailed analysis of the findings, using administrative data from various government entities and institutional partners. The findings are organized thematically to reflect areas such as water resources, climate, marine and terrestrial ecosystems. Each goal includes tables, charts and narrative analysis to provide a clear picture of the data presented.

iv. Conclusion and Recommendations

The conclusion summarizes the key findings of the report and reflects on Somalia's overall progress toward achieving the environmental components of the SDGs. It identifies areas where the country is making significant strides, such climate adoption or water access in urban areas, as well as areas where progress is slow or data is insufficient. The section provides actionable recommendations for improving environmental outcomes, such as investing in data systems, enhancing coordination among institutions, increasing awareness of environmental issues, and integrating SDG indicators into national development planning.

1.4.METHODOLOGY

The methodology of the report on SDG Environmental Indicators in Somalia is grounded in a mixed-methods research design that incorporates both quantitative and qualitative techniques to provide a comprehensive assessment of progress and challenges. The data sources include data collected from key government institutions such as the Ministry of Environment and Climate Change, Ministry of Fisheries and Blue Economy, Ministry of Livestock, Forestry and Range, and the Ministry of Health and Human Services. These data sources provided sector-specific reports and datasets, which served as the foundation for evaluating indicators related to environmental sustainability, climate resilience, biodiversity conservation, and public health impacts linked to environmental conditions.

The report also employs descriptive and correlation analytical approaches to interpret the data collected from relevant MDAs, enabling the systematic encapsulation of the findings. These methods allow for the identification of trends, patterns and statistical relationships across various environmental indicators, contributing to vibrant understanding of the governance and institutional performance in relation to the specified SDG indicators. The integration of both numerical data and contextual insights captures the measurable progress and the underlying structural and policy-related factors affecting the environment in Somalia.

The report also utilized statistical and visualization tools to enhance data presentation and analysis. Microsoft Excel and Tableau were employed to generate charts that visually communicate key findings and trends. Additionally, QGIS was used to map the geographic distribution, allowing for the detection of spatial patterns, clusters and disparities across regions.

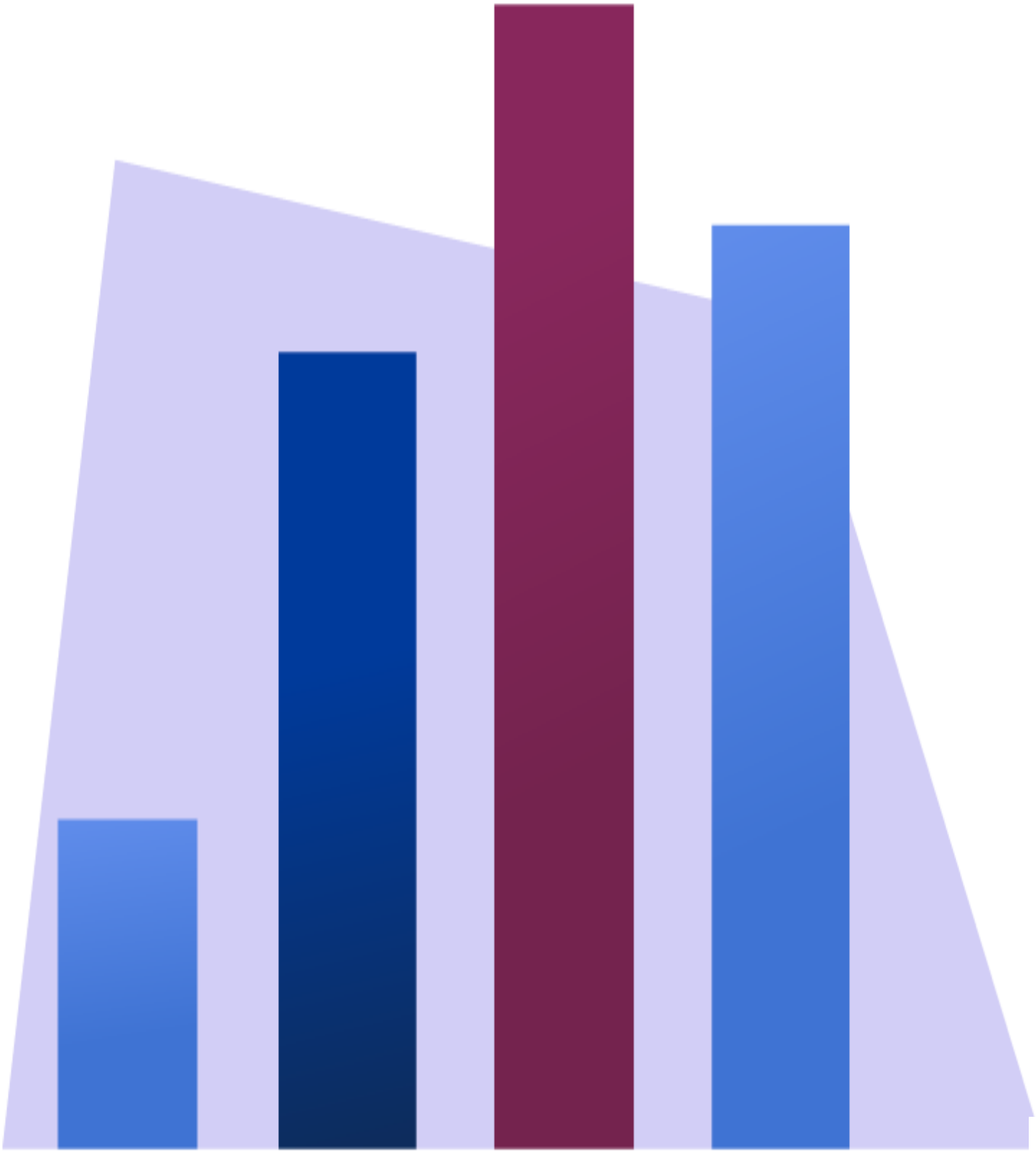
1.5. SCOPE OF THE REPORT

This Report aims to monitor and present key environmental indicators aligned with the SDGs, with special focus on SDG 6, 13, 14 and 15. The focus is on generating evidence-based insights to inform NTP, policy formulation and international reporting obligations. The scope of the report covers a selected set of SDG goals that monitor the challenges and the progress of the environment, including land, water, climate, biodiversity and sustainable resource use in Somalia.

1.6. LIMITATIONS OF THE REPORT

The report encountered several limitations, primarily stemming from data sharing challenges and fragmentation across relevant government institutions. Despite the presence of valuable administrative data, a lack of coordination and standardized data-sharing mechanism among government institutions have led to inconsistencies and gaps. Data silos remain a significant barrier, where institutions collect and store data independently without integrated systems and protocols for interoperability.

This fragmentation hampers the ability to conduct comprehensive, cross-sectoral analysis and limits the effectiveness of monitoring progress on SDG environmental indicators. As a result of these limitations, the SNBS had to allocate additional time and resources to address and minimize them, ensuring the report deliver a comprehensive and well-rounded analysis. These challenges underscore the urgent need of strengthening national capacities in data collection, management and inter-agency collaboration.



2.0 DATA ANALYSIS

2.1. CLEAN WATER & SANITATION

INTRODUCTION

Access to clean water, adequate sanitation and hygiene services is fundamental for human health, dignity and sustainable development. The SDG 6 seeks that fundamental right for everyone, recognizing that safe water and sanitation as essential tools for eradicating poverty, reducing inequality and improving quality of life[6]. In Somalia, where climate variability, population growth and limited infrastructure continue to challenge service delivery, progress toward SDG 6 remains central to national and community resilience.

Between 2021 and 2024, significant efforts have been made to improve water access and sanitation coverage across rural and urban areas[7]. The findings show gradual improvements in access to basic drinking water, expansion of piped and non-piped services and moderate gains in hygiene and sanitation facilities. The findings in this chapter also highlight persistent disparities between rural and urban communities, stagnation in wastewater treatment and declining hygiene coverage.

Achieving this Universal Goal, Somalia will require not only physical access but also the quality, reliability and sustainability of WASH services. Strengthening local governments, promoting community participation and expanding climate-resilient water systems are critical to ensuring that all households; particularly those in rural areas benefit from safe, reliable and equitable water and sanitation services. In contrast, the findings presented in this chapter directly inform national efforts to monitor the accessibility of water and sanitation services and guide interventions for long-term sustainability.

SDG 6 INDICATORS

Based on the data provided in drinking water, accessibility, availability, sanitation and wastewater management; this chapter directly responds to the following indicators.

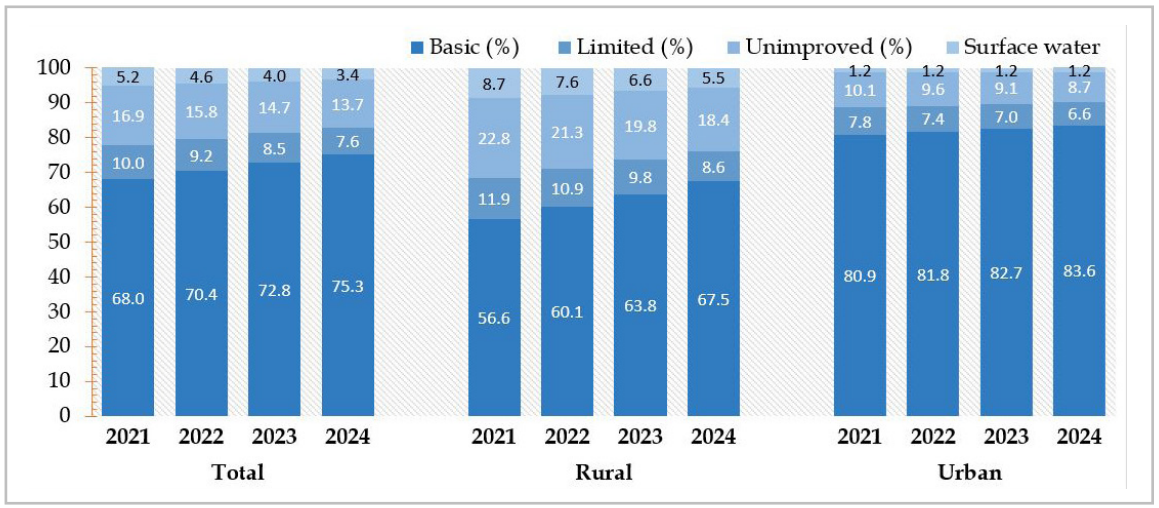
- Indicator 6.1.1 on the proportion of population using safely managed drinking water services. (See table 2.1)
- Indicator 6.2.1 Proportion of population using:
    a. Safely managed sanitation services. (See table 2.6)
    b. Hand-washing facility with soap and water. (See table 2.8)
- Indicator 6.3.1 Proportion of domestic and industrial wastewater flows safely treated. (See table 2.8)

6 United Nations, 2010. General Assembly Adopts Resolution Recognizing Access to Clean Water, Sanitation.
7 Ministry of Health and Human Services, 2025

Table 2.1: Proportion of People Using Drinking Water Service Levels by Area (2021-2024)

	Basic			Limited			Unimproved			Surface Water		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2021	80.9	56.6	68.0	7.8	11.9	10.0	10.1	22.8	16.9	1.2	8.7	5.2
2022	81.8	60.1	70.4	7.4	10.9	9.2	9.6	21.3	15.8	1.2	7.6	4.6
2023	82.7	63.8	72.8	7.0	9.8	8.5	9.1	19.8	14.7	1.2	6.6	4.0
2024	83.6	67.5	75.3	6.6	8.6	7.6	8.7	18.4	13.7	1.2	5.5	3.4

Figure 2.1: Proportion of People Using Drinking Water Service Levels by Area (2021–2024)



Ministry of Health and Human Services, 2025

Access to basic water services shows steady improvement from 68 percent in 2021 to 75 percent in 2024, driven by a gradual reduction in both limited and unimproved sources. Surface water use declines slightly over the period, indicating overall progress in national water service provision. The data show a clear and positive trend in access to basic drinking water services across both rural and urban areas between 2021 and 2024. In rural areas, the proportion of the population with access to basic water services increased 11 percent from 2021 to 2024.

This increase indicates steady and meaningful progress toward universal access to safe drinking water services. Urban areas also made progress on basic drinking water with 3 percent growth over the years; this shows while urban coverage is already high, rural areas are making rapid progress, gradually narrowing the gap between the two settings. This progress also demonstrates that rural investments or programs aimed at promoting safe water access are working effectively. However, the basic drinking water variable shows r = 0.999909; a very strong correlation between urban and rural areas. The correlation coefficient is extremely close to r =+1, indicating that changes in access to basic drinking water in urban areas are almost identically mirrored in rural areas. This suggests a very consistent and synchronized pattern in the distribution or improvement of basic drinking water services across both settings.

On the other hand, the use of limited and unimproved water has declined, which is a positive outcome. In rural areas, the use of limited water dropped from 12 to 9 percent and unimproved water from 23 to 18 percent over the period, while in urban areas it fell from 8 to 7 percent for the use of limited water and 10 to 9 percent for the use of unimproved water services respectively. These downward trends show that more households are moving out of lower-quality water categories into basic service levels. This shift is particularly visible in rural areas, where the decreases in the use of limited and unimproved water services align closely with the gains in basic water service coverage. Moreover, the limited and unimproved drinking water variables demonstrates r=0.999175 and r= 0.999373; a strong positive correlation. Although still high, it is slightly lower than a perfect correlation, meaning that while urban and rural trends move closely together, there may be minimal variation in how both variables change between the two areas.

The use of surface water which is the least safe source of water remains very low in urban areas, stable at 1 percent throughout the years. Rural areas show a more variable pattern, with surface water use falling from 9 percent in 2021 to 7 percent in 2023 but then raising back to 9 percent in 2024. This small rebound could indicate a seasonal fluctuation, real setback caused by supply disruptions or local environmental factors. Additionally, the surface water variable shows no correlation because the value is constant. This implies that there is no variation between urban and rural areas as the data doesn't change in a way that allows a relationship to be measured. The dependence of surface and other unsafe water sources still poses significant health risks and well- enforced public health policies, investment in clean water infrastructure, community education and sustainable resource management are essential to ensure long-term safety and equity in access.

Basic: Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing

Limited: Drinking water from an improved source, for which collection time exceeds 30 minutes for a round trip, including queuing

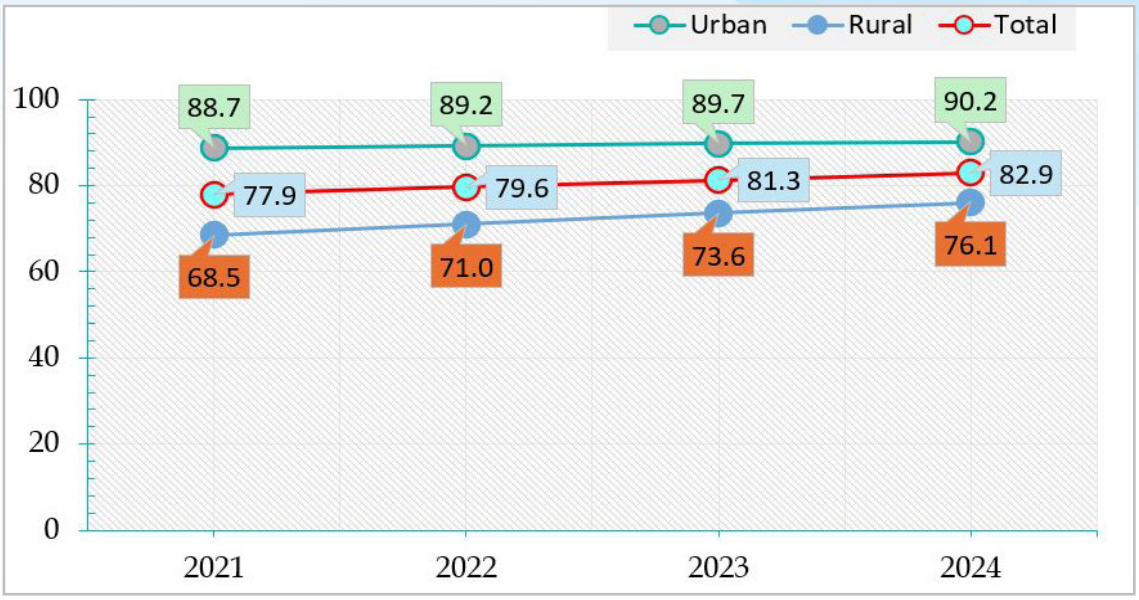
Unimproved: Drinking water from an unprotected dug well or unprotected spring

Surface water: Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal

Table 2.2: Trends in Proportion of People Using Improved Water Sources by Area (2021–2024)

	Improved water		
Year	Urban	Rural	Total
2021	88.7	68.5	77.9
2022	89.2	71.0	79.6
2023	89.7	73.6	81.3
2024	90.2	76.1	82.9

Figure 2.2: Proportion of People Using Drinking Water Service Levels by Area (2021–2024)



Ministry of Health and Human Services, 2025

The total population using improved water sources shows a steady upward trend, rising from 77.9 percent in 2021 to 82.9 percent in 2024. Although progress is consistent, the yearly increases are small, signaling slow national progress. This suggests that while efforts are working, stronger and more targeted actions are needed to accelerate overall access nationwide.

In urban areas, access improves from 88.7 percent in 2021 to 90.2 percent in 2024, maintaining a gradual level of coverage. The gradual rise reflects continued investment and easier service delivery in dense settings. However, the pace of improvement remains moderate, indicating persistent challenges even in better-served areas.

