



TRACTION

Advancing climate adaptation action

Traction: Enablers to effective local governance in adaptation planning and implementation at the sub-national level in Malawi

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Executive Summary

Traction is a three-year project that aims to understand what constitutes enablers to adaptation in terms of technical capacity, legislative authority and inter-institutional systems that help to bring about change at a range of levels, nationally, regionally and locally.

The Traction project aims to develop greater understanding of:

- what drives adaptation that has positive and just impacts across society;
- what factors or enablers can accelerate adaptation;
- what are the barriers or inhibitors to convening adaptation progress

Traction is not intended as a checklist of the quality of national climate adaptation responses. Nor is it intended to be used to make a comparison between different contexts or to compare whether one country has undertaken climate change adaptation planning 'better' than another.

In 2021, Sniffer and the International Institute for Environment and Development with support from the Scottish Government implemented Traction studies with stakeholders and communities in districts and regions in Malawi and Scotland and at the national level in Mozambique.

This report aims to present Traction analysis on **enablers to effective local governance in adaptation planning and implementation at the sub-national level in Malawi** identified through the Climate Change Program Malawi (CCPM). The study involved 26 Focus Groups Discussions and 16 Key Informant Interviews in the districts of Balaka, Machinga, Zomba and Chikwawa representing communities and civil society organizations working with Trócaire Malawi through the CCPM.

Through the study in Malawi, it is recognized that enablers to **effective local governance in adaptation planning and implementation at the sub-national level in Malawi** include:

- Well-defined climate change policy with **vertical and horizontal integration or coherence across thematic sectors**, poverty reduction, disaster management, agriculture, water and economic development, social support programs; **Decentralization of planning processes and deliberate strategies to engage underrepresented groups and especially women** in adaptation planning and implementation through engagement in local structures. **District level contingency planning** provides a shared framework across sectors as a basis of coordination, decision making and budgeting,
- **Demand driven** efforts such as agriculture extension approaches give communities an opportunity to choose agriculture value chains suitable in their area, based on their local climatic conditions and subsequently demand the extension services they need for specific commodities to produce. **Access to information by farmers and community groups in a manner that is accessible, timely and appropriate to support users in making decisions – when they need to.** Effective district level **multi-stakeholder structures that coordinate well** with key private sector and NGO actors as well as **working closely with local level community structures.** Legitimacy and mechanisms to **enable local communities' engagement** in planning and implementation of adaptation activities.
- **Mechanisms to enable farmer and community driven advocacy** drives coherence between climate risk, environmental management and poverty reduction efforts. **Capacity and skills building, and support groups** have helped women and other vulnerable groups to have confidence to drive adaptation planning and implementation.

The Malawi decentralized governance system is an enabler to adaptation. Local structures have been put in place providing an avenue for communities' views to feed into decision making at both district and national levels. Adaptation action is integrated across sectors and scales with coherence or alignment between policies relating to livelihoods, agriculture, poverty reduction, disaster and climate change programs cascaded from national level through

local Government programs through multi-sectoral and stakeholder structures. National to local policy coherence and a close integration between CCMP and other policies through vertical and horizontal coherence at the district level.

Multi-stakeholder governance structures facilitated by the District Executive Committee (DEC) and sub-committees have provided an important enabler to adaptation. District level deliberations have contributed to national policy making, for example, the inclusion of small livestock into the Affordable Input Program. Development of different district level plans such as district development plans, multi-hazard plans, water development or forestry plans follow a consultative multi-stakeholder process and DEC hold review meetings at district level outlining the impact of climate change or potential disasters on communities and local groups in a district to coordinate strategies, solutions and providing innovation through needs-based planning. Governance structures are supported through an upsurge of evidence from the local level, which inform higher level decision making for influencing policy, planning and resilience action. Needs based planning through tools such as the Participatory Vulnerability Capacity Assessment (PVCA) which offer innovation in knowledge flow and contribute to multi-stakeholder and multi-sector planning from district councils to national level.

