

GARISSA TOWNSHIP WARD CLIMATE AND WATER PERCEPTION SURVEY REPORT



Udgoon
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INTRODUCTION:

The arid and semi-arid environment of Garissa Township Ward presents ongoing challenges in climate resilience, especially in managing water scarcity and environmental stress. This survey examined residents' perspectives on climate change and water issues to identify knowledge gaps, gauge the level of community engagement and assess interest in local environmental and water management efforts.

The study segmented respondents into five age groups to capture varying generational views on these topics. By analyzing each age group, we highlight common concerns as well as age-specific priorities, which can help tailor climate change communication and water management strategies to different segments of the community.

OBJECTIVES OF THIS SURVEY:

- Assess Climate Change Awareness and Knowledge
 - Measure residents' awareness of climate change impacts, especially within Garissa Township Ward.
 - Distinguish general climate awareness from in-depth knowledge of causes, effects and indicators of climate change.
- Understand Perceptions of Climate Change Causes and Effects
 - Gather insights on what residents see as main contributors to local climate change (e.g, deforestation, industrial emissions, human activities).
 - Document perceived community impacts, including on agriculture, livestock, water availability and quality of life.
- Evaluate Experiences with Water Scarcity and Quality
 - Assess the extent and frequency of water scarcity issues in Garissa Township Ward, including challenges related to water quality and access.
 - Identify primary household water sources and understand perceptions regarding their adequacy and reliability.
- Gauge Community Awareness and Participation in Local Initiatives
 - Determine residents' awareness of and involvement in local climate planning and water management efforts.
 - Explore reasons for varied participation levels and gather suggestions for increasing community engagement in climate resilience and water management.
- Identify Preferred Sources for Climate and Water Information
 - Assess where residents obtain climate change and water-related information, noting trusted and widely used sources.
 - Collect suggestions on information or resources that would enhance residents' understanding and adaptation to climate impacts.
- Gather Recommendations for Climate Resilience and Water Management

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- Solicit resident recommendations for actionable climate resilience and water management steps by local authorities and the community.
 - Highlight community-driven solutions and identify popular measures to address climate-related challenges and improve water security.
 - Analyze Demographic Differences in Perceptions
 - Compare responses across age groups to examine differences in awareness, knowledge, and perceptions of climate change and water issues.
 - Provide demographic insights to inform targeted outreach and interventions based on age-specific needs and preferences.
 - Analyze Gender Differences in Climate and Water Perceptions
 - Examine differences in how men and women perceive climate change impacts and water issues, with a focus on awareness levels, participation in local initiatives, and access to resources.
 - Identify areas where women's perspectives and participation may be underrepresented, especially in decision-making processes related to climate resilience and water management

BACKGROUND

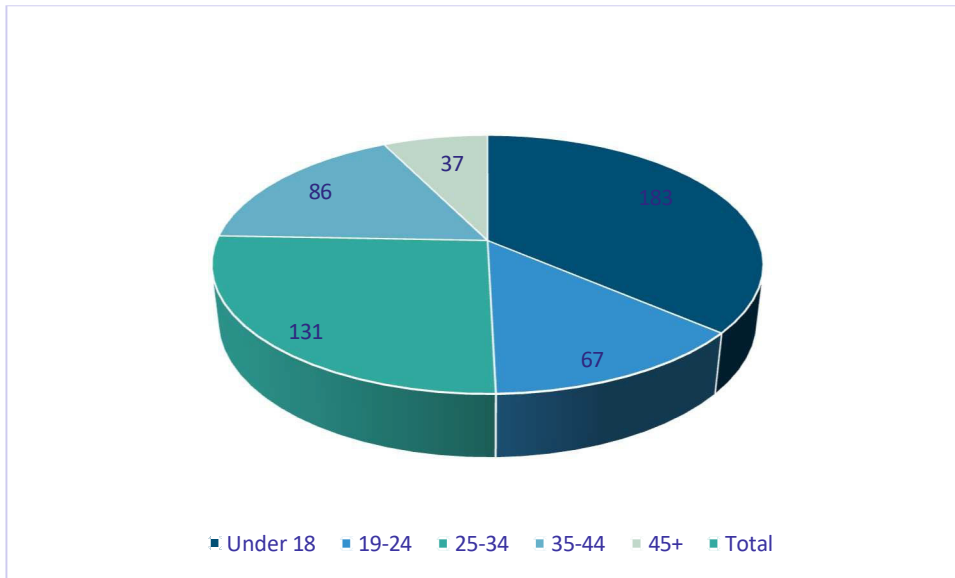
This report examines the views on climate change and water challenges in Garissa Township Ward, focusing on differences across five age groups: Under 18, 19-24, 25-34, 35-44, and 45+. A total of 504 participants shared their insights on climate change awareness, its impacts, and local water resources. Each group brought unique perspectives on climate change, sources of information, and levels of involvement in community efforts, pointing to areas for focused outreach and action.