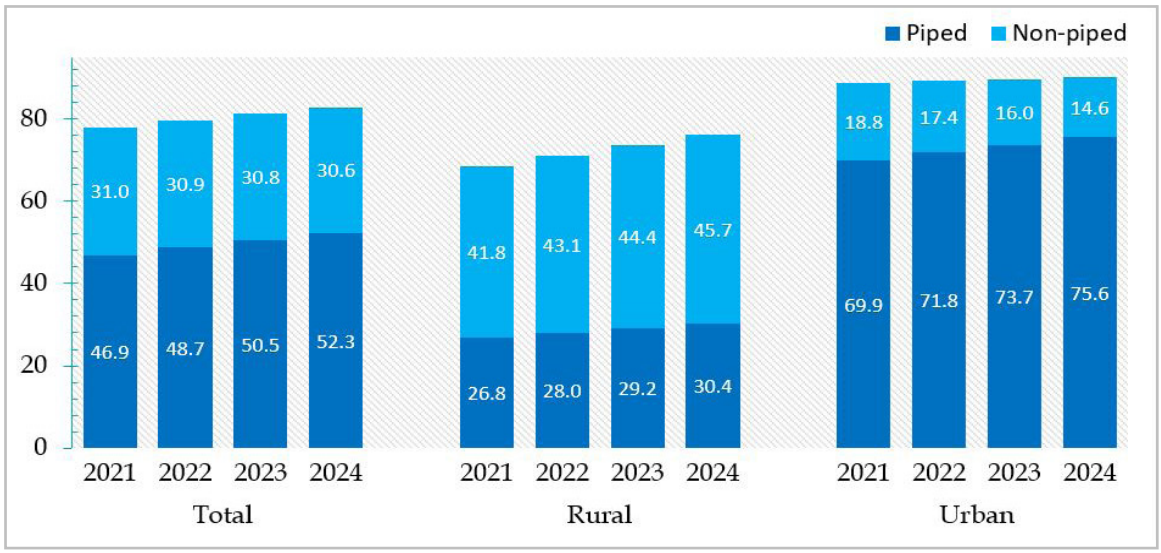
Rural areas show the lowest access but the most notable relative improvement, increasing from 68.5 percent in 2021 to 76.1 percent in 2024. The upward trend demonstrates meaningful expansion of services and efforts to reduce inequalities. Despite this, rural access continues to lag significantly behind, underscoring ongoing structural and geographic barriers. Furthermore, the improved water access variable shows r= 0.999969, which is a very strong positive correlation. The coefficient is almost exactly r= +1, underscoring that improvements in urban areas are directly and proportionally reflected in rural areas, signifying uniform development patterns.

Overall, progress is positive across all categories, with rural areas recording the largest gains and the urban-rural gap slowly narrowing. Yet, the rate of improvement remains too slow to meet universal access commitments on time. Accelerating progress will require increased investment in rural infrastructure, strengthened maintenance systems to keep water points functional, and expanded partnerships that leverage both public and private sector capacities. Enhanced policy enforcement, targeted financing for vulnerable communities, and integrating water initiatives into broader health, education, and climate programs will also be essential to sustain and scale up gains.

Table 2.3: Proportion of People Using Piped and Non-Piped Water Service Delivery Types by Area (2021–2024)

	Piped			Non-piped		
Year	Urban	Rural	Total	Urban	Rural	Total
2021	69.9	26.8	46.9	18.8	41.8	31.0
2022	71.8	28.0	48.7	17.4	43.1	30.9
2023	73.7	29.2	50.5	16.0	44.4	30.8
2024	75.6	30.4	52.3	14.6	45.7	30.6

Figure 2.3: Proportion of People Using Piped and Non-Piped Water Service Delivery Types by Area (2021–2024)



Ministry of Health and Human Services, 2025

The data shows a consistent progress, rising from 78 percent in 2021 to 83 percent in 2024, reflecting gradual expansion of both piped and non-piped improved services nationwide. This upward trend suggests strengthened investment and winding coverage in safe water infrastructure across the country.

The data also highlights the two service-delivery types of piped and non-piped for both rural and urban areas from 2021 and 2024; it reveals distinct and somewhat contrasting dynamics in each setting. For piped supplies, rural coverage rises from 27 in 2021 to 30 percent in 2024, a 3 percent increase. Urban piped coverage increases from 70 percent to 76 percent, a 6 percent increase. The data shows that both settings are improving in the access of piped water sources, but urban areas add twice the absolute percentage points over the years. The piped water variable represents r=+1, which is a perfect positive correlation. A coefficient of r= +1 means that changes in piped water access in urban areas are exactly matched by changes in rural areas, indicating total consistency between the two settings.

The none-piped row, however, moves in opposite directions by setting; none-piped water sources for rural areas increased from 42 to 46 percent whereas the none-piped water sources for urban areas declined from 19 to 15 percent. The increase in non-piped water sources in rural areas could indicate that households are increasingly accessing commercial wells or kiosks, which could provide relatively safer water compared to surface water sources. Additionally, this trend might reflect stagnation in bringing piped connections to rural households; with the growing demand instead being met through decentralized or point-source systems. In many rural areas, households rely heavily on traditional means of water transport, such as wooden carts pulled by donkeys or cattle in some areas. In addition to this, the non-piped water variable on the other hand, displays r= -1, which is a perfect negative correlation. This means that as non-piped water access increases in rural areas, it decreases in urban areas in a perfectly inverse relationship, suggesting a clear contrast in distribution trends between the two settings.

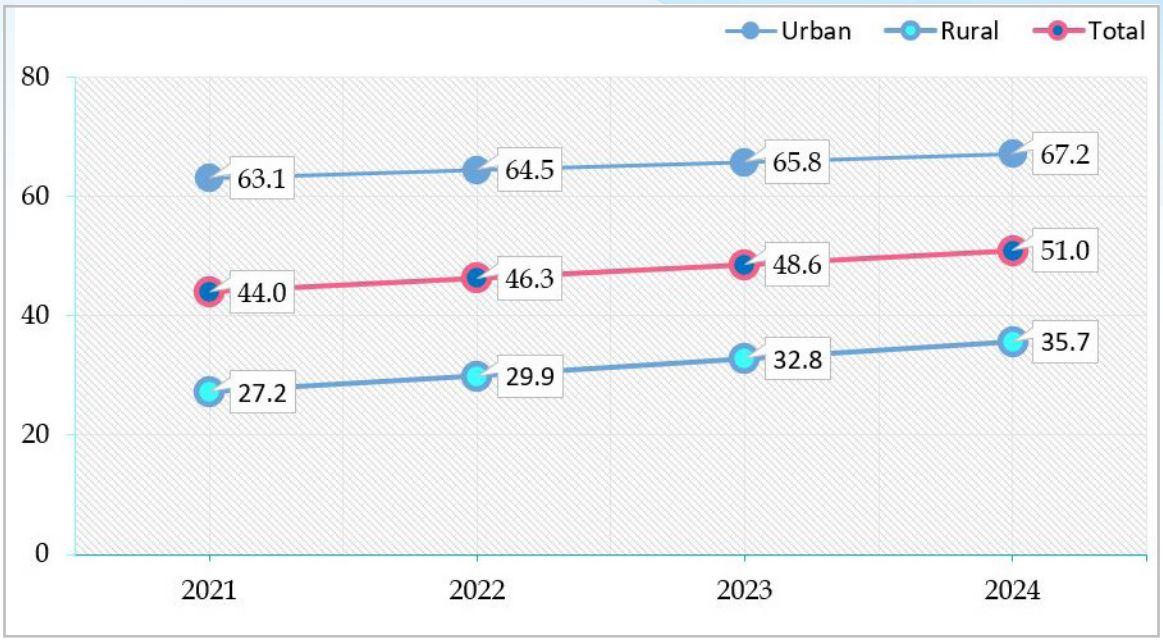
The Examining of combined coverage of the two rows helps put these shifts in context. The two categories together cover a larger share of rural households over time; rural combined goes from 69 in 2021 to 76 in 2024, an increase of 7 percentage points in their combined footprint. For urban areas the combined share rises modestly from 89 to 91 percent over the period. The rise in rural combined coverage suggests that other categories for example surface water or unimproved water are shrinking in rural areas and households are being absorbed into either piped or non-piped sources. In urban areas a large majority are already covered by piped or non-piped sources and the room for more gains is smaller.

However, if the non-piped category includes unimproved options in both areas, it would represent a significant public health concern and targeted interventions would be required at the time. Authorities should prioritize ensuring all households have access to safe, reliable and sustainable water supplies for their citizens

Table 2.4: Trends in Water Accessibilty by Urban and Rural Communities (2021–2024)

	Accessibility		
Year	Urban	Rural	Total
2021	63.1	27.2	44.0
2022	64.5	29.9	46.3
2023	65.8	32.8	48.6
2024	67.2	35.7	51.0

Figure 2.4: Trends in Water Accessibility by Urban and Rural Communities (2021–2024)



Ministry of Health and Human Services, 2025

The total percentage of the population with water accessible on premises shows a steady increase from 44 percent in 2021 to 51 percent in 2024. This indicates gradual improvement in the aptness and reliability of water access, enhancing the overall quality of water services for the consumers.

This dataset also captures water accessibility levels from 2021 to 2024 for rural and urban areas, it also reveals a consistent upward trend in both settings, though at different magnitudes and speeds.

In rural areas, accessibility increased steadily from 27 percent in 2021 to 36 percent in 2024, marking a 9-percentage point gain. This progress reflects a significant investment in rural infrastructure; these include commercial wells, community-based water transport systems, installation of new water points and maintenance of existing water sources. As a result, rural communities have benefited these infrastructure as they reduced travel distances to access water.

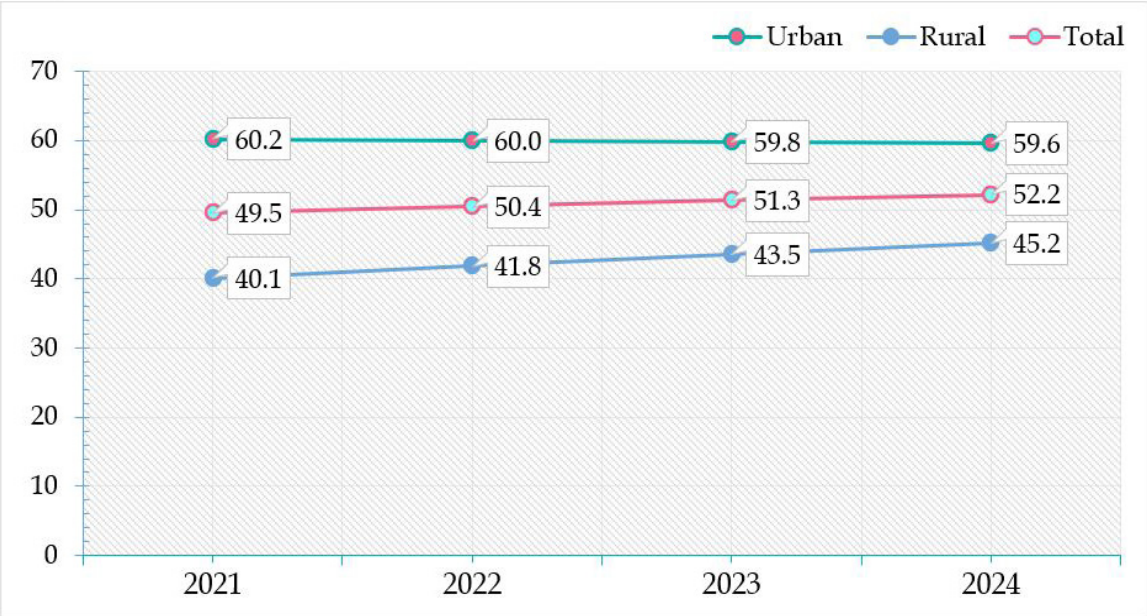
In urban areas, accessibility rose from 63 percent in 2021 to 67 percent in 2024; this progress reflects the higher baseline as the vast majority of urban communities already have relatively easier access to water sources. This increase may stem from the expanding investment on water sources such piped or other homebased water systems in urban areas or it may be due to the pre-urban neighborhoods like outskirts that previously lacked adequate supply or it could be from network upgrades improving reliability rather than physical proximity. Moreover, the accessibility variable shows r=0.99964; a strong positive correlation. While very high, it is slightly below perfect, meaning that accessibility trends in urban and rural areas move together closely but not identically, with minor discrepancies in how accessibility changes over time.

The gap between rural and urban in water accessibility remains significant but slowly narrowing. In 2021, the difference between both areas was 36 percentage points but by 2024, it had dropped to 31 percentage points; indicating that rural communities are making progress in water accessibility, albeit slowly. The progress also demonstrates some level of convergence, suggesting that targeted interventions by the government and NGOs in water access are helping close the gap. From a policy standpoint, the findings underscore the importance of sustaining rural momentum. Sustained investment in rural infrastructure; particularly in piped and safely managed water systems is essential to accelerate accessibility and reduce the existing gaps.

Table 2.5: Trends in Water Availability by Urban and Rural Communities (2021–2024)

	Availability		
Year	Urban	Rural	Total
2021	60.2	40.1	49.5
2022	60.0	41.8	50.4
2023	59.8	43.5	51.3
2024	59.6	45.2	52.2

Figure 2.5: Trends in Water Availability by Urban and Rural Communities (2021– 2024)



Ministry of Health and Human Services, 2025

The data shows a steady improvement from 49.5 percent in 2021 to 52.2 percent in 2024, indicating gradual but consistent progress in availability. The year-to-year increases are small, but the overall trend suggests strengthening reliability in water availability over the years.

This dataset presents water availability trends from 2021 to 2024 across rural and urban areas, it also provides a clear picture of gradual improvement in rural water supply alongside stagnation in urban areas.

In rural areas, availability increased from 40 percent in 2021 to 45 percent in 2024, representing an increase of 5 percentage point. This steady upward movement suggests that rural communities are gaining more consistent or dependable water sources; likely through expansion of infrastructure, improved functionality of existing systems and better water resource management. Such progress is significant because rural water systems often face challenges of seasonality, mechanical breakdowns or overuse; on the other hand, this progress in availability, reliability and maintenance of groundwater can recharge ongoing efforts.

In contrast, urban areas show a completely flat trend, holding steady at 60% availability from 2021 through 2024. This plateau suggests that while most urban residents already enjoy relatively stable water supply, the system has not improved further in terms of consistent availability. Several interpretations are possible; cities may be struggling with aging infrastructure; population growth may be outpacing supply improvements or intermittent service issues such as rationing or network failures may be preventing further gains. In other words, the urban sector appears to have reached a point of saturation, where maintaining the same availability level requires effort just to offset growing demand.

The gap between rural and urban remains notable but is slowly narrowing. For example, in 2021, the difference was 20 percentage points, by 2024, it had decreased to 15 percentage points. This reduction indicates that rural water systems are becoming more reliable relative to urban ones, reflecting gradual convergence between the two sectors; and if this pace keeps going, rural areas could approach urban availability levels within the next decade. On the other hand, the water availability variable shows r=-1; a perfect negative correlation. This indicates that increases in availability in urban areas corresponds to equivalent decreases in rural areas, highlighting a strong inverse relationship that may point to unequal resource allocation.

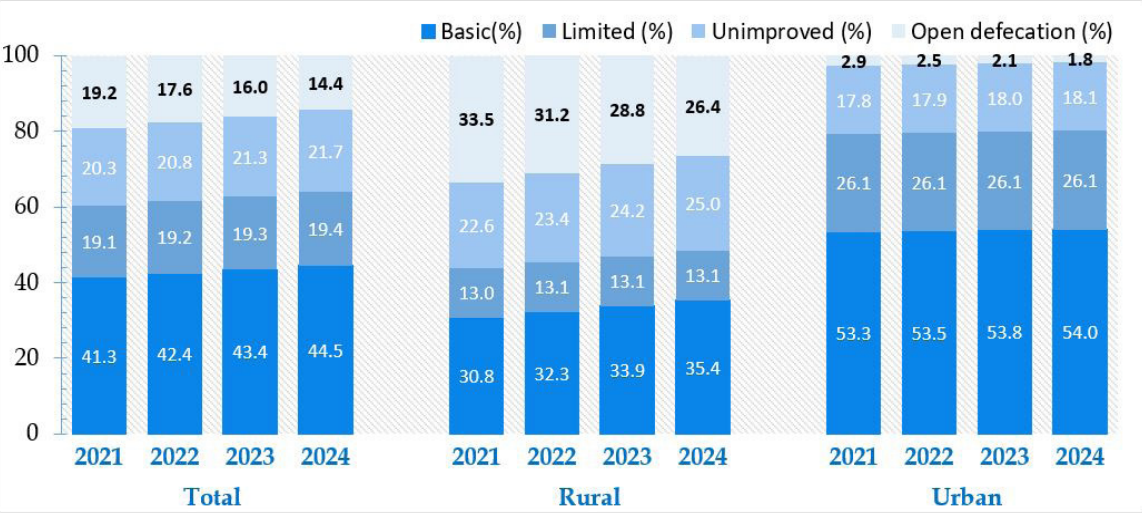
The data also highlights an important nuance; while rural availability is improving, the absolute level remain low; less than half of rural residents have consistently available water by 2024. This means that while progress is measurable, a significant portion of the rural population still faces unreliable or intermittent supply. On the other hand, urban water systems, though stable, may need renewed investment and modernization to move beyond stagnation and ensure that 100 percent of the population has reliable water all year round.

From policy perspective, the trends imply several priorities. For rural areas, the key is to sustain and accelerate reliability reliable water systems, invest in maintenance systems, protection of water sources and the resilience of climate change by rural communities to guarantee year-round availability. For urban areas, policies should focus on system resilience, tackling leakage issues, water losses and supply-demand imbalances to prevent

Table 2.6: Proportion of People Using Sanitation Service Levels by Area (2021–2024)

	Basic			Limited			Unimproved			Open defecation		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2021	53.3	30.8	41.3	26.1	13.0	19.1	17.8	22.6	20.3	2.9	33.5	19.2
2022	53.5	32.3	42.4	26.1	13.1	19.2	17.9	23.4	20.8	2.5	31.2	17.6
2023	53.8	33.9	43.4	26.1	13.1	19.3	18.0	24.2	21.3	2.1	28.8	16.0
2024	54.0	35.4	44.5	26.1	13.1	19.4	18.1	25.0	21.7	1.8	26.4	14.4

Figure 2.6: Proportion of People Using Sanitation Service Levels by Area (2021–2024)



Ministry of Health and Human Services, 2025

Access to basic sanitation facilities demonstrated modest but steady growth. Access of basic sanitation in rural areas increased from 18 percent in 2021 to 20 percent in 2024, while access improved from 36 percent to 37 percent in urban areas. Although this represents a positive change in access, the overall rate of progress remains slow. The data also highlights that urban areas maintain a clear advantage, with nearly double the coverage compared to rural areas. This persistent disparity underscores the need for a greater investment in rural infrastructure and service delivery. In addition to this, the basic sanitation variable shows r=0.99754, which is a strong positive correlation. This means that changes in basic sanitation coverage in urban areas are closely matched by similar changes in rural areas. Improvements or declines tend to occur simultaneously, indicating coordinated or uniformly influenced sanitation development.

The proportion of people with limited sanitation facilities remained unchanged throughout the for-year period, holding constant at 13 percent in rural areas and 26 percent in urban areas. This stagnation may indicate a lack of significant policy or program intervention or improvement within the category and unless authorities make measures to upgrade limited facilities to basic or safely managed facilities, communities relying on this type of service are unlikely to experience better hygiene outcomes. On the other hand, the limited sanitation variable, shows no correlation due to lack of variation. It suggests that limited sanitation levels remain unchanged or don't vary in a way that allows for meaningful comparison between urban and rural areas.