At district level, information on the impact of climate change is formalized through DEC multi-stakeholder and multi-sector review meetings. These gatherings are attended by both government and non-state actors. Districts have devised ways of disseminating climate change related messages through two non-traditional methods, Short Message Services (SMS) through cell phones and the use of agriculture extension agents from district to the local levels. The importance of locally relevant information, presented in many ways and media throughout communities, and based on the different needs, and contexts is key. Scientific messages disseminated are translated into local language, making messages more user-friendly to people in communities. Implementation of climate change related policies in local communities are stakeholder inclusive. Decentralization demands that grassroots communities be consulted in the development phase of adaptation actions. NGOs advocacy on women's leadership, deliberate approaches by district stakeholders to include women in civil protection committees, and NGOs playing a critical role in building local capacities and empowering community groups have contributed to enabling adaptation through decentralization.

Malawi's climate change management policy recognizes that women and girls are disproportionately affected by climate change and are more vulnerable to its impacts. Women representative posts are established to ensure that women's specific issues are integrated into various adaptation initiatives. Offering support to women through skills and confidence development, inspiration through leadership, and economic empowerment have been key. Victims of disasters have in the past been involved in overall assessment of damage by the Village Civil Protection Committees. Women's involvement is enabled through their own satisfaction in contributing to community service and provision of training from different organizations, inspiration from fellow women working for partner organizations and role modelling in advocating women's leadership in development.

Whilst enablers have supported adaptation planning and implementation, inhibitors are also identified. Vertical integration was impacted by limited financial and human resources, for example, where local capacities and resources were limited, impacting development and implementation of contingency plans by the local structures. Women's participation was affected by transport and mobility, as well as social and cultural context, norms, and expectations. Lack of mechanisms in districts to formalize multi-sectoral exchange and learning beyond the review meetings at the district were also identified as inhibitors. False promises and politicization of adaptation measures by people vying for political positions as a means of amassing votes, or perceived lack of transparency in financial utilization and management of non-governmental organizations' projects limited adaptation progress.

Moving forwards, a national level meeting convened by CCPM national advocacy implementer the Civil Society Network on Climate Change (CISONECC) to enable policy makers, donors, academia, and other key stakeholders to discuss findings further will be important as will district level meetings organized to discuss the results with district level stakeholders.

Contents

Executive Summary	3
1. Project background.....	6
1.1. Climate Change in Malawi	6
1.2. Climate Change Projects in Malawi	7
1.3. Overall Research Questions	9
2. Qualitative research framework.....	9
2.1. Assessment Methodology	9
2.2. Assessment Approach	10
2.3. Key Informant Interviews	10
2.4. Focus Group Discussions	11
2.5. Sampling	11
2.6. Data Analysis	12
2.7. Limitations	13
3. Study Findings: Background and Context.....	13
3.1. Background and context.....	13
3.2. Climate change issues	13
3.3. Sources of climate change information.....	15
4. Study Findings: Results of Key Questions	15
4.1. Key Question: How does an enhanced behaviour / knowledge of the local communities’ human rights in relation to climate change impact individual smallholder farmers? To what extent have communities advocated for climate justice?.....	15
4.2. Key Question: Has increasing the number of women present in community structures led to increased engagement of women in decision making processes within these structures.	17
4.3. Key Question: What approaches are most successful at ensuring the functionality and sustainability of the water points constructed by the programme?	19
5. Understanding enablers of adaptation action: Learning from Malawi through TRACTION framework	20
5.1. Visioning, goals, targets and outcomes through policy and leadership	20
5.2. Defining and developing pathways from the present towards envisioned outcomes – governance processes and capacity to respond	23
5.3. Synthesis and utilisation of knowledge – understanding knowledge systems for society and the natural environment.....	25
5.4. Facilitation of cross-sector and cross-organisational collaboration via stakeholder and public engagement 27	
5.5. Consideration of ethics and justice via normative competence.....	28
6. Enablers and inhibitors in adaptation planning and implementation	31
7. Malawi experience in using Traction Framework.....	34
8. Suggestions: taking the learning forwards	34
Annex 1: Summary Findings using TRACTION framework	35
Annex 2: Coding framework.....	42
Annex 3: Study Photo Documentation, field study June 2021	44