The survey shows strong climate change awareness across all age groups, with a broad acknowledgment of the link between climate change and water scarcity. However, awareness and participation in community programs, such as climate planning committees and water stakeholder forums, were generally lower, especially among younger participants.

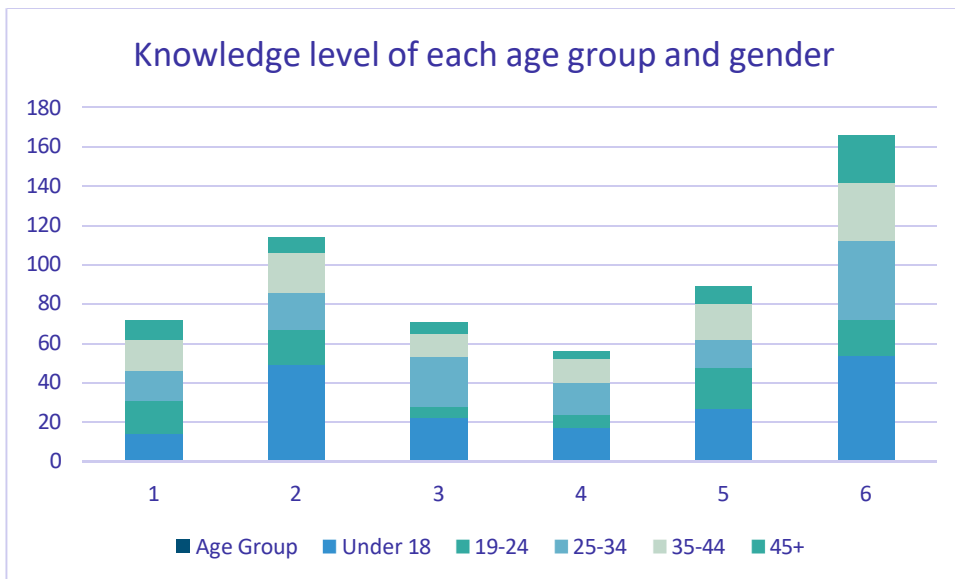
The survey was conducted to address growing concerns about climate variability and water resource issues in Garissa Township Ward, where residents experience challenges like water scarcity, poor water quality, and limited access to reliable climate resilience information. Garissa's arid climate, marked by limited rainfall and high temperatures, intensifies these issues, affecting daily life and livelihoods.

The age-group breakdown for the 504 survey participants is as follows:

- Under 18: 183 participants
- 19-24: 67 participants
- 25-34: 131 participants
- 35-44: 86 participants
- 45+: 37 participants



A pie-chart showing the number of participants in each age-group



Stacked bar-chart showing the level of knowledge in each age-group and gender

Participants provided information on their climate change awareness, experiences with water scarcity, views on the causes of these issues and engagement with local initiatives. Most respondents recognized the impact of climate change on water resources, though their depth of understanding varied significantly. Younger respondents primarily used internet sources for information, while older groups favored community meetings. Awareness of local climate and water forums was moderate, revealing an opportunity to boost community participation.

The distinct perspectives of each age group offer a basis for targeted strategies to improve climate resilience and water security in Garissa. The report ends with tailored recommendations based on these findings, emphasizing the need for increased community awareness, improved water infrastructure, and the inclusion of local priorities in broader environmental policies.

WOMEN'S PARTICIPATION AND REPRESENTATION IN CLIMATE CHANGE AND WATER MANAGEMENT

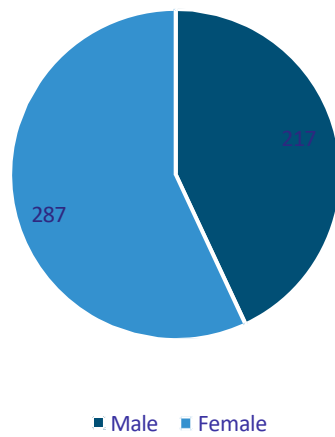
Survey results highlight clear gender differences in climate-related involvement:

- **Higher Participation Rate:** Women represented a larger portion of survey participants across all age groups, showing strong community interest in issues like climate change and water scarcity.
- **Limited Involvement in Climate Committees:** Fewer women reported participating in climate change committee meetings compared to men, suggesting barriers or limited support for women's public involvement in environmental issues.
- **Awareness and Engagement:** While women showed awareness of climate impacts (notably drought and water scarcity), their role in organized climate actions and community forums appears limited. This lack of representation may reduce the diversity of perspectives in local resilience planning.