In contrast, the unimproved sanitation category shows a worsening trend in rural areas, rising from 23 percent in 2021 to 25 percent in 2024, while remaining stable at 18 percent in urban areas. The increase of unimproved sanitation in rural areas highlights inadequate progress in upgrading the poor-quality facilities or maintaining existing infrastructure. The unimproved sanitation variable indicates r=+1, which is a perfect positive correlation. The pattern of unimproved sanitation is identical in both urban and rural areas, meaning any increase or decrease occurs in complete synchrony.

Encouragingly, open defecation has declined over time in both rural and urban areas. Rural open defecation rates dropped from 34 percent in 2021 to 26 percent in 2024, showing a notable progress. Urban area rates also decreased slightly, from 3 to 2 percent, although urban areas already had low baseline figures. The reduction in open defecation is a positive improvement and suggests some effectiveness in sanitation campaigns including public awareness and program interventions, particularly in rural setting. The variable reflects r= 0.997307; a strong positive correlation, this underscores that trends in open defecation are nearly the same in both settings. If open defecation reduces in urban areas, it almost equally reduces in rural areas. However, the fact that over a quarter of the rural communities still practice open defecation indicates that more policy and program interventions are required to achieve sanitation coverage.

Basic: Use of improved facilities that are not shared with other households

Limited: Use of improved facilities that are shared with other households

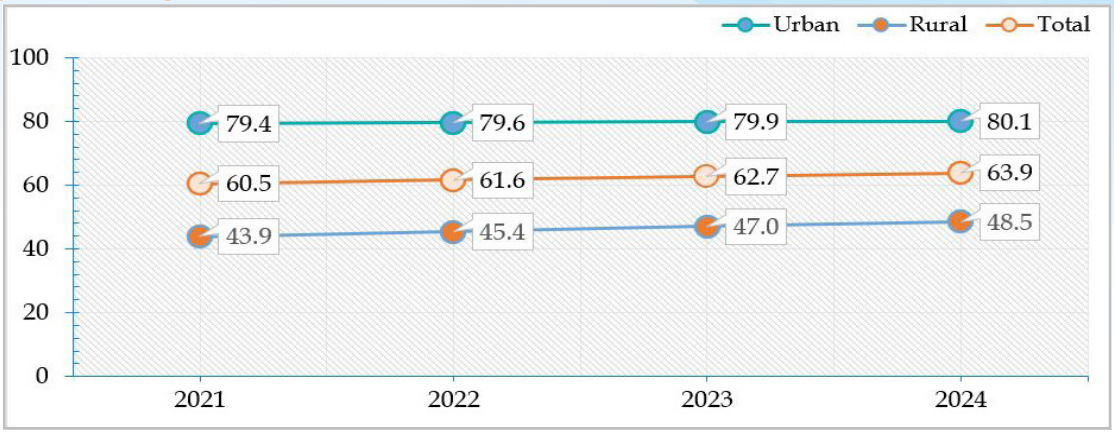
Unimproved: Use of pit latrines without a slab or platform, hanging latrines or bucket latrines

Surface water: Disposal of human faces in fields, forests, bushes, open bodies of water, beaches or other open places, or with solid waste

Table 2.7: Trends in Access to Improved Sanitation by Urban and Rural Communities (2021–2024)

	Improved Sanitation		
Year	Urban	Rural	Total
2021	79.4	43.9	60.5
2022	79.6	45.4	61.6
2023	79.9	47.0	62.7
2024	80.1	48.6	63.9

Figure 2.7: Trends in Access to Improved Sanitation by Urban and Rural Communities (2021– 2024)



Ministry of Health and Human Services, 2025

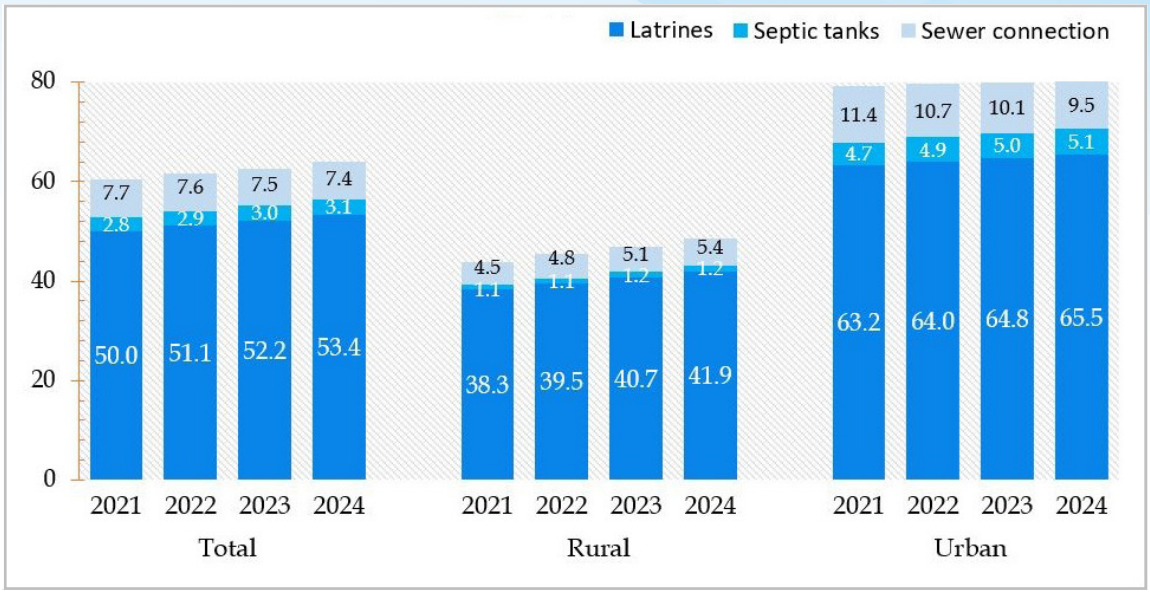
The total population using improved sanitation shows a steady rise from 60.5 percent in 2021 to 63.9 percent in 2024. Progress is consistent each year, indicating sustained efforts in sanitation. However, the pace of growth remains modest, suggesting that more intensive interventions are needed to accelerate efforts of sustainable sanitation nationwide. Urban sanitation coverage remains high and increases gradually from 79.4 percent in 2021 to 80.1 percent in 2024. These small but steady gains show that urban areas are approaching saturation levels, where further increases become slower. Nonetheless, pockets of underserved urban communities may still require targeted support to achieve full coverage. Rural sanitation access, while significantly lower, shows the most meaningful relative improvement; from 43.9 percent in 2021 to 48.6 percent in 2024. This upward trend reflects ongoing efforts to reduce disparities between urban and rural populations. Despite this progress, rural coverage remains far behind, indicating persistent infrastructure, affordability, and behavioral barriers. the improved sanitation variable shows r=0.996953; a strong positive correlation, this indicates consistent progress or decline in improved sanitation access in both urban and rural locations.

Overall, the progress across all areas is positive, with rural areas showing faster improvement and the total increasing steadily. Yet, the urban-rural gap remains substantial and continues to slow national averages. To accelerate progress, greater investment is needed in rural sanitation systems, including low-cost, climate-resilient, and community-led solutions. Strengthening hygiene promotion, improving supply chains for affordable sanitation products, and expanding subsidy or incentive schemes for the poorest households will also be key. Additionally, integrating sanitation initiatives into broader health, education, and WASH programs and enhancing local government capacity can help sustain and scale achievements more rapidly.

Table 2.8: Proportion of People Using Sanitation Facility Types by Area (2021–2024)

	Latrines			Septic tanks			Sewer connection		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2021	63.2	38.3	50.0	4.7	1.1	2.8	11.4	4.5	7.7
2022	64.0	39.5	51.1	4.9	1.1	2.9	10.7	4.8	7.6
2023	64.8	40.7	52.2	5.0	1.2	3.0	10.1	5.1	7.5
2024	65.5	41.9	53.4	5.1	1.2	3.1	9.5	5.4	7.4

Figure 2.8: Proportion of People Using Sanitation Facility Types by Area (2021–2024)



Ministry of Health and Human Services, 2025

The dataset highlights that the use of Latrines and other facilities increased steadily from 50 percent in 2021 to 53.4 percent in 2024, showing gradual improvement in basic sanitation infrastructure. Septic tank use remained relatively stable around 7-8 percent, while Sewer Connections showed only a slight rise from 2.8 percent to 3.1 percent, indicating limited expansion of higher-level sanitation services.

The data presents the types of sanitation facilities that both rural and urban communities accessed in four-year period, these include sewer connections, septic systems and latrines. The data reflects the structural dimension of sanitation, providing insights about the access and the infrastructure of sanitation facilities in both settings.

The figure shows that latrines are by far the most common sanitation facility type in both rural and urban areas. In rural areas, access to latrines increased gradually from 38 percent in 2021 to 42 percent in 2024, while in urban areas it rose from 63 percent to 66 percent during the four-year spell. This steady upward trend suggests a strong reliance on and modest expansion of latrine-based sanitation systems. Latrines, which can range from basic pit types to improved ventilated models, remain the backbone of sanitation access, particularly in rural communities where sewer and septic systems are rare. the variable shows r=0.999494, which is a strong positive correlation. This means that trends in latrine usage are almost identical between urban and rural areas, reflecting uniform reliance or transition patterns. However, while their increasing prevalence is positive, it also highlights that a large share of the population still depends on non-piped systems that may not meet the safely managed standard unless properly constructed and maintained.

The access of sewer connections remains limited and shows minimal progress, particularly in rural areas. In rural, the coverage increased slightly from 4 percent in 2021 to 5 percent in 2024, this increase indicates that centralized sewer networks are still largely unavailable outside urban centers. In urban areas, sewer access declined marginally from 11 percent to 9 percent over the same period. This drop suggests that the urban infrastructure in sanitation may be facing strains, potentially due to population growth, inadequate expansion of sewer networks or maintenance challenges. Additionally, the variable highlights r= -0.999244; a very strong negative correlation, indicating a direct inverse relationship. Increased sewer connections in urban areas correspond to decreased connections in rural areas; or vice versa, highlighting a sharp infrastructure divide. The overall picture shows that sewer-based sanitation remains a minor component of total coverage, even in urban context, which is concerning given its importance for safe managed sanitation for all.

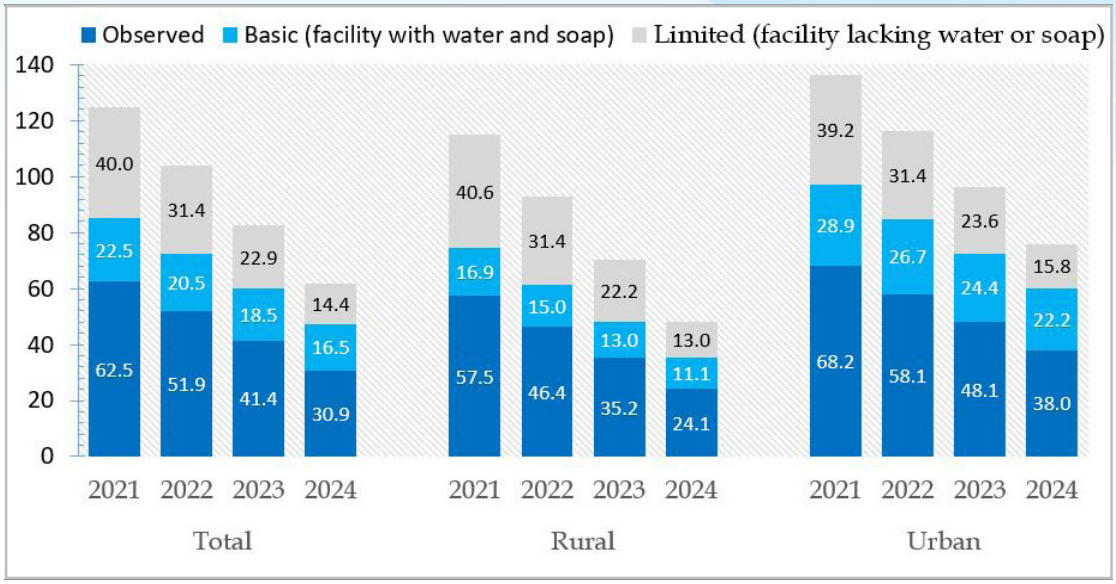
The share of the population using septic systems remained constant over four-year period; 1 percent in rural areas and 5 percent in urban areas. This stagnation suggests a lack of investment or policy that focus on the expansion of decentralized sanitation technologies such as septic tanks and so on. In rural setting, where sewer networks are not economically viable, well-managed septic systems could serve as a sustainable alternative, and the absence of growth indicates that this potential remains largely untapped. Moreover, the septic tanks, on the other hand, displays r= 0.845154; a strong positive correlation but weaker than most other variables, suggesting that while trends are similar, there is more divergence between urban and rural areas in the use of septic tanks.

In contrast, the given data reveals a sanitation landscape dominated by latrines, with sewer and septic systems playing only a minor role. Urban areas have significantly higher access to improved sanitation facilities, but the slow or negative trends in sewer expansion point to systematic challenges in urban sanitation management. Rural areas, on the other hand, continue to rely heavily on latrines, reflecting both progress in providing basic access and limitations in infrastructure.

Table 2.9: Proportion of People with Hygiene/Sanitation Facility Type by Area (2021–2024)

	Observed			Basic			Limit		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2021	68.2	57.5	62.5	28.9	16.9	22.5	39.2	40.6	40.0
2022	58.1	46.4	51.9	26.7	15.0	20.5	31.4	31.4	31.4
2023	48.1	35.2	41.4	24.4	13.0	18.5	23.6	22.2	22.9
2024	38.0	24.1	30.9	22.2	11.1	16.5	15.8	13.0	14.4

Figure 2.9: Proportion of People with Hygiene/Sanitation Facility Type by Area (2021–2024)



Ministry of Health and Human Services, 2025

The dataset shows that Basic hygiene access fell steadily from 40 percent in 2021 to 14.4 percent in 2024, showing a significant drop, while limited facilities also decreased; these numbers indicate worsening availability of adequate hygiene services over the period.

The data shows a worrying decline in access to hygiene and sanitation for both rural and urban areas. The proportion of people with no facility increased sharply each year, indicating a serious deterioration in sanitation conditions. In rural and urban areas, the percentage of people without any sanitation facility rose from 38 percent in 2021 to 69 percent in 2024. This trend suggests that more people are living without access to even the most basic sanitation services, particularly in rural communities.

At the same time, the proportion of people with limited facilities declined significantly. In rural areas, it dropped from 41 percent in 2021 to 13 percent in 2024, while in urban areas, it dropped from 39 percent to 16 percent. This sharp decrease could mean that many limited facilities have become non-functional or that people are losing access due to poor maintenance and lack of investment. In addition to this, the limited sanitation highlights r= +1; a perfect positive correlation; this underscores that limitations in hygiene facilities are experienced equally in urban and rural areas; highlighting a shared challenges in maintaining basic hygiene standards.

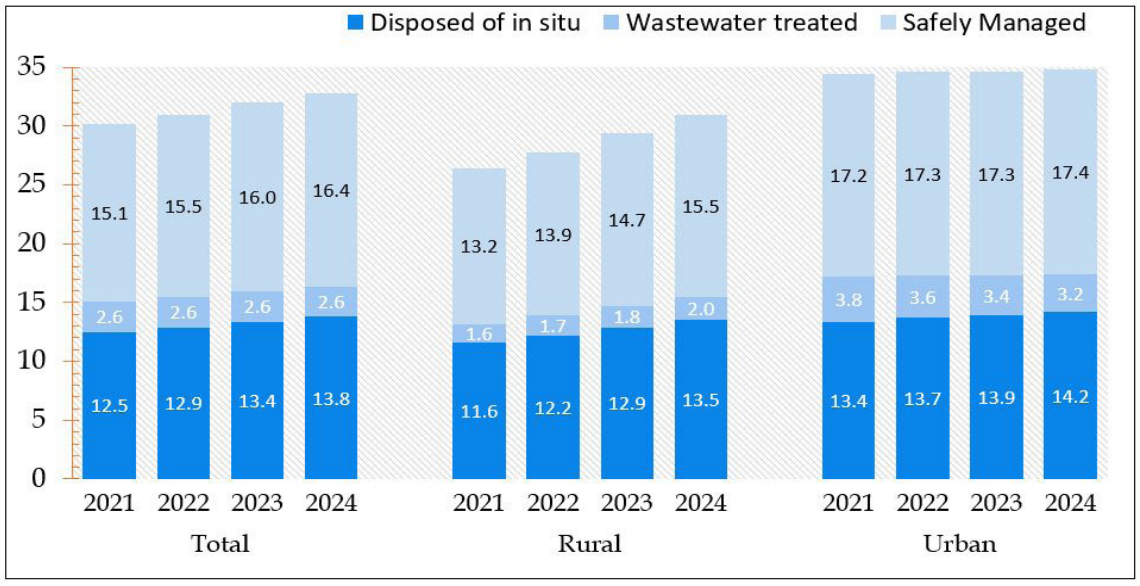
Access to basic sanitation facilities, which represents a higher standard of hygiene, also shows a gradual but consistent decline. Access of basic sanitation facility in rural areas dropped from 17 percent in 2021 to 11 percent in 2024, while access in urban areas dropped from 29 percent to 22 percent respectively. Although urban areas continue to perform better than rural areas, both show negative trends that directly contradict the universal access to sanitation. The basic sanitation variable shows r=0.999999; a strong positive correlation, suggesting that hygiene facilities with water and soap follow almost identical trends in both settings.

The growing disparity between rural and urban areas illustrates increasing inequality in sanitation access. The patterns suggest that existing sanitation systems are failing to sustain progress, potentially due to poor infrastructure maintenance, inadequate funding and weak community engagement. They also show not just a lack of new facility construction but also the deterioration of previously existing ones. This regression indicates a need for effective policy and programmatic intervention. Government for example, should reinvest in rural sanitation infrastructure, restore and maintain existing facilities and promote behavioral change through hygiene education.