1. Project background

The Traction is a project funded by the Scottish Government and delivered by Sniffer Foundation and International Institute for Environment and Development (IIED). The project aims to understand what constitutes 'climate adaptation competency' and how this affects adaptation responses. Competency is defined in terms of the technical capacity, legislative authority and interinstitutional systems that help to bring about change, and covering:

- Policy, legislation, and leadership
- Governance processes and capacity to respond.
- Synthesis and use of knowledge.
- Collaboration and coordination and inclusion of civil society
- Ethics and justice

A Literature review and adaptation competences framework were produced and piloted in Scotland and Malawi in 2019. Use of the Traction framework in Malawi at national level indicated how important effective and competent local government and governance is in adaptation planning and implementation and links among local and nationally driven adaptation action that should be strengthened. In this context, review the learning from the Scottish Government funded Climate Change Programme Malawi (CCPM) outputs/outcomes through the lens of the Traction Competency framework has allowed better understanding of what enabled/impeded the success of CCPM and what of this learning is transferable.

1.1. Climate Change in Malawi

Malawi's economy heavily depends on agriculture, supporting about 80% of rural people's livelihoods and contributing about 30% to GDP and 80% of export revenue¹. This therefore implies that the performance of the other sectors of the economy is dependent on agriculture which is largely rainfed which is highly vulnerable to climate change and climate variability. The United Nations Entity for Gender Equality and the Empowerment of Women, suggested that the country is losing about 1.7 percent of its gross domestic product (about USD 22 million (MK 16 billion) on average every year due to the combined effects of drought and floods². It is on record that the country experienced six major droughts and 18 episodes of flooding between 1967 and 2003 which negatively impacted smallholder farmers³. Devastating effects of climate change have also been recorded in Malawi in the modern-day history. For instance, the country was hit by droughts in 2011-2012 which had severe effects on food security in many districts, with approximately 2 million people affected majority of which were from southern region of the country. The country has also only just recovered from extensive flooding that took place in 2015 and left many lives and livelihoods destroyed; it is estimated that 1,101,364 people were affected, with 230,000 displaced and 106 killed. Furthermore, drought conditions occurred due to the strong El Nino in 2021 which resulted in extensive crop failures, affecting 2.8 million people⁴.

National Policies supporting climate change

Malawi is guided by diverse national and sector specific policies in her quest to attain global and national development goals. The Malawi Growth and Development Strategy (MGDS), for instance, a series of five-year plans, guides the country's development. The current MGDS III, building a Productive, Competitive and Resilient Nation, will run through 2022 and focuses on education, energy, agriculture, health, and tourism. The policy further mentions disaster risk management, and social support as one of the other areas to focus on during the implementation period. In January 2021, the Government launched the Malawi 2063 Vision that aims at transforming Malawi into a wealthy and self-reliant industrialized 'upper middle- income country. This development agenda recognizes integration of disaster risk reduction and financing into sustainable development and planning as well as the promotion of climate change adaptation, mitigation, technology transfer and capacity building for sustainable livelihoods through Green Economy measures as key enabling factor to its attainment⁵.

¹ <https://climateknowledgeportal.worldbank.org/country/malawi>

² <https://www.mwnation.com/malawi-loses-1-7-of-gdp-to-floods-un/>

³ <https://www.mountainresearchinitiative.org/news-content/africa/addressing-climate-change-poverty-and-flooding-in-malawi>

⁴ <https://www.mountainresearchinitiative.org/news-content/africa/addressing-climate-change-poverty-and-flooding-in-malawi>

⁵ <https://malawi.un.org/sites/default/files/2021-01/MW2063-%20Malawi%20Vision%202063%20Document.pdf>

The Government of Malawi developed a National Climate Change Management Policy in 2016 to assist the country achieve its long-term goal for climate change management which is to reduce the socioeconomic impacts of adverse effects of climatic change⁶. The Policy articulates the goals and objectives for climate change management in Malawi, as well as principles and strategies to guide implementation of activities aimed at reducing socio-economic impacts of adverse effects of climate change. Six priority areas are highlighted in the policy including Climate Change Adaptation, Climate Change Mitigation, Capacity Building, Education, Training and Awareness, Research, Technology Development and Transfer, and Systematic Observation, Climate Change Financing, Cross-Cutting Issues.

