Vulnerability Assessments in Garissa District, Kenya - Ohia and Modika Locations

The Global Water Initiative
A Partnership Funded by the Howard G. Buffett Foundation

GOALS OF THE PROCESS:

- **Understand the links between local livelihoods and climate in *Garissa District, Kenya***
- **Assess a project's impact on livelihood resources important for climate change adaptation**
- **Devise adjustments to improve a project's impact on these key livelihood resources**

OBJECTIVES FOR GARISSA:

- **Create awareness and share knowledge on climate change**
- **Train team and partners on doing vulnerability assessments**
- **Understand vulnerability to climate change in *Ohia and Modika***
- **Identify potential adaptation options**

PROJECT OVERVIEW: The project on Sustaining School Children's Access to Safe Water in Garissa District, Kenya is being implemented as part of the Global Water Initiative (GWI) in order to see poor rural communities in arid and semi-arid zones reduce their vulner-

THE PROCESS: Using a combination of adaptation and participatory tools from Climate Vulnerability and Capacity Analysis (CVCA) project managers are able to obtain information on the regional, ecological and country-wide climate context for the project area. The Community-based Risk Screening Tool: Adaptation and Livelihoods (CRiSTAL) can then be utilized as a decision-support tool to analyse the vulnerability assessment information gathered using CVCA. The process integrates climate change adaptation into community-level projects, as well as identifies adaptation actions that can improve resilience to climate related hazards (i.e. droughts and floods).

IN GARISSA: Facilitators were trained on communicating climate change concepts and carrying out a vulnerability assessment. This included how to gather information using CVCA and analyse the collected data using CRiSTAL.. Participants also plotted out a potential way forward beyond the assessment. Some of the participatory tools within CVCA and CRiSTAL used to gather information in the field include the rain calendar, hazard map and vulnerability matrix. The rain calendar helps users to gather rainfall and temperature information for specific local areas from the communities. Hazard mapping provides a visual representation of the links

IMPACT TO LIVELIHOOD RESOURCES: Upon identifying the climate-related hazards and the relevant livelihood resources within the project region, the next step is to determine the impact of the hazards on these resources in order to more effectively analyze current and possible coping strategies. training.

MODIKA: Drought and floods have a high impact on the natural resources of Modika community, although it should be noted that floods were thought to positively impact tree and water resources through increasing the 'quantity of water in reservoirs such as earth pans and supporting growth of trees.' The major impact to livelihood resources through extreme heat were associated with reduced activity and the associated reduction in productivity.

OHIA: Drought has a high impact on natural resources, as well as financial resources in Ohia community, as these often rely on the outputs from water, land and trees. This is also reflected with extreme heat to a lesser extent. Both drought and extreme heat somewhat impact social resources, including women's groups and the chief's office. Strong winds has a lower impact on resources compared to the other hazards , as they likely have less overall impact on the community.

ABOUT GWI: The Global Water Initiative (GWI) addresses the declining state of the world's fresh water supply and the lack of access to clean water services by the world's poorest people. It brings together the talents and experiences of seven leading international organizations—Action Against Hunger-USA, CARE, Catholic Relief Services (CRS), International Union for Conservation of Nature (IUCN), International Institute for Environment and Development (IIED), Oxfam America and SOS Sahel UK—to work out effective solutions.

The creation of the GWI comes at a time when more than one billion people lack access to improved water sources and more than 2.6 billion people lack adequate sanitation.

Overview of Results

Hazard	Impact	Alternative Coping Strategy - OHIA	Alternative Coping Strategy - MODIKA
Drought	Water shortage	Drill and maintain boreholes	Storing water in water storage reservoirs
	Livestock death	Hay making	Buying of animal feeds
	Food shortage	Supplement rainfed agriculture with irrigation (water can be obtained from River Tana, Boreholes etc)	N/A
	Lack of Pasture	N/A	Destocking
Extreme Heat	Livestock death	Destocking	N/A
	Drying up of Earthpans	N/A	Drilling boreholes in the area
	Water shortage	Piping water from River Tana and increasing the size of the water pan	N/A
	Reduced Human Activity	N/A	Working early in the morning or late in the evening
	Human diseases	Seeking alternative (modern treatment) e.g. from clinics (including mobile ones)	Use of traditional medicine
Strong Winds	Destruction of houses and animal shelters	Plant trees to act as wind breaks	N/A
	Respiratory diseases	Seeking alternative (modern) treatment from clinics (including mobile ones)	N/A
	Destruction of trees	Planting more trees	N/A
Floods	Livestock deaths	N/A	Migration to higher grounds
	Destruction of houses	N/A	Putting temporary traditional houses
	Human/Livestock diseases	N/A	Seeking hospital/veterinary services

Developing a summary of climate-related hazards, their impacts on the community and existing coping strategies for these hazards is crucial in developing a community adaptation strategy. Additionally, the efficacy and sustainability of each coping strategy must be determined in order to identify where progress can be made for sustainable adaptation. The main climate-related hazards, their impacts and key current coping strategies identified in Ohia and Modika are indicated in the table to the left.

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WAY FORWARD: Current project activities whose results may be affected by the impacts of climate variability and climate change include: construction of pit latrines, construction of the earth pan, hygiene promotion and irrigation. Piping water from River Tana to a 90m^3 steel tank (2 or 3 tanks) for the schools in Balambala with kiosks to sell water would also be increasingly beneficial with less intense rainfall. The project will also work on the rehabilitation of an earthpan in Ashadin, the rehabilitation of school latrines in Balambala, provision of a mobile pit latrine in Modika, construction of child friendly latrines in all beneficiary schools and undertaking theatre style training to convey key messages to community members. In order to make these activities effective project team should incorporate education on climate change, expansion of the area for dam construction and consideration to wind or solar power for pump operations.

Potential barriers to these revised activities include: potential conflict over abstraction of water if there is reduced flow; financial constraints due to the high initial capital costs of wind and solar power; clan conflicts in the area could disrupt activities; the existence of few artisans to support construction of pit latrines; and the attitude of dependency on CARE (and other aid agencies) for support.

Moving forward, the team would like to include other stakeholders, whom they have already engaged strengthening partnerships. Mainstreaming climate change adaptation into other project activities is important to the team as well.

ABOUT GWI EAST AFRICA: The GWI programme in East Africa has three strategic objectives: (SO)
SO1: Good Governance Improved local and community governance and the enabling policy framework
SO2: Sustainable Multiple Uses of Water - Efficient, effective and equitable domestic and productive uses of water, sanitation, hygiene, and watershed management
SO3: Risk Management - Vulnerable rural communities and their environments have increased resilience to water-related shocks.
The vulnerability assessment is providing input to achieve SO3.

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