Table 2.10: Proportion of People with Safely Managed Sanitation, Waste Disposal In-Situ and Wastewater Treated by Area (2021–2024)

	Safely managed			Disposed of in-situ			Wastewater treated		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2021	17.2	13.2	15.1	13.4	11.6	12.5	3.8	1.6	2.6
2022	17.3	13.9	15.5	13.7	12.2	12.9	3.6	1.7	2.6
2023	17.3	14.7	16.0	13.9	12.9	13.4	3.4	1.8	2.6
2024	17.4	15.5	16.4	14.2	13.5	13.8	3.2	2.0	2.6

Figure 2.10: Proportion of People with Safely Managed Sanitation, Waste Disposal In-Situ and Wastewater Treated by Area (2021–2024)



Ministry of Health and Human Services, 2025

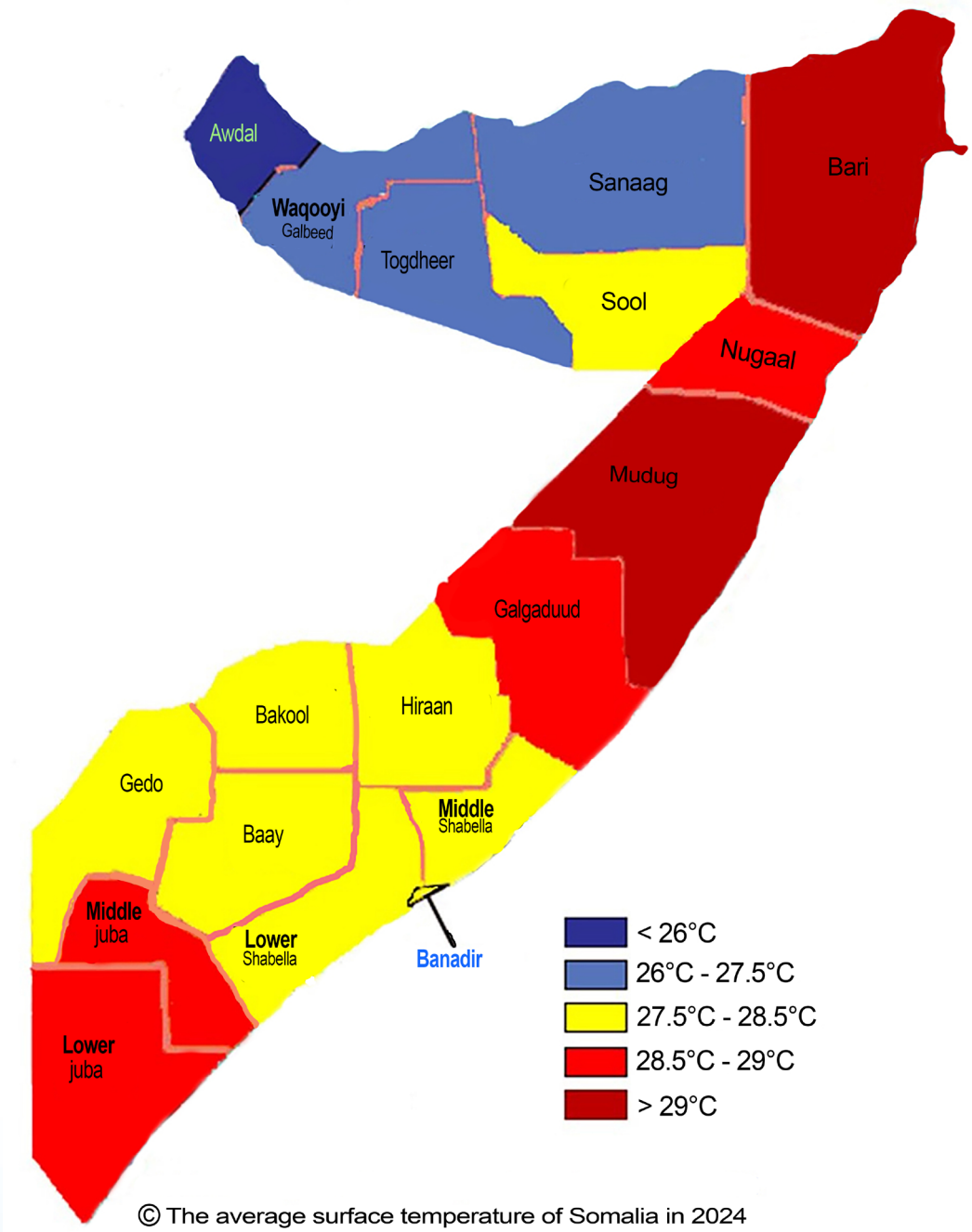
The graph shows a gradual but limited improvement; indicating that while there has been some progress in expanding access to sanitation, the reliance on in-situ systems remains dominant, suggesting limited infrastructural development for centralized waste management and sewerage systems. Between 2021 and 2024, safely managed sanitation services showed only marginal progress. In rural areas, the percentage of people with sanitation services rose slightly from 13 to 16 percent, while in urban areas, it remained constant at 17 percent. This slow progress suggests that efforts to promote access to safely managed sanitation facilities are either limited or stagnant, particularly in urban areas where no improvement is recorded over four year period. In addition to this, the safely managed sanitation variable represent r= 0.944099; a strong positive correlation between the two communities, though slightly weaker than others. It suggests that while trends are similar, there is more room for variation between urban and rural areas in safely managed services. The data also shows a steady increase in in-situ disposal practices across rural and urban communities. Urban rates rise from 13.4 percent in 2021 to 14.2 percent in 2024, rural rates, on the other hand, increased more sharply from 11.6 percent to 13.5 percent. Although urban areas consistently record higher values, both settings suggest a gradual nationwide rise in in-situ disposal, with stronger growth occurring in rural setting. However, the in-situ disposal variable shows r=-0.994172; which is a strong negative correlation. As in-situ waste disposal increases in urban areas, it decreases in rural areas or vice versa, highlighting an inverse relationship and inequality in waste management practices.

In contrast, wastewater treatment remains critically low in both rural and urban settings. Rural wastewater treatment consistently stood at 2 percent across the four-year spell, showing no measurable improvement. Urban areas, while performing slightly better, experienced a decline; from 4 percent in 2021 and 2022 to 3 percent in 2023 and 2024. This regression is particularly concerning, as it highlights persistent challenges in expanding wastewater treatment capacity, maintaining existing infrastructure and ensuring sustainable operation of treatment facilities in urban centers. Moreover, the wastewater treated variable on the other hand, demonstrates r=-0.982707; a strong negative correlation, this indicates that wastewater treatment trends in urban areas move in the opposite direction to rural areas, suggesting disparities in infrastructure and treatment capacity.

The disparity between rural and urban sanitation conditions underscores structural inequalities in access to improved sanitation services. Urban areas continue to demonstrate better access overall, yet both contexts fall significantly short. The stagnation in rural sanitation and the regression in urban wastewater treatment suggest systemic constraints, including inadequate investment, limited technical capacity and weak regulatory enforcement in the hygiene and sanitation sector.

In summary, while Somalia has made modest gains in expanding basic sanitation coverage, the data reveals that progress toward SDG 6 remains slow and uneven. Achieving meaningful progress will require comprehensive strategies that prioritizes investment on infrastructure, strengthen institutional frameworks and promote sanitation technologies suited to both rural and urban contexts.

2.2. CLIMATE ACTION



© The average surface temperature of Somalia in 2024

INTRODUCTION

Climate change represents one of the most pressing global challenges of our modern time, with wide-ranging implications for ecosystems, economies and societies[8]. Somalia, like many developing nations, faces growing climate vulnerabilities that threaten its livelihoods, food security and development prospects. Rising greenhouse gas emissions, recurrent droughts and floods and declining rainfall patterns have intensified the country's exposure to environmental shocks. These trends are worsened by deforestation, land degradation and dependence on rain-fed agriculture; all of which contribute to heightened fragility across rural communities.

The analysis of GHG emissions in this chapter reveals that recent years have seen a sharp surge in total emissions, driven by expanded land use, energy demand and industrial activity. These patterns underscore the need for Somalia to implement comprehensive mitigation and adaptation strategies that promote sustainable land management, clean energy transition and resilient agricultural practices.

The chapter also highlights that through legal reforms and strategic plans, Somalia has demonstrated growing commitment to integrating climate change into its development plans. However, sustained progress in this sector will depend on strengthening institutional capacity, enhancing early warning systems and fostering community-based resilience to address the escalating impacts of climate change.

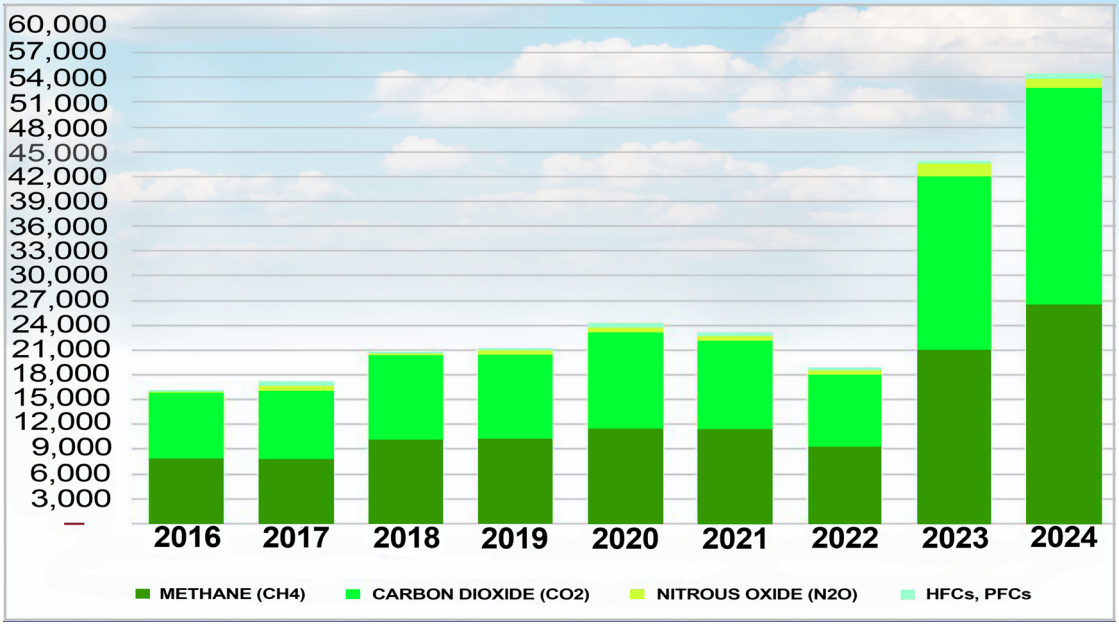
SDG 13 INDICATORS

Based on the data and other frameworks, this chapter corresponds directly to the following SDG 13 indicators:

- Indicator 13.1.2 on the number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030. (see Policies, Strategies and Legal Frameworks i)
- Indicator 13.2.1 on the number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications as reported to the UNFCCC Secretariat. (see Policies, Strategies and Legal Frameworks ii)
- 13.2.2 Total greenhouse gas emissions per year. (see figure 3.1)
- Indicator 13.3.2 on the number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions. (see Figure 2.2)
- Indicator 13.3.1 on the extent to which countries mainstream Global Citizenship Education and Education for Sustainable Development in their education systems. (see Policies, Strategies and Legal Frameworks iii)

8 United Nations, 2015. Global Issue, Climate Change

Figure 3.1 : Trends in Major Greenhouse Gas Emissions in Somalia, 2016-2024



Ministry of Evironmental and Climate Change 2025

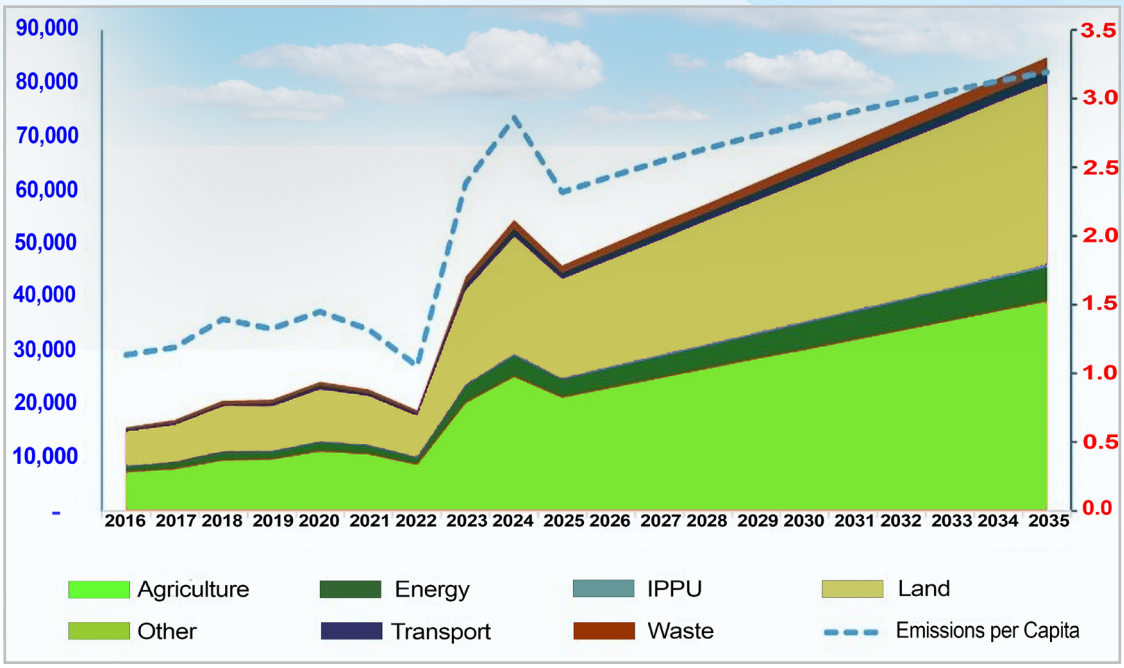
The chart presents greenhouse gas emissions from 2016 to 2024, disaggregated by four major gases; Methane, Carbon Dioxide, Nitrous Oxide and other gas emissions like hydrofluorocarbons, perfluorocarbons. The data shows the total emissions in gigatonnes of CO2 equivalent, highlighting both overall trends and changes in the relative contributions of each gas.

From 2016 to 2021, total GHG emissions exhibit a gradual upward trajectory, suggesting moderate and consistent growth in emissions. Methane and Carbon Dioxide dominate this period, representing the largest shares of total emissions. Methane's contribution in the blue colored mark remains relatively stable, while Carbon Dioxide in the orange colored mark displays a slightly increasing pattern, indicating intensified fossil fuel use (gasoline) for cars and other motor-powered activities like electricity and so on. Nitrous Oxide, on the other hand, remains a minor but steady component, like reflecting agricultural emissions that are less volatile over time.

A noticeable shift occurs in 2022, where total emissions decline compared to 2021. This decrease might indicate temporary mitigation; likely due to global events and reduced industrial activities caused by COVID19. However, the drop is short-lived as emissions surged dramatically in 2023 and 2024, marking the most significant increases in the entire dataset. The total GHG emissions nearly doubled, surpassing 50,000 GtCO2e in 2024. This sharp escalation suggests a resurgence in industrial output, expansion of energy consumption or poor climate control policies.

On the other hand, HFCs and PFCs in yellow colored mark begin to appear in the emissions mix in 2024, though, at a small scale. The emergence signals the growing role of synthetic greenhouse gasses from refrigerants and chemical processes; substances with a very high global warming potential. In contrast, the data reflects growing challenges in maintaining reduced gas emissions. While early stability and moderate growth indicate controlled expansion, the surge in the final two years highlights the urgency need for renewed policy action, strict enforcement and sustainable energy transitions to prevent further acceleration of greenhouse gas accumulation.

Figure 3.2: Projected Greenhouse Gas Emissions by Sector and Emissions Per Capital (2016–2035)



Ministry of Eviromental and Climate Change 2025

The data illustrates Sect oral projected GHG emissions from 2016 to 2035, measured in GtCO2e. The figure Dis-aggregates emissions by agriculture, energy, industrial processes and product use, land, waste, transport and other potential sources, while the dashed blue line represents emissions per capital on the secondary axis. The visualization provides a comprehensive view of both total emissions growth and changes in sect oral contributions over time.

From 2016 to 2021, overall GHG emissions exhibit a steady and moderate rise. The agriculture and land sectors in orange and purple areas respectively dominate total emissions during this period, highlighting the significance of land-use activities, deforestation and agricultural processes such as livestock and soil emissions. The energy and transport sectors contribute less significantly in the early years, suggesting limited transport or energy related development relative to land-based emissions.

A notable shift occurs around 2022-2024, where emissions surge sharply; mirroring the spike observed in the previous figure. This escalation reflects a significant increase in activity within the land and energy sectors. The expansion of the land category suggests intensified deforestation or land conservation, while the rapid rise in energy-related emissions implies increased reliance on fossil fuels to meet growing energy demand. The transport and waste sectors also display modest upticks during this phase, consistent with economic growth and urbanization trends. Following this sharp increase, there is a brief dip around 2025, possibly due to reduced industrial output and transportation, before emissions resume a strong upward trend through 2035.

Between 2025 and 2035, emission continue to grow steadily across nearly all sectors. The land sector remains the dominant contributor, reinforcing the critical role of land-use management in shaping national emission trajectories. Agriculture maintains a substantial share, emphasizing the key position of agricultural practices in emission generation. The energy and transport sectors, though smaller in relative terms, show a persistent increase, likely due to population growth, industrial expansion and rising mobility demands. Meanwhile, waste and IPPU represent minor but gradually expanding contributions, indicating slow industrial diversification and increasing waste generation; particularly in urban areas.

The emissions per capital in the dashed line trend provides additional insights on gas emissions. From 2016 to 2021, per capital emissions remain relatively stable, but starting in 2022, they increased sharply in tandem with more than 3 tonnes of CO2 emissions. The per capital curve continues to climb through 2035, approaching 3.5 tonnes CO2e per person, indicating that emission growth is outpacing population increase.

In contrast, the data highlights the urgent need for integrated strategies focusing on sustainable land management, clean energy transition and improvements in resource efficiency. Without targeted interventions, both total and per capital emissions are projected to rise significantly through 2023, undermining long-term climate resilience and emission reduction commitments.

Somalia, on the hand, is continuously strengthening institutional, systemic and individual capacity among key stakeholders including civil servants, civil society organizations and women's groups to effectively implement adaptation, mitigation and technology transfer and development actions. These training are provided by the Ministry of Environment and Climate Change, the Ministry of Communication and Technology, the Benaadir Regional Administration and several other government institutions. Through targeted training, awareness programs and policy support, the country aims to enhance technical skills, promote inclusive participation and build resilient systems capable of addressing climate change impacts while fostering sustainable development and innovation across the country.