Gender Ratios and Representation

- **Overall Gender Ratio:** Women outnumbered men in participation, especially in younger age groups (Under 18 and 19-24), underscoring women's interest in community matters despite fewer formal participation pathways.
- **Barriers to Participation:** Though women face climate-related challenges like water scarcity, they are less involved in community-level planning. Supporting women's inclusion in these discussions could lead to more inclusive, well-rounded strategies.

Participant's gender ratio



A pie-chart showing the number of Female and Male that participated in the survey

WATER SCARCITY CONCERNS IN GARISSA TOWNSHIP WARD

Respondents across age groups in Garissa Township Ward shared key concerns about water scarcity:

1. **Water Availability and Accessibility**
 - High Demand and Low Supply: Limited clean water availability is a critical issue in Garissa, where low rainfall and high temperatures increase water demand.
 - Reliance on Multiple Water Sources: Residents depend on various sources—piped water, boreholes, vendors, rainwater and rivers. This reliance suggests an inconsistent water supply.
2. **Quality of Water**
 - Recurring Water Quality Issues: Contaminated water, unpleasant odors and discoloration are common concerns, affecting health and reducing trust in local water sources.
 - Lack of Treatment Facilities: Limited water treatment exacerbates quality issues, especially with a growing population.
3. **Mismanagement of Water Resources**
 - Inefficiencies in Resource Management: Many respondents pointed to poor distribution practices and lack of oversight as major contributors to water scarcity.
 - Resource Allocation Concerns: More efficient allocation systems are needed, especially in underserved areas, to improve equitable access to water.
4. **Climate Change Impacts**
 - Drought and Decreasing Rainfall: Climate change has worsened droughts, further depleting Garissa's limited water resources.

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- Higher Temperatures: Rising temperatures increase water needs for personal, agricultural and livestock purposes, straining the limited supply.
 - 5. Population Growth and Urbanization
 - Rising Demand with Population Growth: Rapid growth and urbanization intensify pressure on limited water resources, as demand surpasses existing infrastructure.
 - Strain on Infrastructure: Current water infrastructure cannot keep up with population demands, resulting in frequent shortages and a need for expansion and upgrades.
 - 6. Infrastructural Gaps
 - Poor Infrastructure Maintenance: Frequent breakdowns of water pipes, boreholes and other infrastructure lead to supply interruptions.
 - Need for Storage and Distribution Expansion: Many respondents stressed the importance of better storage and distribution systems to ensure water availability, especially in remote areas and during dry periods.
 - Community Engagement on Climate Adaptation: Educating the community on climate adaptation and involving them in decision-making could strengthen resilience to future water scarcity challenges

CLIMATE CHANGE CONCERNS IN GARISSA TOWNSHIP WARD

Respondents in Garissa Township Ward expressed several key concerns about climate change:

1. Increased Drought Frequency and Intensity
 - Extended Dry Seasons: Many cited longer dry periods and reduced rainfall, which drive water shortages, lower agricultural yields, and heighten food insecurity.
 - Livelihood Disruptions: For farming and livestock-reliant households, drought disrupts income and food sources, a critical issue for communities dependent on rain-fed agriculture.
2. Rising Temperatures and Heat Waves
 - Higher Temperatures: Respondents reported increased temperatures, making daily life tougher and raising water demand. The heat accelerates evaporation, complicating water conservation efforts.
 - Health Impacts: Extreme heat poses health risks, especially for the elderly and children, with higher rates of heat-related illness.
3. Deforestation and Environmental Degradation
 - Vegetation Loss: Deforestation is a major concern, leading to soil degradation and reduced natural water retention.
 - Resource Depletion: Deforestation affects biodiversity and reduces access to resources like firewood, essential for many households.
4. Grazing Land and Water Shortages for Livestock
 - Effects on Pastoralism: Prolonged drought and reduced rainfall are shrinking grazing lands, threatening livestock health and survival—a primary livelihood source for many.