Effective climate change management, leadership and coordination at district and local levels of government as well as seeking community-based engagement and action are recognized as key in turning the policy aspirations into a reality. The policy singled out the following as key stakeholders in the implementation of the policy; government, non-governmental organizations and civil society, the private sector, academia, development partners, local communities, faith-based organizations and identified vulnerable groups. The policy further elaborates the roles and responsibilities that each stakeholder must play for full realization of the policy goal. Among others, the blueprint recognizes the decentralized structures as being pivotal in providing an avenue for communities' views to feed into decision making at both district and national levels. The organizations and committees at various levels (VDC, ADC, DEC etc) are tasked to ensure that climate change is integrated into their programmes, projects, and plans.

1.2. Climate Change Projects in Malawi

National Climate Change Programme

The National Climate Change Programme in Malawi was implemented from 2012 to 2020 by United Nations Development Program (UNDP) in partnership with the government of Malawi through the department of Environment Affairs. The aim of the program was to climate-proof the policies, strategies and plans of the sectors of the economy most directly affected by climate change, to create an enabling policy and regulatory environment within which vulnerable communities would be empowered to adapt to these challenges in harmony with the environment⁷.

Modernized Climate Information and Early Warning systems (M-CLIMES)

The high dependence on rainfed agriculture for both income and food threaten the livelihoods of the population placing an urgent demand for an accurate and timely information to warn them about impending floods, droughts, or heavy rains. Such information forms the basis of their ability to take preparatory action, which is critical to reducing the vulnerability of disaster-prone communities and livelihoods⁸. The Green Climate Fund (GCF) in collaboration with the UNDP, is implementing Scaling up the Use of Modernized Climate Information and Early Warning systems (M-CLIMES) project in Malawi. M-CLIMES is intended to expand Malawi's meteorological network, install automatic weather stations, hydrological monitoring stations, and lake-based weather buoys, as well as increase the capacity of local officials to identify risks and forecast impacts.

Primarily, the project is being implemented by Malawi's Department of Disaster Management Affairs (DODMA), in partnership with the Department of Climate Change and Meteorological Services (DCCMS), to increase the warning time of impending climate-induced danger, allowing local communities sufficient time to prepare. The project is also training people in local hydro met networks to generate climate-related data. This helps them to forecast extreme weather and chart the broad effects of climate change. M-CLIMES project is disseminating the climate data to the most remote parts of the country to ensure that fishing people and farmers can take timely and urgent action. The information is being spread through mobile phones, ICT, and radio channels - targeting vulnerable farming communities, as well as fishing communities around Lake Malawi. The project is working with the private sector, including telecoms and micro and small enterprises, to ensure that people know what to do with this enhanced weather information.

Another important aspect of the project is the capacity building initiative of which the project provides funding to work with affected communities in flood disaster prone areas to undertake awareness raising and risk reduction. The capacity of local communities, district councils, and national agencies to respond to emergencies is being strengthened through training and improved emergency services.

⁶ <https://reliefweb.int/sites/reliefweb.int/files/resources/NCCM-Policy-Final-06-11-2016.pdf>

⁷ <https://www.mw.undp.org/content/malawi/en/home/projects/national-climate-change-programme-----.html>

⁸ <https://reliefweb.int/report/malawi/protecting-malawi-climate-information-and-early-warning-systems>

Climate Challenge Programme Malawi

Trócaire Malawi, through a sister agency the Scottish Catholic International Aid Fund (SCIAF), is contracted by the Scottish Government’s Energy and Climate Change Directorate to implement the Climate Challenge Programme Malawi (CCPM). The implementation of the programme began in October 2017. CCPM was designed using a participatory process that ensured a high level of community engagement. The programme is aimed at improving the targeted communities’ resilience to the adverse effects of climate change by developing and implementing adaptation strategies that will improve agricultural production and sustain rural livelihoods in Balaka, Chikwawa, Machinga and Zomba districts in the Southern Region of Malawi. This programme is premised on an integrated community-based climate change adaptation approach to build communities’ livelihood resilience, diversify their livelihood options, and support them to conserve natural resources and reduce disaster risks associated with climate change. A key strategy of the programme is to promote transformative agriculture through agro-ecology, as opposed to the more conventional approach.