POLICIES, STRATEGIES AND LEGAL FRAMEWORKS

i. SDG Indicator 13.1.2

The Somali Disaster Management Agency's 2024-2029 Policy and Legal Framework demonstrates Somalia's commitment to adopting and implementing national disaster risk reduction strategies in alignment with the Sendia Framework for Disaster Risk Reduction 2015-2030. The framework emphasizes resilience, coordination and preparedness reflecting the core priorities of the Sendai Framework; particularly in understanding and managing disaster risks and strengthening disaster management.

In doing so, Somalia exemplifies a country actively implementing a national DRR strategy that operationalize the Sendai Framework's objectives, fostering resilience and reducing risks across communities.

ii. SDG Indicator 13.2.1

Somalia made significant progress on the Indicator 13.2.1 on the number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change.

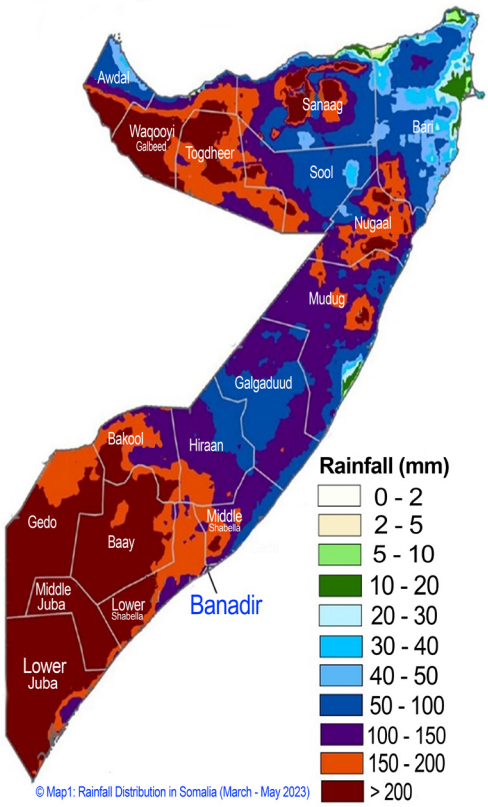
Somalia's Constitution provides overarching guidance on environmental affairs, especially Article 25 "Environment", Article 43 "Land", Article 44 "Natural Resources" and Article 45 "Environment". Article 25 of the Constitution states that "every Somali has the right to an environment that is not harmful to their health and well-being, and to be protected from pollution and harmful materials", while Article 45 requires residents of Somalia to "participate in the development, execution, management, conservation and protection of the natural resources and environment". Arising from the constitution, Somalia has developed various policy instruments to give effect to its provisions and specifically guide its response to climate change and its impacts. The country is also signatory to various regional and global conventions, treaties and agreements which address climate change and related matters. The operational development plan for Somalia is the National Transformation Plan (NTP 2025- 29), which aims to create a prosperous and stable Somalia, aligned to Somalia's Centennial Vision 2060. It recognizes the importance of addressing climate-related shocks by promoting climate change mitigation, adaptation and resilience initiatives for economic stability. Somalia developed the National Climate Change Policy in 2023 to guide efforts towards achieving the NDP-9 (now superseded by NTP 2025-29) and moving the country along low- carbon development pathways. The policy commits the country to building a climate- resilient economy by implementing appropriate climate change adaptation and mitigation measures. Given Somalia's high vulnerability to climate change, the policy prioritizes adaptation and resilience as the nation's primary focus. The Draft National Adaptation Plan 2024 outlines the country's adaptation priorities and plans to achieve these. Various sectoral laws, policies, plans and strategies support the country's climate change response, and some of the key ones are shown in the table 2 below.

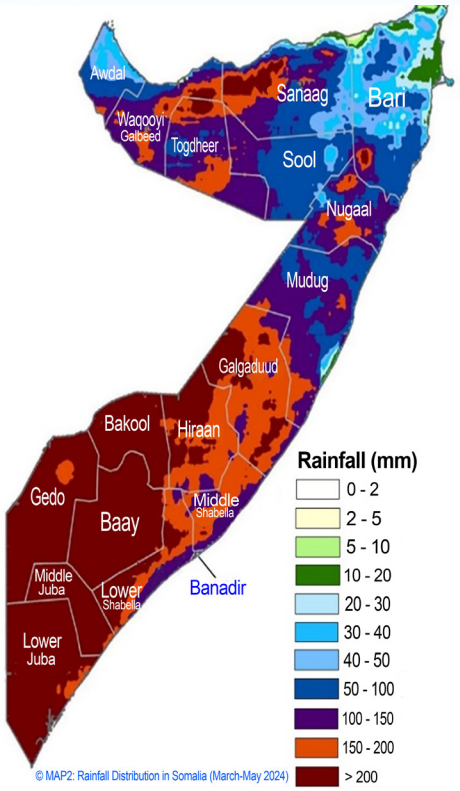
Table 3.1: Key National Climate Policy Documents and Strategies

No.	National Policy Document / Strategy	Year / Period
1	Nationally Determined Contribution (NDC)	2021
2	The Ninth National Development Plan (NDP-9)	2020 - 2024
3	Somalia National Climate Change Policy	2020
4	Draft Environmental and Social Impact Assessment (ESIA) Regulations	2020
5	National Environment Management Bill	2025
6	National Durable Solutions Strategy	2020 - 2024
7	Integrated Water Resource Management (IWRM) Strategic Plan	2019 - 2023
8	Un Strategic Framework for Somalia	2017 - 2020
9	Power Master Plan for Somalia	2019
10	Ministry of Environment and Climate Change (MoECC) Strategic Plan	2023 - 2028

iii. Indicator 13.3.1

Somalia has taken concrete steps to mainstream global citizenship education and education for SDGs across its education system. These themes are increasingly reflected in national curricula, teacher training and policy frameworks. As a result, learners are being equipped with knowledge, skills and values needed for peaceful, sustainable and globally engaged communities.



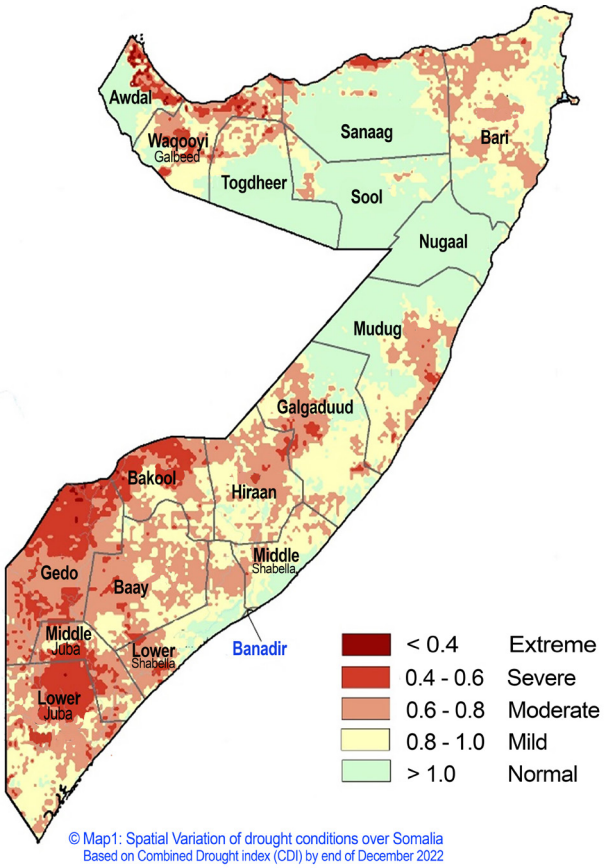


Ministry of Humanitarian Affairs and Disaser Management

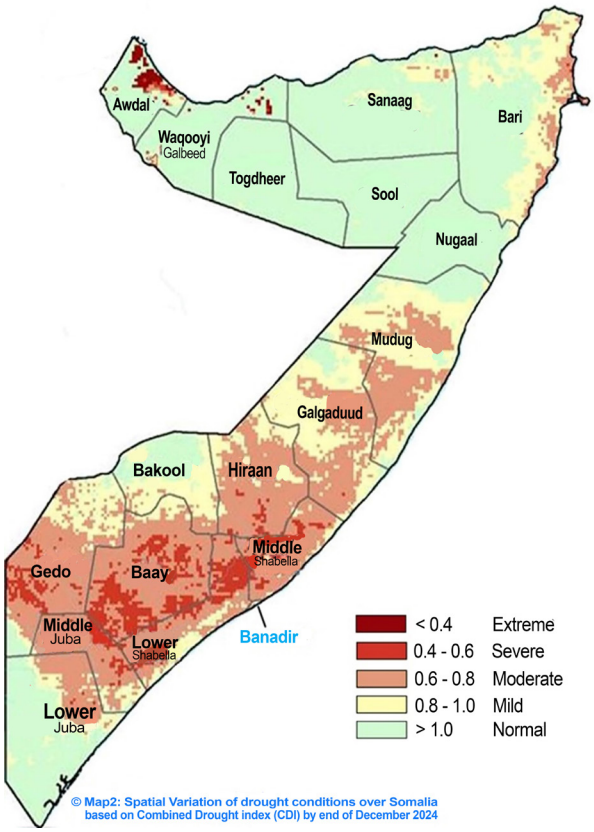
A comparison between the rainfall of the last quarter of 2023 and 2024 reveals a clear decline in cumulative rainfall across most regions. The 2023 map shows moderate rainfall particularly in southern and northeastern zones, supporting seasonal river flows and pasture regeneration. On the other hand, the 2024 map indicates a significant reduction, with most zones recording less than 50 mm of rainfall, and only isolated areas in Bay, Middle Shabeelle and parts of Mudug exceeding 100 mm. This shift points to a drying trend that aligns with increasing variability of Deyr season, likely influenced by broader climatic drivers.

The impact on Somalia's agriculture and pastoral livelihoods is profound. Reduced rainfall diminishes soil moisture, delays crop germination and lowers yields of stable crops such as sorghum and maize. For pastoral communities, poor pasture regeneration and drying water pans lead to longer migration distances, livestock stress and higher mortality rates, conflicts and confrontations over scarce water resources and so on. These conditions aggravate food insecurity, particularly in rain-fed and agro pastoral regions. Repeated rainfall failures also accelerate land degradation and desertification, further undermining environmental resilience.

To adapt and mitigate these issues, Somalia should invest and strengthen climate-smart agricultural practices and water management systems. Investment in rainwater harvesting, small-scale irrigation and drought-tolerant crop varieties can stabilize food production. Restoring degraded rangelands through reseeding and controlled grazing could improve fodder availability. Moreover, strengthening early warning systems with effective disaster preparedness plans can also help communities anticipate and respond to rainfall variability and build long-term resilience to Somalia's changing climates.



© Map1: Spatial Variation of drought conditions over Somalia
Based on Combined Drought index (CDI) by end of December 2022



© Map2: Spatial Variation of drought conditions over Somalia
based on Combined Drought index (CDI) by end of December 2024

Ministry of Humanitarian Affairs and Disaster Management

The two maps show how drought conditions in Somalia have evolved between December 2022 and December 2024. In 2022, most of the country; particularly the central and southern regions such as Galgadud, Mudug, Bay, Bakool, Hiraan and Gedo experienced severe drought, while the northwestern regions like Awdal, Waqooyi Galbeed and parts of Togdheer faced mild or no drought at all. By December 2024, the drought conditions had slightly increased in northern and coastal areas like Awdal, parts of Waqooyi Galbeed and Bari, but severe and extreme drought persisted across much of southern and central Somalia. The 2024 Combined Drought Index map shows that while northern regions remained relatively stable and resilient, the southern belt continued to suffer chronic water shortages and land degradation.

The persistence of drought across Somalia is largely due to a combination of climatic and human factors. The Country lies in highly climate-vulnerable region where rainfall is erratic and temperatures are rising due to global climate change. Repeated failure of Gu and Deyr rainy seasons, along with land degradation form deforestation and unsustainable farming, has worsened soil dryness. Furthermore, Somalia's heavy reliance on rain-fed agriculture and pastoralism makes its economy and food security extremely sensitive to rainfall variability. Compounding these issues are Alshabaab, as their inhumane activities represent a significant secondary factor contributing to Somalia's recurring drought crises, following climate change. The group has undermined local agricultural and pastoral livelihoods by discouraging communities from cultivating land and herding livestock. They have also confiscated crops and livestock under the pretext of collecting Zakawat; an Islamic principle intended to promote social welfare and justice, but instead the group diverted these resources to fund their agenda. Moreover, the group's restrictions on humanitarian aid and government interventions have severely limited timely drought response and recovery efforts, further worsening the vulnerability of affected populations.

In contrast, Somalia needs both short and long-terms strategies. In the short term, strong early warning systems that can reach far rural areas, water trucking and emergency aid can help save lives and protect livelihoods. However, sustainable solutions require stronger water management through rainwater harvesting, small dams and borehole development, the adoption of drought-resistant crops, improved rangeland practices and large-scale reforestation to combat climate related shocks. On the other hand, strengthening climate adaptation policies, regional corporation and diversification of livelihoods will be crucial to breaking the recurring cycle of drought and building lasting resilience across the country.

2.3. LIFE BELOW WATER

INTRODUCTION

The SDG 14 aims to conserve and sustainably use the oceans, seas and marine resources for sustainable development. Oceans play a vital role in supporting livelihoods, providing food security, regulating the global climate and driving economic growth[9]. For Somalia; home to the longest coastline in mainland Africa, the ocean represents both a source for immense opportunity and a domain of persistent challenges as well. The country's marine ecosystems sustain thousands of small-scale fishers and coastal communities, yet faces growing threats from illegal, unreported and unregulated fishing, weak infrastructure and limited governance capacity.

In recent years, Somalia has made meaningful strides toward rebuilding its fisheries sector and strengthening marine governance. Data on fish consumption and production indicate gradual growth in domestic demand, rising artisanal output and renewed engagement with the blue economy. On the other hand, efforts to enhance maritime connectivity and improve port infrastructures reflect broader attempts to integrate Somalia into global shipping networks and promote sustainable trade.

The chapter also highlights the country's commitment to implementing national and international frameworks, particularly the United Nations Convention on the Law of the Sea. Reforms targeting IUU fishing, enhanced licensing transparency and improved coordination in the sector mark significant steps toward responsible fisheries management. In contrast, sustaining this momentum will require continued investment, regional cooperation and capacity building to ensure that marine resources are managed sustainably for future generations.

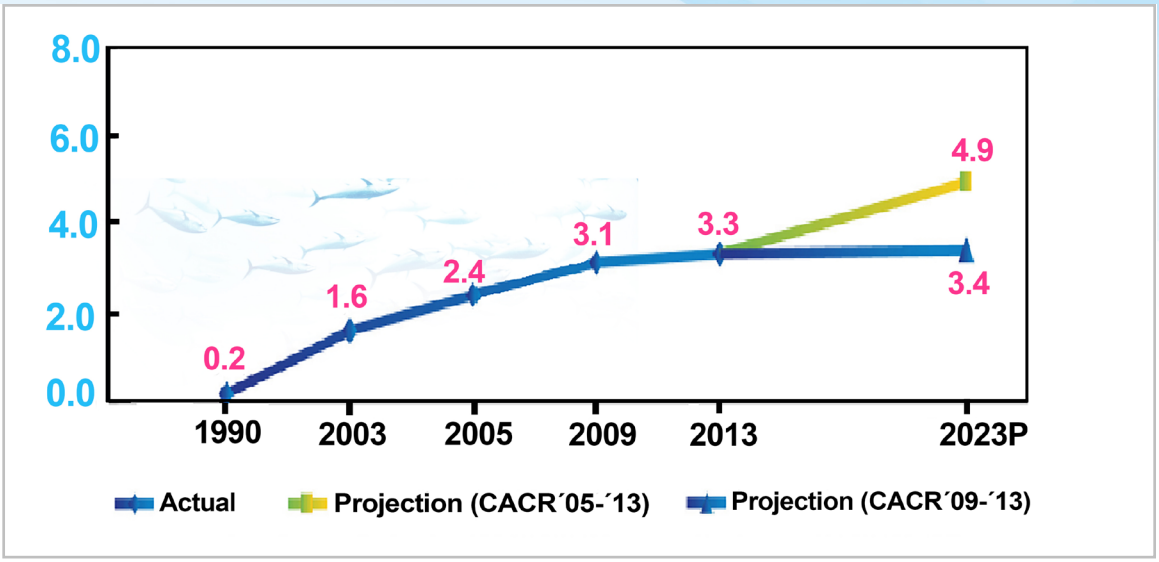
SDG 14 INDICATORS

Based on the data and policy analysis of this chapter, the following SDG 14 indicators are directly addressed:

- 4.6.1 Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing. (see Policies, Strategies and Legal Frameworks i)
- 14.b.1 Degree of application of legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries. (see Figure 4.1)
- 14.c.1 Number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nations Convention on the Law of the Sea, for the conservation and sustainable use of the oceans and their resources. (see Policies, Strategies and Legal Frameworks ii)
- Indicator 14.7.1 on sustainable fisheries as a proportion of GDP in small island developing States, least developed countries and all countries. (see Figure 4.4)

9 UNSTATS, 2016. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Figure 4.1: Consumption of fish in Somalia (KG PER CAPITA PER YEAR)



Ministry of Planning 2025. The National Transformation Plan Report

The figure and accompanying data provide valuable insights into Somalia's progress on fisheries and fish consumption, it also provides a measurable insight in the country's progress on SDG 14, particularly in relation to Indicator 14.b.1 on the degree of application of legal, regulatory, policy, institutional framework that recognizes an d protects access rights for small -scale fisheries.