- Forced Migration: With dwindling grazing options, some pastoral communities migrate to find water and pasture, creating social and economic stress.
- 5. Flooding and Extreme Weather Events
 - Unpredictable Rainfall: While drought is the main worry, some respondents highlighted sudden heavy rains causing localized flooding, making it hard to plan for farming.
 - Infrastructure Damage: Flash floods damage homes, roads and infrastructure, creating hazards and disrupting accessibility.
- 6. Awareness and Knowledge Gaps
 - Limited Climate Information: Although general awareness is high, respondents across age groups seek more specific knowledge on climate effects and solutions to better adapt.
 - Community Involvement: Many feel disconnected from local climate adaptation efforts. Greater community involvement in climate planning could improve resilience and readiness.

Cause of Climate Change	Under 18	19-24	25-34	35-44	45+
Deforestation	31.6%	25%	44%	35%	40%
Industrial Emissions	2%	2%	4%	6%	17%
Human Activity	31.2%	28.6%	28%	25%	17%
Location-Specific Causes	13.2%	12.5%	12%	10%	10%
Other (includes pollution, etc.)	21.9%	19%	12%	24%	13%

This table provides a breakdown of the perceived causes of climate change, which can help prioritize areas for intervention or education.

METHODOLOGY

This survey employed a structured approach to gather residents' perspectives on climate change and water issues in Garissa Township Ward. Using a combination of questionnaires and key informant interviews, the research team ensured a comprehensive data collection process that engaged various demographic groups.

1. Research Design

- Objectives: The survey aimed to measure residents' awareness of climate change, document perceived impacts on water resources, evaluate community engagement in climate resilience initiatives and analyze demographic and gender-specific insights.
- Research Questions: Key questions focused on climate awareness levels, water scarcity issues, barriers to clean water access, preferred information sources and recommendations for water management improvements.

2. Data Collection Tools

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- **Questionnaires:** Structured questionnaires were administered to a representative sample of 600 residents, approximately 5% of Garissa Township Ward’s population. The tool captured responses from diverse age groups, with a targeted approach to involve more women and girls. The survey included questions on climate awareness, water scarcity, involvement in local initiatives and recommendations for improvement.
 - **Key Informant Interviews:** Conducted with 13 members of the Garissa Ward Water Stakeholders Forum and 11 from the Ward Climate Change Planning Committee. These interviews provided in-depth insights into community planning efforts, participation barriers and resource management challenges.

3. Data Collection Process

- **Volunteer Training:** Twenty youth volunteers received a half-day training session to ensure standardized data collection practices. This training covered question delivery, data recording and ethical considerations.
- **Field Data Collection:** Volunteers administered the survey over three days, capturing input from a wide cross-section of the community, with a strong focus on female participation.
- **Data Management:** Responses were recorded in a centralized database for accurate analysis. Key informant interviews were documented for qualitative insights.

4. Analysis and Reporting

- **Data Analysis:** Quantitative data was analyzed to identify trends in climate and water perceptions across age and gender groups. Qualitative responses from key informants were synthesized to supplement the quantitative findings.
- **Report Development:** Findings were organized into clear, actionable insights, supported by charts and tables, to facilitate understanding. The final report also highlights areas where community-driven recommendations align with local policy opportunities.

5. Project Phases and Timeline

- The project followed a phased approach, beginning with the development of survey tools and volunteer training. Data collection was conducted in mid-October 2024, with analysis and reporting extending into early November. Subsequent phases included community workshops, strategy development, and project evaluations scheduled through March 2025.

KEY FINDINGS

1. **Climate Change Awareness Varies by Age Group**
 - **General Awareness:** Most respondents know about climate change, but depth of understanding differs:

- Under 18 and Young Adults (19-24): Primarily rely on the internet for information, showing general awareness but less knowledge about local impacts.
 - Older Groups (35-44 and 45+): Show a deeper understanding gained from community meetings and firsthand experience, especially around drought and environmental degradation.
2. Water Scarcity and Quality Concerns Across All Ages
 - Availability: Every age group expressed concern over the lack of clean water. Key sources affected include piped water, wells and boreholes.
 - Quality Issues: Poor water quality, contamination and inconsistent supply are major issues. Young adults noted health risks from contaminated water, while older respondents focused on seasonal shortages and infrastructure needs.
 3. Impact of Climate Change on Livelihoods
 - Agriculture and Livestock: Those relying on farming and livestock face disruptions. The under-18 group noted reduced grazing land impacts food security, while adults, especially those over 35, pointed to extreme weather affecting crops and livestock.
 - Migration and Economic Strain: All age groups noted that worsening conditions often force migration in search of grazing, adding social and economic stress.
 4. Differences in Perceived Causes of Climate Change
 - Younger Respondents: More likely to cite deforestation and human activity as main causes, likely influenced by education or online resources.
 - Older Respondents: Also mentioned industrial emissions and poor resource management, with a focus on local issues like inadequate infrastructure contributing to scarcity.
 5. Low Engagement in Climate and Water Management Initiatives
 - Awareness vs. Involvement: While adults are somewhat aware of climate and water initiatives, actual participation remains low, indicating the need for more inclusive community engagement.
 - Interest in Committees: Many respondents aged 25-34 are interested in climate committees, but logistical challenges and perceived ineffectiveness deter them.
 6. Preferred Information Sources by Age
 - Under 18 and 19-24: Depend on the internet for climate change information, suggesting digital outreach might be effective.
 - 35-44 and 45+: Rely more on community meetings, indicating the need for in-person awareness efforts tailored to older demographics.

RECOMMENDATIONS

1. Enhance Water Infrastructure and Distribution
 - Improve maintenance and reliability of water systems to address quality issues.
 - Add storage facilities to ensure availability during dry seasons and construct more boreholes for areas with shortages.
2. Boost Community Awareness on Climate and Water Issues

- Run awareness programs on climate change causes and impacts to improve understanding.
- Promote sustainable water practices through public campaigns and encourage community participation in environmental initiatives.
- 3. Increase Community Involvement in Planning
 - Involve more community members in climate and water committees to build a sense of ownership.
 - Hold public forums on climate change and water issues to gather input and foster collaboration.
- 4. Support Sustainable Agriculture and Livestock Practices
 - Offer training on climate-smart agriculture techniques, including water-efficient farming and improved grazing management.
- 5. Empower Local Leadership in Climate and Water Efforts
 - Enable local leaders to coordinate resources and implement resilience projects, with clear roles for committee members.
- 6. Encourage Tree Planting and Reforestation
 - Initiate tree planting and reforestation projects to improve the local climate and enhance soil health.
- 7. Promote Water Conservation and Recycling
 - Advocate for rainwater harvesting and greywater reuse for agricultural needs to optimize seasonal rainfall.
- 8. Strengthen Water Management Policies
 - Create policies to reduce water mismanagement, focusing on equitable distribution and water quality standards.
- 9. Improve Public Communication Channels
 - Use multiple platforms like social media, radio, and community meetings to spread information on climate and water initiatives tailored to various age groups.
- 10. Increase Resilience to Climate Impacts
 - Support income diversification for residents to reduce dependency on climate-sensitive activities and provide training on preparation for climate events.

Age Group	Recommendations on Climate Change Actions	Recommendations on Water Management
Under 18	Increase education; tree planting	Water conservation, community awareness
19-24	Awareness campaigns, more community engagement	Infrastructure improvement, reduce pollution
25-34	Risk assessment, environmental management	Improve water storage, establish water-saving habits
35-44	Encourage sustainable farming, local adaptation projects	Infrastructure upgrades, fair water distribution

45+	Public awareness, disaster resilience	Water storage facilities, water conservation efforts
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This table can compile specific recommendations provided by respondents in each age group, which is helpful for strategic planning.

Conclusion

The Climate Change and Water Resource Survey in Garissa Township Ward highlights residents' understanding, concerns, and priorities related to climate change and water scarcity. Across age groups, participants showed strong awareness of climate change's impact on daily life, particularly on water access and quality. Respondents widely perceive climate change as a driver of worsening water scarcity, with deforestation, human activity and resource mismanagement identified as key contributors.

Community recommendations emphasize sustainable water management, infrastructure improvement, climate awareness and strengthened leadership in resilience efforts. There is a clear call for better water infrastructure, sustainable farming and increased reforestation—solutions that address both immediate and long-term needs.

This survey points to the importance of collaboration among local authorities, community leaders, and residents to develop and apply strategies that address these issues. By focusing on community engagement, accessible communication and sustainable practices, Garissa Township Ward can build greater resilience to climate impacts and foster proactive water management. The findings and recommendations provide a solid foundation for future programs aimed at strengthening climate resilience and water security for Garissa's communities.

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