The programme is founded on the following principles:

- a) Community-led;
- b) Leave no-one behind.
- c) Benefit the environment;
- d) Create a sustainable legacy; and
- e) Improve climate literacy, in relation to human rights.

Programme interventions are centred on sectors of food, water, energy, income, and empowerment.

Trócaire implements the programme through various local partners including Catholic Development Commission (CADECOM) Chikwawa; CADECOM Mangochi; CADECOM National; Centre for Integrated Community Development (CICOD); Churches Action in Relief and Development (CARD); Civil Society Network on Climate Change (CISONECC); Eagles Relief and Development (Eagles Relief) and Zomba Diocese Research and Development Department (ZARDD)

Table 1. List of Trócaire Partners and their areas of operation.

District	Organization	Region
Chikwawa	CICOD	Southern
Machinga	CADECOM	Southern
	CARD	Southern
Balaka	Eagles Relief	Southern
Zomba	ZARDD	Southern
National	CISONECC	
	CADECOM National	

Building Resilience and Adapting to Climate Change in Malawi (BRACC)

The long-term impact of BRACC project is to contribute to a reduction in extreme poverty and end the recurrent cycle of hunger and humanitarian assistance in Malawi. This is achieved through a market-based approaches to improving people's livelihoods; and developing scalable social safety net systems that respond more predictably and efficiently to weather and climate related shocks. Implementation started in 2018 and it is expected to phase out in 2023. ⁹The DFID funded initiative is expected to invest about £90.5 million over five years period, 78% of the budget is International Climate Fund (ICF) eligible. The key component of the project includes the following: Climate resilient livelihoods, Provision of a scalable safety net 'crises modifier, Strengthening social protection systems, Natural resource management, and Evidence, knowledge and policy influence. The main outcome BRACC project is a *"Strengthened resilience of the targeted 300,000 poor and vulnerable households (around 1.7million people) to withstand current and future weather and climate related shocks and stresses"*

1.3. Overall Research Questions

Research aimed explore with participants **what contributes or hinders effective and competent local government and governance in adaptation planning and implementation, what links and strengthened coherence between local and nationally driven adaptation action**, considering:

1. Local governance and adaptation in relation to water management (including access to water, drought, and flood risk management)
2. Local governance and adaptation in relation to decision making processes and inclusion, justice, and gender equality.

Key questions explored with stakeholders and community groups included:

- *How does an enhanced behaviour/knowledge of the local communities' human rights in relation to climate change impact individual smallholder farmers? To what extent have communities advocated for climate justice?*
- *Increasing the number of women present in community structures actually led to increased engagement of women in decision making processes within these structures?*
- *What approaches are most successful at ensuring the functionality and sustainability of the water points constructed by the programme?*

2. Qualitative research framework

2.1. Assessment Methodology

The qualitative enquiry was primarily undertaken to learn from CCPM using the Traction Adaptation Competence Framework lens. Traction framework addresses adaptation competences in terms of the technical capacity, legislative authority and inter-institutional systems that help to bring about change. However, the framework is not intended as a checklist of the quality of national climate adaptation responses. Nor is it intended to be used to make a comparison between different contexts or to compare whether one country has undertaken climate change adaptation planning 'better' than another. It is currently under further peer-learning between Malawi, Mozambique, and Scotland to help us better understand "what does effective and competent local government and governance look like in adaptation planning and implementation, and what would strengthen the links and coherence between local and nationally driven adaptation action in different settings".