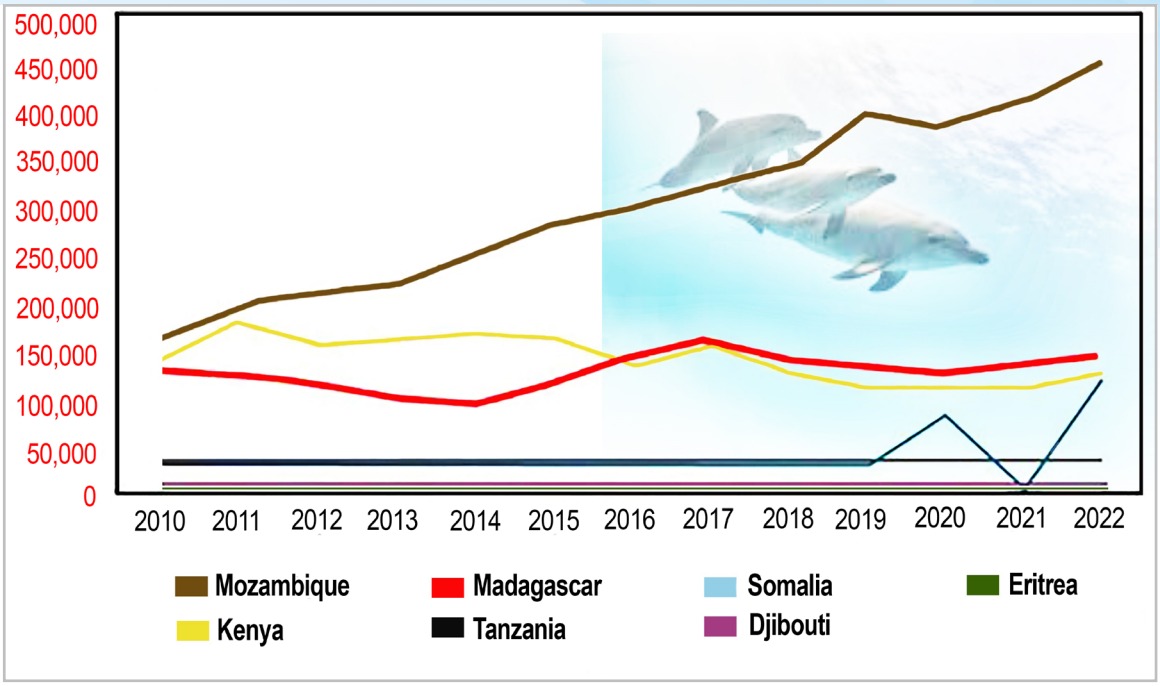
The chart shows a clear upward trend in domestic fish consumption from 1990 to the projected values in 2023. Fish consumption rose from 0.2 kg per capita in 1990 to 3.3 kg in 2013, with an increase of between 3.4 and 4.9 kg per capital was projected by 2023. This steady growth reflects not only an improvement in national dietary diversification but also suggests an expanding role for the fisheries sector in Somalia's blue economy. The positive trajectory of fish consumption aligns with the country's efforts to enhance sustainable marine resource use and promote small-scale fisheries as vital livelihood source.

The Ministry of Fisheries and Blue Economy's (MFBE) fish consumption data underscores the central role of artisanal fishers in the national fish supply chain. It estimates that traditional fishing methods yield approximately 6,000 tonnes annually, a significant contribution considering the limited infrastructure and capacity of local fishing communities. This local production demonstrates Somalia's commitment to supporting small-scale fisheries, which are crucial for livelihoods, job creation and food security, particularly in coastal communities.

Somalia still face IUU fishing, with foreign fishing vessels capturing an estimated 13,000 tonnes per year; more than double the artisanal catch. Despite this, the combined figure remains below 10% of the total estimated national fish harvest of 200,000 tonnes, indicating that Somalia's marine resources are underutilized caused by poor fishing practices or subject to external exploitation[10].

10 Ministry of Planning, Investment and Economic Development, 2025. The National Transformation Plan Report

Figure 4.2: Total fisheries production, metric tonnes (2010-2022)



Ministry of Planning 2025. The National Transformation Plan Report

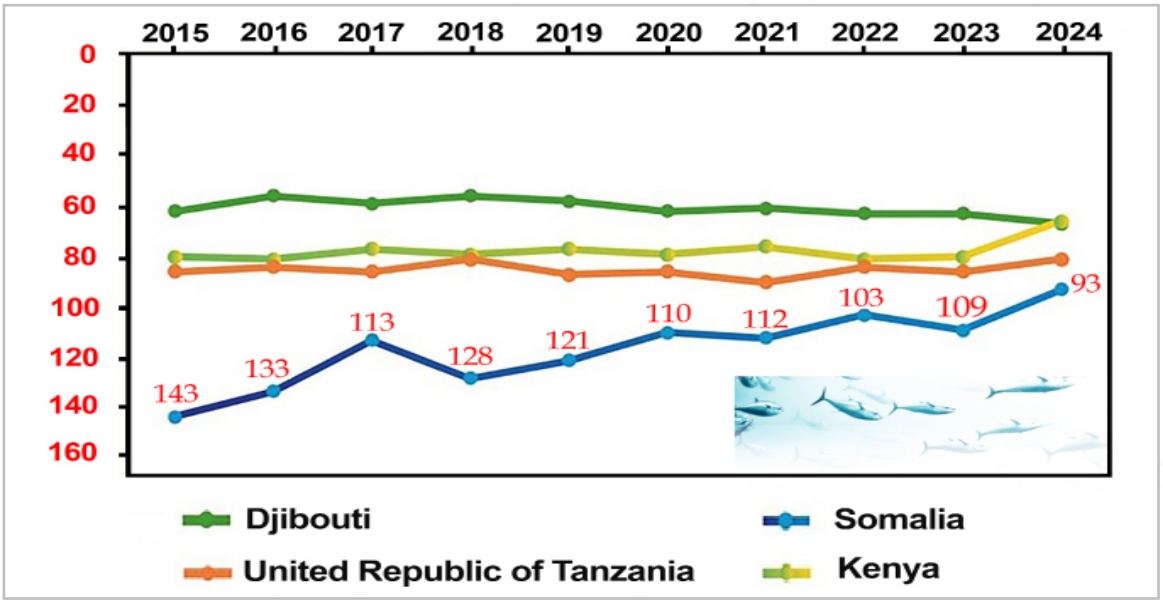
The line chart shows total fisheries production in metric tonnes from 2010 to 2022 for many East African countries, including Somalia, Djibouti, Kenya, Tanzania, Mozambique, Madagascar and Eritrea. The trends reveal substantial differences in production levels and growth trajectories among these countries.

Somalia's fisheries production, though modest compared to regional peers, shows encouraging signs of recovery and potential for sustainable growth. After remaining relatively low for much of the period, there is a visible increase toward 2021 and 2022, indicating renewed activity in the marine sector. This growth could reflect improved coastal security, enhanced governance of marine resources or increased participation by local fishing communities. Somalia's long coastline which is the longest in mainland Africa provides a significant natural resource. This extensive maritime zone holds rich fish stocks and potential for both artisanal and commercial fishing.

Compared to its neighbors, Somalia's fisheries production remains far below Kenya's steady output and Djibouti's minimal but stable levels. While Kenya benefits from stronger governance, better infrastructure and established domestic markets, Somalia's potential is constrained by weak regulation, limited investment and recurring maritime insecurity. Somalia's coastline which is longer than Kenya's and Djibouti's combined coastlines, gives it immense untapped potential, and to rise as one of leading fisheries producer in Africa, Somalia should focus on policies and program interventions that strengthen fisheries governance, curb illegal fishing, invest in fishing technologies and empower artisanal fishers through capacity building initiatives.

In contrast, the data demonstrates wide disparities in fisheries capacity across these East African coastal nations. Mozambique's sustained growth contrasts sharply with stagnation in Kenya and Madagascar, decline in Tanzania and sporadic changes in Somalia and Eritrea. The patterns indicate that regional fisheries progress is uneven, influenced by national policy, access to resources, local and foreign investment shortages and stability in some maritime zones.

Figure 4.3: Liner Shipping Connectivity Index (LSCI) for Somalia and Regional Peers (2015- 2024)



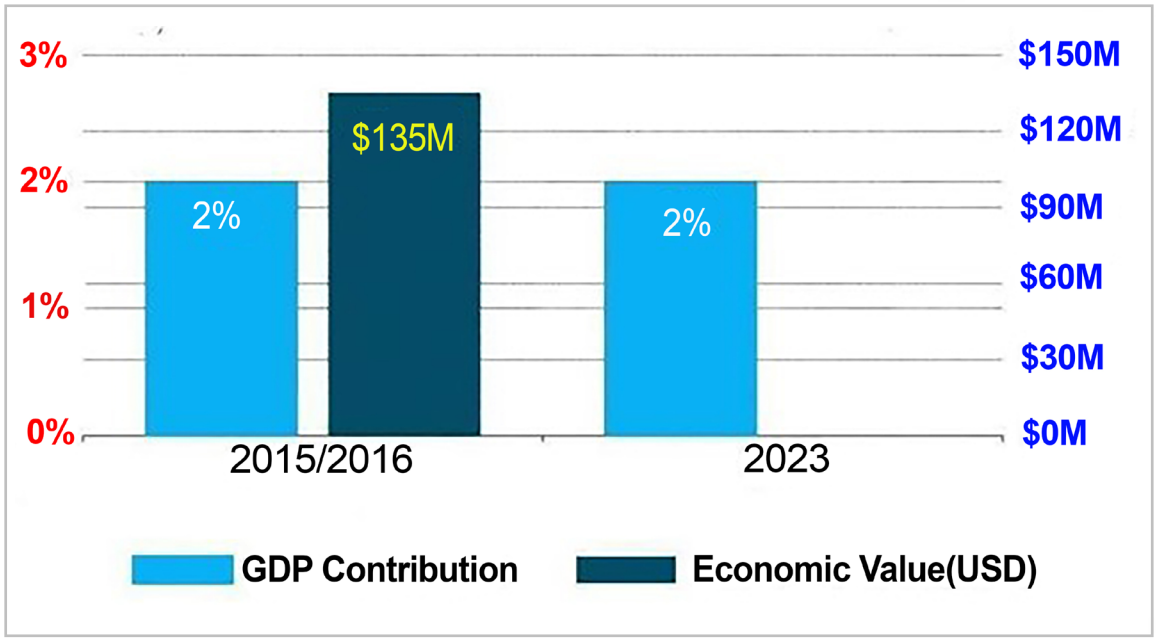
Ministry of Planning 2025. The National Transformation Plan Report

This chart shows the Liner Shipping Connectivity Index performance from 2015 to 2024 for Somalia and its peers in the region. The LSCI measures how all countries are connected to global shipping networks; higher values indicate stronger maritime connectivity, better port infrastructure and greater integration into international trade routes.

Djibouti consistently leads the region, maintaining the highest connectivity throughout the period. Its index remains around 67-70, demonstrating stable and strong maritime performance. The dominance reflects Djibouti's role as a strategic maritime hub in the Horn of Africa, it also benefits from its modern port infrastructure, its position near major shipping lanes and its role as Ethiopia's main port gateway. Kenya shows relatively high and stable performance, this stability indicates consistent shipping operations and growing port efficiency; particularly through the port of Mombasa which is East Africa's largest seaport. Tanzania shows closely behind Kenya, maintaining a smaller level of connectivity but with slightly lower values for most years. The port of Dar es Salaam remains central to Tanzania's maritime network, serving many landlocked countries like Zambia, Malawi, Rwanda, DRC, Burundi, Zimbabwe and so on.

Somalia, on the other hand, shows a much lower LSCI score but an overall improving trend from 2015 to 2024. Starting 143 in 2015, Somalia gradually improves around 93 by 2024. This improvement, though from a low base, signals growing re-enlargement with global trade and shipping lines, perhaps due to increased stability in Mogadishu, rehabilitation of Mogadishu Seaport and rising interest from investors. Recent efforts under the New Mogadishu Initiative, inaugurated by President Hassan Sheikh Mohamud in late 2024, aim to redefine and modernize Mogadishu's key infrastructure including the main seaport, as part of broader efforts to strengthen the city's maritime and economic development.

Figure 4.4: Somali's Fisheries Sector Contribution to Economy (2015/16 & 2023)



Ministry of Fisheries and Blue Ecoomy 2025. Direct Communication

Somalia's fisheries sector shows a mixed trajectory when comparing 2015/16 with the estimated 2023 economic landscape. Over the year, the sector generated approximately $135 million, representing 2 percent of national GDP. Using the constant-share GDP model, the sector's 2023 economic value is estimated at about $219.3 million, reflecting growth driven largely by Somalia's expanding economy rather than by the structural transformation within the fisheries sector itself. Despite this nominal growth, the sector's GDP share remains unchanged, signaling that fisheries have not increased their relative importance within the wider economy. In other words, this indicates limited progress in unlocking its full potential despite Somalia's long coastline and rich marine resources.

Persistent challenges remain intact, with the sector being heavily artisanal, with inadequate investment in modern fleets, processing capacity and cold-chain logistic. IUU fishing by foreign vessels continues to erode domestic economic gains, while weak regulatory and enforcement capacity limits Somalia's ability to realize the true value of its marine resources. Additionally, post-harvest loses, poor market access, limited financing for fishermen and climate-related challenges to marine ecosystems still remain intact. These factors together explain why the sector's share of GDP has stagnated; growth remains largely superficial, driven by macroeconomic expansion rather than progress within the sector itself.

Somalia's fisheries sector requires a shift from passive growth to structural modernization. Strengthening maritime governance, investing in coastal infrastructure and expanding value-added processing are key steps to unlocking higher economic returns. On the other hand, improving monitoring of the EEZs, regulating licensing and supporting artisanal fishermen with better fishing technologies and training would substantially increase productivity and could potentially shift from being stagnant in GDP share to becoming a major economic pillar.

In order to find the missing "Economic Value" the report used Constant-Share-of-GDP Model in the following way.

$$X_t = C\,Y_t$$

Where X_t stands for Variables Value at Time, **C** for percentage of the GDP and Yt for Total GDP at the Same Time.

$$X_{2023} = C(0.02)\,Y_t\,(10{,}969{,}000{,}000)$$

Economic Value for 2023= $ 219,380,000

POLICIES, STRATEGIES AND LEGAL FRAMEWORKS

i. Indicator 14.6.1

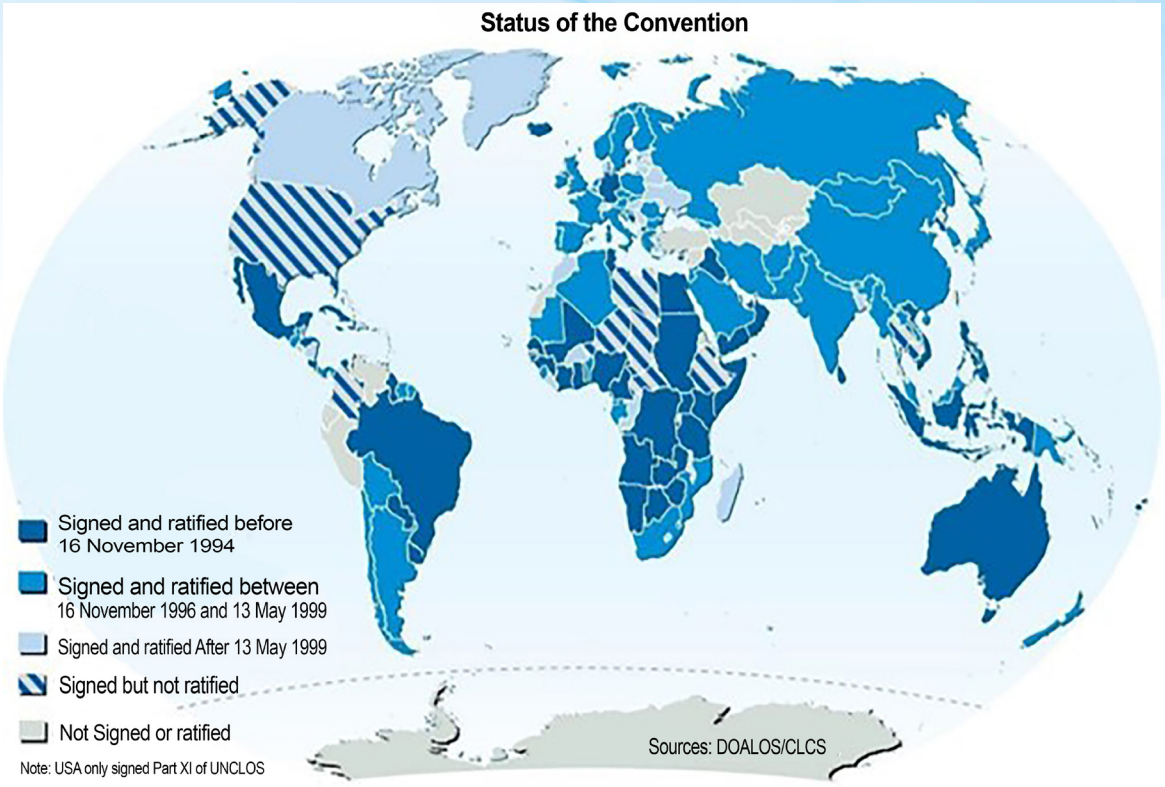
The indicator 14.6.1 on the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing provides a measure of how effectively a country adopts and enforces global frameworks and best practices to deter IUU fishing. In the context of Somalia, the available data suggests notable progress in recent years. According to FAO, Somalia achieved a score of 4 out 5, which indicates a high level of implementation of key anti-IUU fishing measures[11]. The score also reflects the country's substantial commitment to aligning the governance of its marine resources with international standards and related UN frameworks.

This progress stems from comprehensive reforms in Somalia's fisheries and blue economy legislations and institutional mechanisms. As noted by Blue Justice, Somalia undertook a significant overhaul of its licensing systems, which enhanced transparency, accountability and traceability in fishing operations[12]. These measures reduced chances for illegal operators to exploit regulatory loopholes and improved monitoring for both domestic and foreign fishing vessels.

Additionally, the implementation of strict enforcement mechanisms including improved maritime surveillance and enhanced coordination among coastal authorities further strengthened Somalia's capacity to deter and penalize IUU activities. The federal government demonstrated tangible enforcement of its anti-IUU policies through penal measures against violators as shown in the provided picture. The federal level and member states penalized several illegal fishing companies and fishermen found trespassing in the country's exclusive economic zone without proper authorization. These penalties included imprisonment and fines, signaling a shift toward a more assertive and deterrent approach to maritime governance. Moreover, a number of ongoing cases are still under legal and administrative processes, with offenders expected to face consequences in accordance with national and international law. These actions not only reinforce Somalia's commitment to protecting its maritime resources but also exemplify the practical enforcement dimension of the country and demonstrate that policy implementation is being translated into concrete accountability measures on the ground.

11 Food and Agriculture Organization. 2024. The Sustainable Development Goals Data Portal

12 Blue Justice, 2023. Article on Reforming Somali Fisheries Sector



ii. Indicator 14.c.1

The Indicator 14.c.1 on number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in UNCLOS for the conservation and sustainable use of the oceans and their resources - measures how effectively states are translating global ocean governance principles into actionable national frameworks. It is not limited to ratification alone but emphasizes a continuum of progress such as formal acceptance of international instruments, policy integration, institutional strengthening and practical enforcement mechanisms that align national ocean governance with UNCLOS obligations.

In the context of Somalia, the indicator captures tangible movement toward full alignment with international maritime law. Somalia ratified UNCLOS in 1989, which established its foundational commitment to the principles governing ocean space, including maritime boundaries, resource management and environmental protection.