It instead represents a structured, focused, and comparative analysis of qualitative data and descriptive feedback to provide insightful context into what an effective and competent local government and governance look like in adaptation planning and implementation. As proposed, it conforms most closely to a case study methodology, in which data is compared, and contrasted to address specific, instrumental questions, versus hypothesis-testing or a theory-driven approach. The qualitative inquiry is designed to maximize the breadth and scope of programming for data collection and analysis. It samples widely across four districts and across local structures, to gain as much insight into

⁹ https://massp.ifpri.info/files/2020/02/BRACC-Programme-Summary_Feb-2020.pdf

questions as possible. This approach helped the consultant to gauge consistency/inconsistency across responses, and geography, as well as the presence and absence of key variables/responses, to assess whether findings are idiosyncratic (to where or to whom) or more general, systematic, and cross-cutting.

2.2. Assessment Approach

The strength of the qualitative assessment hinges, first, on the quality of the data collected. To maximize data quality, the assessment approach entailed the each of the following in sometimes overlapping steps:

- **Develop qualitative data collection instruments.** These were developed intentionally to elicit descriptive responses (versus lead respondents or yield short, or wrote answers). Questions were organized thematically, but also sequenced to be most coherent to respondents, validate responses, and maximize data richness.
- **Develop an *a-priori* codebook.** The codebook—a structure with which to interrogate qualitative data and ultimately “make sense” of text and potentially ambiguous qualitative data—was developed based on research questions and themes of interest, at first independent of any data. The codebook went through at least one iteration after transcripts were reviewed (or “pre-coded”). This amounted to edits to the codebook to ensure that is most effective in selecting and filtering the data to address research questions
- **Train qualitative enumerators:** The consultant trained six research assistants involved in data collection to maximize the quality/utility of the data gained through instruments, and to minimize any discomfort or risk to respondents. Core components of training included best practices in qualitative inquiry, including methods in this study and ethics, including interactions with respondents to maximize ease, privacy, and to facilitate descriptive responses as well as minimize risk to respondents, recording non-verbal cues, informed consent. The facets and nuances of data collection instruments—by question and the tool as a whole, translation complications and edits. Standards for recording, transcribing, and transferring data, as well as data collection.
- **Conduct key informant interviews (KIIs) and focus group discussions (FGDs)** with participating and non-participating farmers, women, community groups and local authorities and stakeholders.
- **Clean and code data, with follow-up and clarifications as needed**
- **Analyse data** and Present findings

2.3. Key Informant Interviews

Key informant interviews engaged a diverse a set of respondents including district agriculture development officers, district water development officers, district planning officers, district disaster and rehabilitation officers among others in four districts.

Table 2: Key Informant Interviews conducted

	Balaka	Zomba	Chikwawa	Machinga
District Agriculture Development Officers	1	1	1	1
District Water Development Officers	1	1	1	1
District Planning Officers	1	0	1	0
District Forestry/environmental Officers	1	0	1	0
District Relief and Rehabilitation Officers	1	1	1	1

2.4. Focus Group Discussions

Focus Groups Discussions (FGDs) with community groups were conducted in four districts of Balaka, Chikwawa, Machinga and Zomba. The FGDs consisted of a small number of willing community members (approximately five to eight). Over 26 FGDs were conducted in the above-mentioned districts targeting Water Point Committee members, women leaders, men leaders, lead farmers, paravets, climate justice committee members among others. Of the 26 FGDs, 207 participants attended interviews, majority (132) were female.

2.5. Sampling

For this qualitative inquiry, we used a sampling strategy that targeted at least 4 villages in each district for FGDs, as well as district level stakeholders. District level stakeholders included district agriculture development officers, disaster relief and rehabilitation officers, planning officers, water development officers and other stakeholders. Villages for FGDs were randomly selected from a list of beneficiary villages to ensure maximum variation by local partner organization and the type of local structure. Interviews were conducted by the consultant along with six research assistants in Balaka, Machinga, Zomba and Chikwawa.