Ratification, however, is only the first step. The real measure of progress lies in how the state has internalized UNCLOS provisions through national laws and policies. Somalia has reportedly taken active steps to align its domestic legal framework with UNCLOS, demonstrating a transition from international commitment to national implementation.

Somalia's participation in regional frameworks like the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden, further strengthens its compliance trajectory. Engagement with PERSGA signifies a cooperative approach to regional marine conservation, pollution control and biodiversity protection, directly supporting the objectives of SDG 14[13]. Regional collaboration enhances institutional learning and resource mobilization; which are essential for countries like Somalia that face limited technical and enforcement capacities.

At the national level, the inclusion of ocean governance objectives in the NTP marks a notable institutional development. The plan's interventions to reinforce commitment to international standards, reflect the mainstreaming of UNCLOS principles into Somalia's broader development strategy[14]. This alignment between national planning and international commitments illustrates a shift from normative ratification to integrated implementation, it also demonstrates Somalia's acknowledgment of the ocean's role in sustainable economic transformation, particularly through fisheries, maritime security and environmental protection.

In contrast, Somalia's trajectory under this Indicator 14.c.1 demonstrates measurable progress across the three main dimensions of the indicator which are ratification, policy alignment and institutional implementation. While challenges remain, Somalia's legal and policy development, regional cooperation and strategic planning commitments collectively indicate substantive movement toward full ratification of UNCLOS principles. This progress provides a strong empirical basis for reporting on SDG 14.c.1 and highlights Somalia's growing integration into the global framework for sustainable use and protection of ocean resources.

13 Ministry of Fisheries and Blue Economy, 2025. Article on SDGs Progress.

14 Ministry of Fisheries and Blue Economy, 2025. Article on SDGs Progress.

2.4. LIFE ON LAND

INTRODUCTION

The SDG 15 focuses on restoring and promoting the sustainable use of terrestrial ecosystems, managing forests, combating desertification, halting and reserving land degradation and curbing biodiversity loss[15]. This goal holds particular significance for Somalia, where economy and livelihoods are deeply intertwined with natural resources. The country's rangelands, forests and drylands form the backbone of its agriculture and pastoral economy, yet they are under increasing pressure from overgrazing, deforestation recurrent droughts and poor land-use management.

The data on livestock contribution to GDP and export trends highlight Somalia's strong economic reliance on the livestock sector, which contributes nearly half of the national income. While this dependence sustains millions of pastoral households, it also exerts considerable stain on rangelands and biodiversity if not managed sustainably. Similarly, land degradation assessments reveal that biological degradation and soil erosion by water together affect more than half of the country's land area; a pattern that underscores the urgent need for sustainable land management and ecosystem restoration.

Somalia's commitment to restoring land productivity and achieving Land Degradation Neutrality aligns with broader objectives of SDG 15. Through national frameworks and policies promoting equitable resource use, the country is laying the groundwork for sustainable management of its ecosystem. Integrating sustainable livestock management, reforestation, soil conservation and biodiversity protection into development planning will be critical to ensuring that Somalia's growth remains both ecologically and economically sustainable.

SDG 15 INDICATORS

Based on the data provided, this chapter directly responds on the following indicators.:

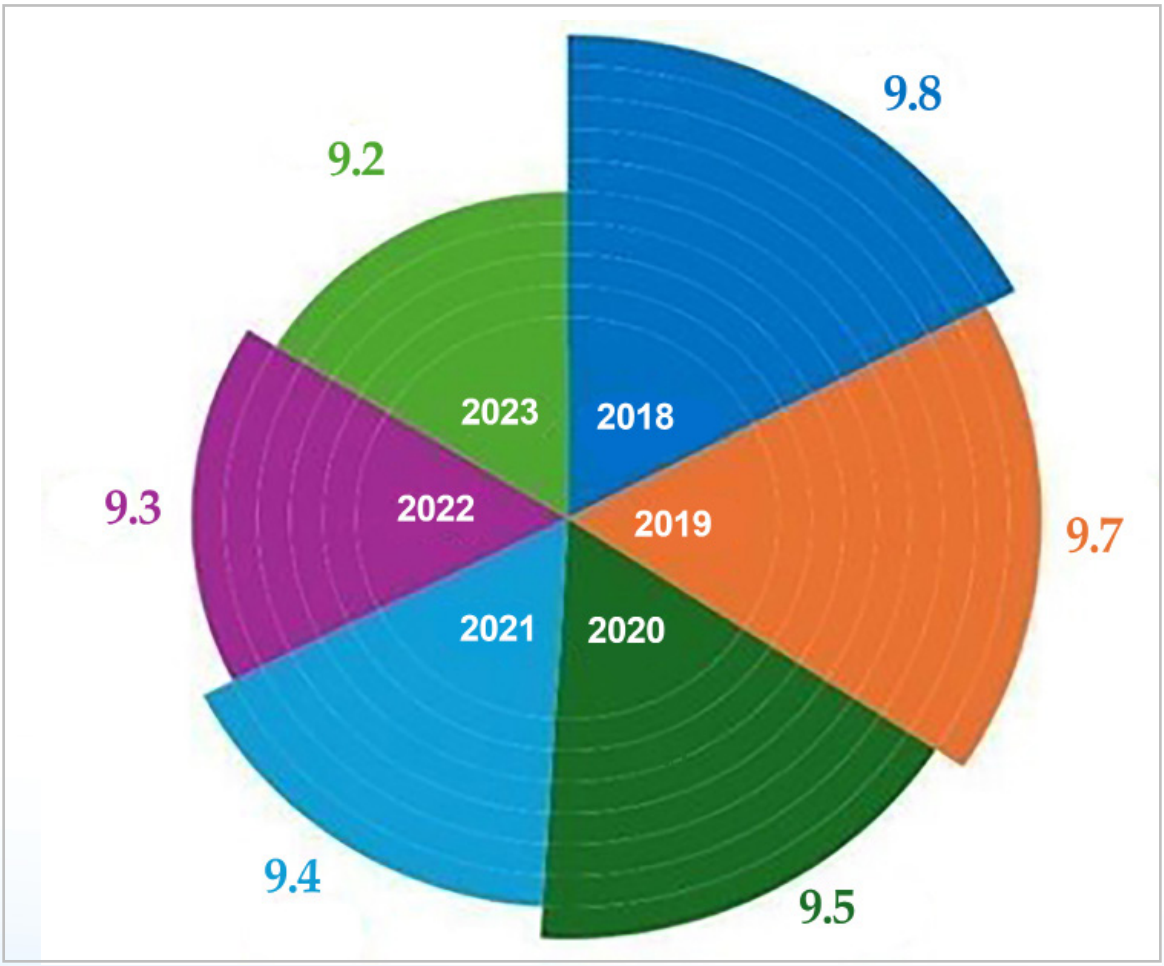
- Indicator 15.1.1 Forest area as a proportion of total land area. (see table 5.1)
- Indicator 15.3.1 Proportion of land that is degraded over total land area. (see table 5.5)
- Indicator 15.6.1 Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits. (see Policies, Strategies and Legal Frameworks i)

15 United Nations, 2015. Sustainable Development Goals.

Table 5.1: Forest area as a proportion of total land area (%)

Year	Forest Area (% of Total Land Area)
2018	9.8
2019	9.7
2020	9.5
2021	9.4
2022	9.3
2023	9.2

Figure 5.1: Trends in Forest Area as a proportion of Total Land Area (%)



World Bank, 2023

Somalia's forest has declined steadily from 9.8 percent in 2018 to 9.2 percent in 2023, revealing a slow but persistent trajectory. This pattern tells a story of environmental pressure in a fragile ecosystem already strained by decades of conflict, recurrent droughts and weak land - management systems. The decline appears gradual, but its consistency signals underlying structural

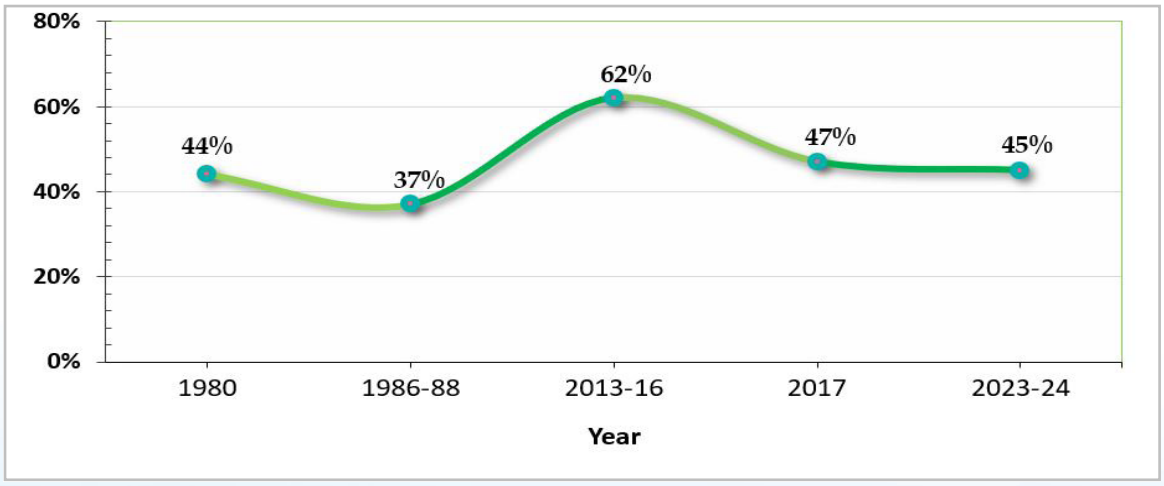
drivers; these include the growing charcoal production for domestic use and export particularly eastern, central and southern regions, urbanization and the unregulated tree-cutting for construction purposes particularly the rural and nomadic communities. The data illustrates a landscape losing tree cover year after year, not through sudden shocks but through a cumulative erosion of forest resources.

However, the protection of the country's forest is challenged by multiple barriers; insecurity in many rural regions limits environmental enforcement, poverty pushes communities toward deforestation for income, the absence of effective renewable energy encourages the consumption of charcoal, weak governance undermines forest protection policies and climate change on the other hand accelerates degradation. These constraints make forest restoration difficult but not impossible. The way forward requires expanding community-based forest stewardship, promoting affordable alternative energy source to reduce charcoal dependence, strengthening environmental data systems for better decision-making and investing in reforestation programs. Together all these steps with support of policies and enforcement, the declining trend could stabilize and eventually shift toward recovery.

Table 5.2: Livestock Contribution to GDP Over Time

Year	Livestock Contribution to GDP (%)
1980	44%
1986–88	37%
2013–16	62%
2017	47%
2023–24	45%

Figure 5.2: Trend of Livestock Contribution to GDP in Somalia (1980–2024)



Ministry of Planning, 2025. The National Transformation Plan Report

The chart shows a non-leaner, volatile contribution of livestock to GDP across five time points. Starting at about 44 percent in 1980, the share falls to 37 percent in 1986 and 1988, then climbs sharply to peak of 62 percent in 2013 and 2016, and subsequently declines to 47 percent in 2017 and then 45 percent in 2023-2024 respectively. The dominant pattern is one large rise between the late 80s and the mid-2010s followed by partial reversion toward the 44 percent range seen earlier.

From the environmental perspective, these patterns are a reminder that economic growth tied strongly to extensive livestock production can come at the expense of biodiversity and land health if not managed substantially. When livestock accounts for more than half of GDP, ecosystems effectively bear the burden of sustaining both livelihoods and national revenue. Without effective grazing management, water resource planning and land rehabilitation; the resulting degradation undermines both economic resilience and the ecological services to prosper.

From a policy and economic perspective, the data imply two practical messages; first the economy is meaningfully dependent on livestock, this means any shock to animal production or trade will have severe macroeconomic consequences; second, the large swing up to 52 percent shows potential for high returns but also exposes volatility risk. For planners this contends for: -

a. Strengthening disease control and climate resilience in the livestock sector.

b. Promote economic diversification and value-adding like processing and packaging so that future swings in raw livestock value have less disruptive macro- economic effects.

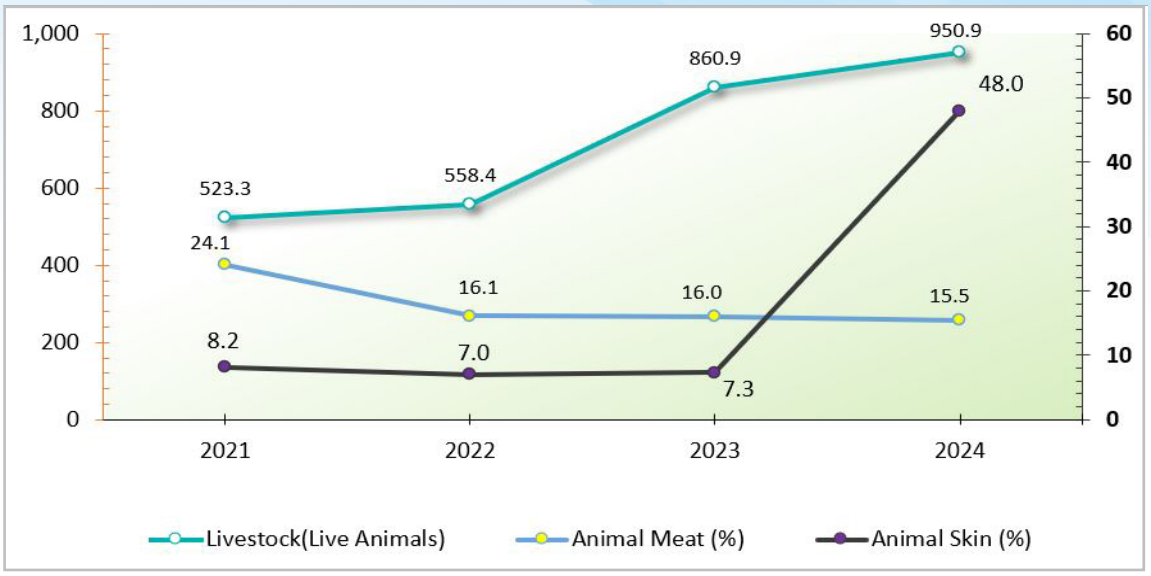
The current stabilization near 45 percent could be seen as an opportunity; it may provide policy space to decouple livestock income from environmental depletion by investing in sustainable rangeland management, rotational grazing and drought-resistant fodder

systems. A substantial balance means maintaining livestock's contribution to livelihoods without exceeding the carrying capacity of ecosystems.

Table 5.3: Somalia's Livestock Exports (2021–2024)

Year	Livestock (Live Animals)	Animal Meat (%)	Animal Skin (%)
2021	523.3	24.1	8.2
2022	558.4	16.1	7.0
2023	860.9	16.0	7.3
2024	950.9	15.5	48.0

Figure 5.3: Trend of Somalia's Livestock Exports by Type (2021–2024)



Ministry of Planning, 2025. The National Transformation Plan Report

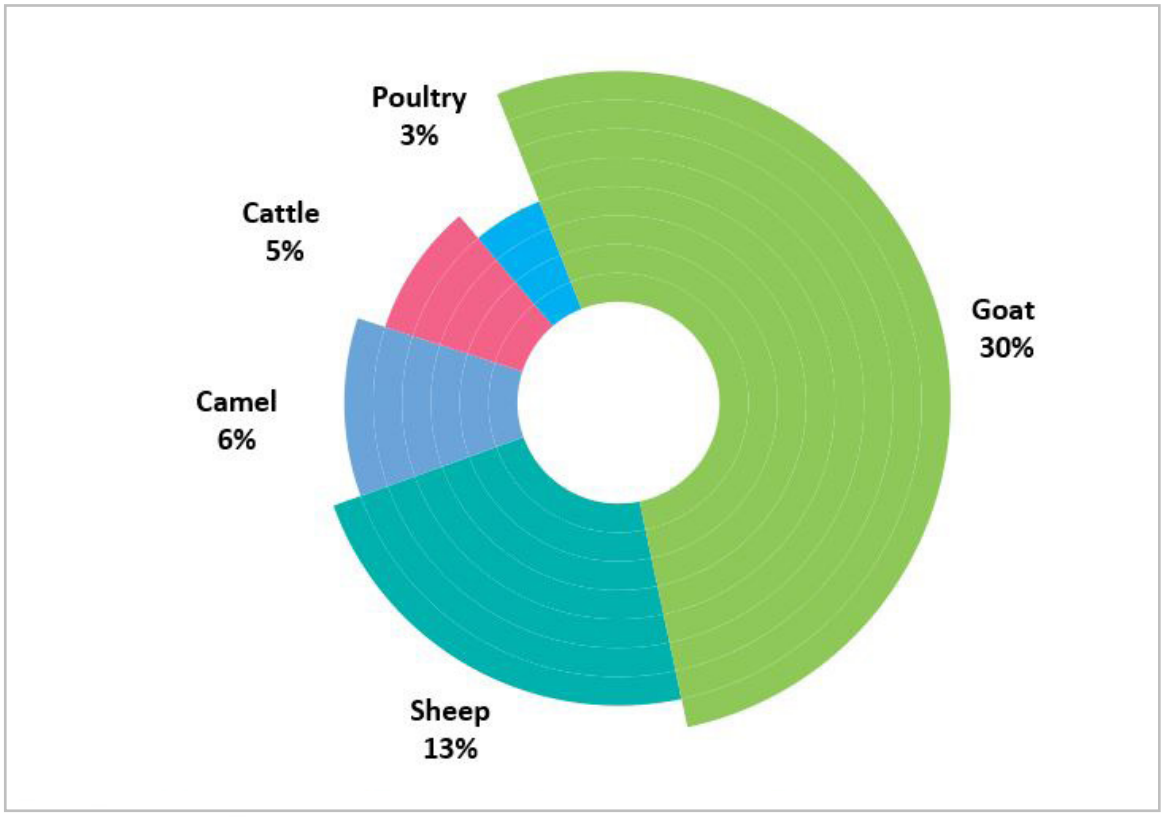
The dual-axis chart tracks three series from 2021 to 2024. Livestock on the left axis had sustained a substantial increase of 82 percent in export, a staggering of 951 million USD during the three-year spell; indicating a growing shipment of live animals abroad. On the other hand, animal meat line declined steadily from 24 percent in 2021 to 16 percent in 2024, this indicates either a falling share of meat in total livestock export value or increasing substitute preference like processed meat or seafood and so on. The 2024 sharp spike in the green line, represents a surge in animal skin export value. This growth suggests increased activity in livestock-related product exports, which, while economically beneficial, could heighten pressure on pastoral systems and ecosystems if not managed sustainably. Expanding animal skin production often correlates with higher livestock slaughter rates, potentially accelerating rangeland degradation and biodiversity loss.