Table 3: FGD Sampling Breakdown

	Village	Group Village Headman	District
Water Point Committees	Chindiwo	Chaweza	Zomba
	Alikuleti	Khukhumba	Machinga
	Matola	Matola	Balaka
	Kachikuni	Matola	Balaka
	MSOMBA	Gaga	Chikwawa
	Phimbi	Phimbi	Balaka
	Makawa	Nkhungubwa	Machinga
	Mwaliwa	Chaweza	Zomba
	Msiyamanda	Tembo	Zomba
	NGONGONDO	NGONGONDO	Machinga
	Mphoyo	Chaweza	Zomba
Community Leaders	DZIMPHONJE	Gaga	Chikwawa
	Nkhungubwa	Nkhungubwa	Chikwawa

	Kachikuni	Matola	Balaka
	Hkathebwe	Kathebwe	Zomba
	Mwananjovu		Chikwawa
	Mangamba	Mangamba	Machinga
	Phimbi	Phimbi	Balaka
	Makawa	Nkhungubwa	Machinga
	Mpheta	Chaweza	Zomba
Advocacy Committees	Matola	Tembo	Zomba
	Havala	Chaweza	Zomba
	Kathebwe	Kathebwe	Zomba
	Matola	Matola	Balaka
	Nduna	Mchacha	Machinga
	Magamba	Magamba	Machinga
	DZIMPHONJE	Gaga	Chikwawa
	Ndatopa	Phimbi	Balaka

2.6. Data Analysis

Data analysis entailed each of the following elements:

- Developing a Coding Scheme:** Rather than a theory-driven analysis, this analysis takes a more traditional research approach that uses an initial set of codes, informed by the research questions themselves. This “first-cycle” of coding consists of a deductive, *a-priori* scheme intended to probe for the presence, absence and patterns of key qualities, actions, and responses.¹⁰ Coding structures the data (text and responses to interview questions) to allow for a more objective weighting of findings, the consistency or idiosyncrasy of important observations (*Is this a widespread phenomenon?* for instance, *or isolated to one instance, in one location?*) and of course how the data reflects wider themes or fits into a bucket of relevant responses. Coding also facilitates backwards mapping the source of data, for verification and validating.

¹⁰ Saldaña, J. (2016). *The Coding Manual for Qualitative Researchers* (3rd ed.). Thousand Oaks, CA: SAGE

- **Refining Codes for Analysis:** The initial set of deductive codes were complemented by additional, inductive codes,¹¹ or those based on “new” findings from the data itself. These may stem from competing interpretations among KII respondents, for example, or references to instances and episodes that challenge assumptions or, conversely, suggest a unique but important success. This phase, and its flexibility, is important to capturing critical bits of data that might otherwise be overlooked, but which are crucial to learning, or more generally capturing the breadth of outcomes and experiences among informants.
- **Codebook:** The codebook—which is simply a list of codes, their definition or description, and rationale for its use—is essential for consistency in analysis, as discussed above, but also transparency and replication. The final codebook includes both a deductive (*a-priori*) set of codes and an inductive set of codes that were added over the course of pre-coding and pre-analysis of data. The final codebook is attached in the Annex.

2.7. Limitations

This qualitative inquiry was somewhat limited in its ability to fully engage district level informants due to the Covid-19 pandemic in part as most of the officers were not physically available making virtual engagement the only option. Nevertheless, most of the key informants were available for interviews. Further, the inquiry was limited in its ability to fully get responses from informants due to frequent transfers of government officials. In some cases, we met government officials who had come in the district six months presenting challenges in articulating key developments in the district fully. Equally other officials who were targeted for the climate justice module were not available in the district. We were also limited to get responses on climate justice questions from other informants and FGD participants as they had just been trained.

3. Study Findings: Background and Context

The following sections presents findings from the data collected as part of this study. The first subsection below outlines the most common climate change issues affecting the communities, livelihoods, as well as impacts of and responses to these shocks, across the four study sites (districts).

3.1. Background and context

This section of the report provides contextual insights on the climate change issues affecting communities across four districts, according to data collected for this assessment. It summarizes and describes climate change issues affecting communities, hazards impact, and shock responses, noting consistency and variance both across study sites and respondent types.