The rapid growth in live animal shipments increases foreign-exchange receipts but leaves money and jobs upstream rather than captured domestically by processing industries. Sustainable export growth would require mechanisms like ecosystem-based grazing plans, certification for sustainable sourcing and monitoring of pasture health. Relevant environmental authorities should link export data to satellite-based vegetation and land degradation indices, ensuring that economic growth in livestock sector does not erode Somalia's rangeland biodiversity.

Table 5.4: Livestock Population Per Head (%)

Livestock	Population per Head (%)
Poultry	3
Cattle	5
Camel	6
Sheep	13
Goat	30

Figure 5.4: Distribution of Livestock Population Per Head (%)



Ministry of Planning, 2025. The National Transformation Plan Report

The chart ranks five animal categories by per-head percentage shares; with Goats 30 percent, Sheep 13 percent, Camel 6 percent, Cattle 5 percent and Poultry at 3 percent. The dominant feature is goats, which account for nearly one-third of the livestock distribution shown in the graph; sheep are distant second and poultry although often numerically abundant in many systems appears minimal in this per-head framing. The visual makes explicit that goats and sheep are the bulk of the population per person, with goats being the single most important species.

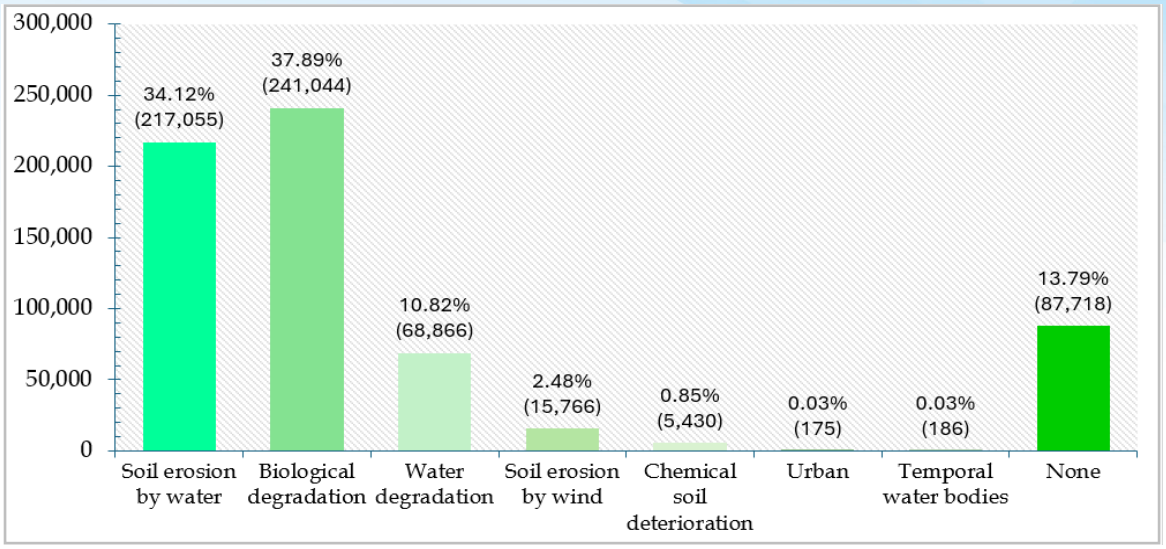
From socioeconomic implications, a goat-dominated livestock base typically signals livelihoods oriented to small-holder pastoralism or agro-pastoralism, flexibility in drought conditions and diets that rely on goat-derived products. Development priorities would

therefore, logically emphasize goat health such as vaccinations and parasite control, improved breeding for productivity and access to markets for small ruminates. The relatively low cattle, camel and poultry shares imply that interventions focused principally on large ruminant or commercial poultry value chains could reach fewer households unless those sectors are concentrated among specific producers.

Table 5.5: Area Coverage by Land Degradation Type (km² and %)

Land Degradation Type	Area Coverage (km²)	Area Coverage (%)
Soil erosion by water	217054.73	34.11
Biological degradation	241043.73	37.89
Water degradation	68865.73	10.82
Soil erosion by wind	15766.48	2.48
Chemical soil deterioration	5429.99	0.85
Urban	175.10	0.03
Temporal water bodies	186.33	0.03
None	87717.91	13.79
Total	**636,240**	**100.00**

Figure 5.5: Distribution of Land Degradation Types by Area Coverage (km² and %)



Ministry of Environment, Et al 2020. LDN Target Setting Process Report

The data indicate that biological degradation 38 and soil erosion by water 34 are the leading forms of land degradation in Somalia, collectively affecting over 70 percent of the country's degraded land area. These are followed by water degradation 11 percent, soil erosion by wind 2 percent and chemical soil deterioration 1 percent, while about 14 percent of land remains unaffected. Such degradation patterns align closely with regional drought maps and hotspot areas shown earlier, where central and southern Somalia, particularly Gedo, Bay, Bakool, Hiraan, Galgadud and Mudug; experience recurrent droughts and land stress. The dominance of biological and water-induced degradation underscores the fragile soil structure and overreliance on rain-fed livelihoods, leading to vegetation loss, reduced soil organic carbon and declining land productivity.

In relation to the Somalia Land Degradation Neutrality targets, this data establishes a clear baseline for action. Achieving LDN by 2030 as compared to the 2015 baseline requires halting further loss and rehabilitation degraded ecosystems. The LDN targets to improve 10 percent of the national territory and reduce stressed or declining land productivity by 50 percent; directly addressing the degradation trends reflected in the data provided. Measures such as increasing forest cover to 30 percent, rehabilitating degraded forests up to 17,988 hectares and improving productivity across grassland and croplands aim to reserve the current erosion and biological decline. Moreover, implementing soil and water conservation structures and promoting sustainable land management practices; particularly in hotspot regions will be essential to convert current degradation into net ecological gain, restore resilience against drought and sustain livelihoods at the time.

POLICIES, STRATEGIES AND LEGAL FRAMEWORKS

i. SDG Indicator 15.6.1

Somalia fulfils the intent of these indicators, which tracks countries that have adopted legislative, administrative and policy frameworks ensuring the fair and equitable sharing of benefits arising from the use of natural resources. The country has developed several national frameworks that collectively promote fairness and equality. Key among these are the provisional Constitution, which guarantees equality and prohibits discrimination, the Social Protection Policy 2019 and the Environmental Protection and Management Act 2024, altogether embed principles of inclusivity, justice and equitable access to opportunities and resources.

3.0 CONCLUSION

3.1 CONCLUSION

Somalia has made notable but uneven progress across the environmental dimensions of the Sustainable Development Goals. The data demonstrates promising improvements in access to clean water and sanitation, climate action, marine resource management and land restoration; yet persistent structural and environmental challenges remain.

Under SDG 6, access to basic drinking water improved in both rural and urban areas between 2021 and 2024; rural access rose 57 to 68 percent and urban from 81 to 84 percent. The gap between the two settings is narrowing, indicating effective rural interventions. However, sanitation coverage remains low, with safely managed services stagnating at 15-17 percent and open defecation still practiced by 26 percent of rural residents. Hygiene services show regression, with the share of households lacking any facility rising to 76 percent in rural areas; revealing critical infrastructure and maintenance gaps.

For SDG 13, greenhouse gas emissions nearly doubled between 2021 and 2024, exceeding 50,000 Gt CO2e. Agriculture and local land-use change remain the dominant sources. Despite these rising emissions, Somalia has made policy strides; including adoption of the Nationally Determined Contribution, National Adaptation Plan and MoECC Strategic Plan 2023-2028. These frameworks provide a strong foundation for resilience, but implementation capacity and financing remain limited.

Under SDG 14, fisheries and blue-economy indicators reflect gradual recovery and reform. Domestic fish consumption has grown steadily, and the Ministry of Fisheries and Blue Economy scored 4 out 5 on the FAO's IUU fishing implementation scale, signaling strong policy enforcement. Nevertheless, illegal and unregulated fishing and weak infrastructure continue to threaten marine ecosystems. Somalia's Linear Shipping Connectivity Index improved from 143 to 93 between 2015-2024; showing progress in maritime integration and trade potential.

For SDG 15, biological degradation with 38 percent and soil erosion by water with 34 percent jointly affect over 70 percent of Somalia's degraded land. Livestock remains central to the economy, contributing about 45 percent to the GDP, but unsustainable grazing practices intensify rangeland depletion. The country's commitment to Land Degradation Neutrality and reforestation initiatives demonstrates awareness of these risks, though measurable restoration outcomes are still emerging.

Overall, Somalia's trajectory toward environmental sustainability is positive yet fragile. Gain in access, governance and international alignment must now be matched with investment in data systems, institutional capacity and climate-resilient infrastructure to secure durable solution and progress toward the 2030 Agenda.

3.2 RECOMMENDATIONS

Reliable and coordinated data systems are essential for tracking Somalia's progress toward the SDGs. To address data gaps, the report proposes the following recommendations:

- Strengthening Somalia's sustainable development data ecosystem requires a unified, technology-driven approach anchored within the Somalia National Bureau of Statistics. A key priority is developing the centralized digital platform; building on the existing SDG Goal Tracker, to aggregate all SDG-related data from government institutions and international organizations. This will ensure the platform accurately reflects the national availability of administrative and survey-based SDG indicators, enabling a more transparent measurement of progress. To support seamless collaboration, the system should be designed for full interoperability, using share data standards, comprehensive metadata catalogues and open APIs that allow datasets to be exchanged, compared and integrated across institutions.
- Advancing data accuracy and real-time insight also demands the integration of geospatial technologies, including GIS and remote-sensing layers, to support dynamic monitoring of progress in SDG environmental indicators. This effort should be embedded within national development frameworks, such as the NTP and the Centennial vision 2060, ensuring long-term environmental monitoring and sustainability. Equally important is the institutionalization of an Inter - ministerial SDG Data Coordination Team, this allows smooth data collection, validation, sharing and dissemination. Clear mandates, standardized reporting schedules and agreed-upon data sharing protocols will also help reduce duplication, minimize data silos and promote accountability.
- To uphold international comparability and methodological rigor, Somalia should adopt national standard for SDG data collection aligned with the UNSD's indicator methodologies. Regular data-quality audits will be essential for identifying inconsistencies and implementing correction mechanisms across ministries and agencies. Building institutional capacity is another critical pillar; continues technical training for data analytics, data management, GIS skills and SDG reporting requirements. Providing government institutions with the necessary analytical tools, such as license for Tableau, Stata and ArcGIS, will expand the country's analytical capabilities and promote evidence-based decision-making.

By building an integrated, interoperable and transparent data ecosystem, Somalia can overcome current fragmentation and establish reliable foundation for environmental monitoring and SDG reporting. Strengthened coordination, standardized methodologies and digital innovation will empower policymakers to data-driven decisions, attract targeted interventions and accelerate national progress toward environmental sustainability and resilience.

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Appendices

Appendix A : Clean water and Sanitation

Table A1: Population Access to Improved Drinking Water Sources by Service Level and Type (2021-2024)

	Basic			Limited			Unimproved			Surface Water		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2021	80.9	56.6	68.0	7.8	11.9	10.0	10.1	22.8	16.9	1.2	8.7	5.2
2022	81.8	60.1	70.4	7.4	10.9	9.2	9.6	21.3	15.8	1.2	7.6	4.6
2023	82.7	63.8	72.8	7.0	9.8	8.5	9.1	19.8	14.7	1.2	6.6	4.0
2024	83.6	67.5	75.3	6.6	8.6	7.6	8.7	18.4	13.7	1.2	5.5	3.4

	Improved Water			Piped			Non-Piped			Accessibility		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2021	88.7	68.5	77.9	69.9	26.8	46.9	18.8	41.8	31.0	63.1	27.2	44.0
2022	89.2	71.0	79.6	71.8	28.0	48.7	17.4	43.1	30.9	64.5	29.9	46.3
2023	89.7	73.6	81.3	73.7	29.2	50.5	16.0	44.4	30.8	65.8	32.8	48.6
2024	90.2	76.1	82.9	75.6	30.4	52.3	14.6	45.7	30.6	67.2	35.7	51.0

Table A2: Population Access to improved Sanitation Facilities and Safely Managed Services (2021-2024)

	Basic			Limited			Unimproved			Open defecation		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2021	53.3	30.8	41.3	26.1	13.0	19.1	17.8	22.6	20.3	2.9	33.5	19.2
2022	53.5	32.3	42.4	26.1	13.1	19.2	17.9	23.4	20.8	2.5	31.2	17.6
2023	53.8	33.9	43.4	26.1	13.1	19.3	18.0	24.2	21.3	2.1	28.8	16.0
2024	54.0	35.4	44.5	26.1	13.1	19.4	18.1	25.0	21.7	1.8	26.4	14.4

	Improved Sanitation			Litrines			Septic tanks			Sewer connection		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2021	79.4	43.9	60.5	63.2	38.3	50.0	4.7	1.1	2.8	11.4	4.5	7.7
2022	79.6	45.4	61.6	64.0	39.5	51.1	4.9	1.1	2.9	10.7	4.8	7.6
2023	79.9	47.0	62.7	64.8	40.7	52.2	5.0	1.2	3.0	10.1	5.1	7.5
2024	80.1	48.6	63.9	65.5	41.9	53.4	5.1	1.2	3.1	9.5	5.4	7.4

	Safely Managed			Disposed of in-situ			Wastewater treated		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2021	17.2	13.2	15.1	13.4	11.6	12.5	3.8	1.6	2.6
2022	17.3	13.9	15.5	13.7	12.2	12.9	3.6	1.7	2.6
2023	17.4	14.7	16.0	13.9	12.9	13.4	3.4	1.8	2.6
2024	17.5	15.5	16.4	14.2	13.5	13.8	3.2	2.0	2.6

Table A3: Population Access to Handwashing Facilities by Service Level (2021–2024)

	Observed			Basic (facility with water and Soap)			Limit (facility lacking water or Soap)		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2021	68.2	57.5	62.5	28.9	16.9	22.5	39.2	40.6	40.0
2022	58.1	46.4	51.9	26.7	15.0	20.5	31.4	31.4	31.4
2023	48.1	35.2	41.4	24.4	13.0	18.5	23.6	22.2	22.9
2024	38.0	24.1	30.9	22.2	11.1	16.5	15.8	13.0	14.4

Appendix B: Life on land

Table B1: Forest area as a proportion of total land area (%)

Year	Forest Area (% of Total Land Area)
2019	9.7
2020	9.5
2021	9.4
2022	9.3
2023	9.2
2024	-

Table B2: Somalia's Livestock Exports (2021 - 2024)

Livestock (Live Animals)	Animal Meat (%)	Animal Skin (%)
-	-	-
-	-	-
523.3	24.1	8.2
558.4	16.1	7.0
860.9	16.0	7.3
950.9	15.5	48.0

Table B3: Area Coverage by Land Degradation Type (Km² and %)

Land Degradation Type	Area Coverage (Km²)	Area Coverage (%)
Soil erosion by Water	217,054.73	34.11
Biological degradation	241,043.73	37.89
Water degradation	68,865.73	10.82
Soil erosion by wind	15,766.48	2.48
Chemical soil deterioration	5,429.99	0.85
Urban	175.10	0.03
Temporal water bodies	186.33	0.03
None	87,717.91	13.79

Table B4: Livestock Population Per Head(%)

Livestock	Population Per Head (%)
Poultry	3%
Cattle	5%
Camel	6%
Sheep	13%
Goat	30%

Table B5: Livestock Contribution to GDP Over time

Year	Livestock Contribution to GDP (%)
1980	44%
1986 - 88	37%
2013 -16	62%
2017	47%
2023 -24	45%

Appendix C: Policy or Framework

This table lists all national and international instruments mentioned in the report that guide the progress of the environmental indicators.

No	Policy or Framework	Type	Year/Period/Scope
1.	Nationally Determined Contribution (NDC)	National Climate Commitment	2021
2.	The Ninth National Development Plan (NDP-9)	National Development Plan	2020 - 2024
3.	National Transformation Plan (NTP)	National Development Framework	Long - term (Integration)
4.	Somalia National Climate Change Policy	National Policy	2020
5.	Draft Enivornmental and Social Impact *Assessment (ESIA) Regulations*	Draft National Regulation	2020
6.	National Environment Management Bill	Draft National Legislation	2025
7.	National Durable Solutions Strategy	National Strategy	2020 - 2024
8.	Integrated Water Resource Management (IWRM) *Strategic Plan*	National Strategy Plan	2019 - 2023
9.	Power Master Plan for Somalia	National Infrastructure Plan	2019
10.	Ministry of Environment and Climate Change *(MoECC) Strategic Plan*	institutional Strategic Plan	2023 - 2028
11.	National Adaptation Plan (NAP)	National Climate Strategy	Strategies outlined
12.	Centennial Vision 2060	Long-term National Vision	Long - term
13.	Land Degradation Neutrality (LDN) Commitment	National Environmental Commitment	Goal for ecological *Restoration*
14.	Sendai Framework	International Framework	Disaster Risk *Reduction (DRR)*
15.	UN Strategic Framework for Somalia	International Framework	2017 - 2020
16.	United Nations Convention on the Law of the Sea *(UNCLOS)*	International Legal Framework	Maritime Regulations

Appendix D: Mathematical Formulas

Pearson correlation coefficient

$$r_{xy} = \frac{Cov\,(x, y)}{\sigma_x \ \sigma_y}$$

Where

$$Cov(x, y) = \frac{\sum(x_i - \bar{x})\,(\,y_i - \bar{y}\,)}{n - 1}$$

$$\sigma_x = \sqrt{\frac{\sum(x_i - \bar{x})^2}{n - 1}}$$

$$\sigma_y = \sqrt{\frac{\sum(y_i - \bar{y})^2}{n - 1}}$$

r_{xy} = Correlation coefficient between x and y

Cov (x, y) = Covariance between x & y Variable

σ_x = standard deviation of x

σ_y = standard deviation of y

PARTNERSHIP FOR THE GOALS

NO POVERTY

ZERO HUNGER

GOOD HEALTH AND WELL-BEING

QUALITY EDUCATION

GENDER EQUALITY

CLEAN WATER AND SANITATION

AFFORDABLE AND CLEAN ENERGY

DECENT WORK AND ECONOMIC GROWTH

INDUSTRY, INNOVATION AND INFRASTRUCTURE

REDUCED INEQUALITY

SUSTAINABLE CITIES AND COMMUNITIES

RESPONSIBLE CONSUMPTION AND PRODUCTION

CLIMATE ACTION

LIFE BELOW WATER

LIFE ON LAND

PEACE, JUSTICE AND STRONG INSTITUTIONS