3.2. Climate change issues

Across all study sites, drought (prolonged dry spell) and floods were the most cited climate change issues affecting the communities. A few study districts indicated that communities were also grappling with the infestation of pests such as fall armyworms and an emergency of strange skin diseases. While flooding and drought were both consistently cited as impactful shocks, there was broad sentiment that lack of rain/water was the most consistent and damaging shock for farmers. Respondents had varying experiences with drought. Some indicated that rains were fine for a while and then a drought would hit for a couple weeks during the growing season, while others indicated that drought was longer and more consistent. Meanwhile, respondents suggested that drought either destroyed their crops or significantly reduced their yield/production of crops. Table 4 summarise key climate change issues as mentioned by both key informants and FGD participants by district.

¹¹ Ibid

Table 4: Climate change issues by district

Climate Change Issue	Machinga	Balaka	Zomba	Chikwawa
Drought	✓	✓	✓	✓
Flooding	✓	✓	✓	✓
Erratic rains		✓		✓
Pest infestation		✓	✓	✓
Strange diseases	✓			
Strong wind	✓			✓

Interviewees noted that the average rainfall received these years has declined drastically. For instance, in Balaka they receive an average rainfall of 500 mm which is below the recommended rainfall range for crop production especially maize estimated at about 900 mm. Furthermore, the district experiences a dry spell for more than 20 consecutive days especially when maize crop is tasselling which is a stage that require a lot of water. Climate change impacts a range of community pillars, as reflected by participants:

“The lake is our major source of livelihood because we used to do fishing as a reliable source of income. When the lake dried up some years ago, our colleagues had no option, but to migrate to Mozambique to work, leaving their families behind, and some of them have not returned up to now” **Female Vice Chairperson, VNRMC, Zomba.**

“Cotton is one of the most important cash crops in our area. Sadly, the dry spell led to low yield, hence, reduced annual income, which has affected us negatively financially” **Female FGD participant, Balaka.**

“As a district we are not doing well in terms of malnutrition which is around 32% and underweight alone is above the national average”, **Female KII participant, Chikwawa district.**

The most cited and dire impacts of climate change issues like drought, flooding, and pests were hunger and famine due to either crop failure or lack of funds from cash crops. Respondents also suggested that the stress of shocks and lack of capital/money caused deteriorating domestic conditions, including domestic violence, migration to urban and nearby countries in search of greener pastures. Respondents often noted specific impacts of climate change issues on children and youth. Across sites, individuals consistently cited malnourishment of children due to a lack of food, and children dropping out of school due to lack of funds for school fees and/or clothing, as impacts. Further, several key informants suggested disease outbreaks such as cholera and diarrhoea where linked to impact of changes to precipitation. In addition, the evidence of child marriage is prevalent to take pressure off parents to provide for children in times of hunger or famine.

Measures to Mitigate the impact of Hazards

There was consensus across study districts and actors that communities across the four districts are engaging in activities aimed at reducing the impact of hazards and ensuring that they are able to have a harvest. In all the districts, respondents indicated that they are now engaging in irrigation farming in response to climate and weather-related changes. These farmers seem to have adjusted inconsistent rainfall by irrigating gardens or small plots in the dry season to avoid inconsistent rainfall conditions like drought or flooding. Participants further suggested the adoption of early maturing varieties especially those with 90 days maturing period that can be planted with the first effective rains. District level enquires revealed that soil and water conservation interventions such as zero tillage, mulching cropping, manure making, and agroforestry are also being promoted in all the study sites. Alternatively, other local

district authorities are encouraging communities to venture into forestry-based enterprises where instead of just relying on income from agriculture they can also depend on other sources such as bee keeping as one of the strategies. Additionally, small ruminants' production has been put high on the central government and local government agenda as a way of building resilient households, demonstrated through the inclusion of livestock distribution in the affordable inputs program (AIP). A few survey participants in Chikwawa and Machinga indicated that they have been able to do riverbank management by planting trees, vetiver grass and construction of a dyke. These initiatives were reportedly impactful in minimizing water runoff especially planting of vetiver grass unlike trees which takes a long time before communities feel the impact. FGD participants indicated that the benefits of constructing a dyke already show reduced number of people affected by flood water in the area in comparison with pre dyke period. In a similar manner, flood victims previously used to evacuate to schools in search of shelter which disturbed learning consequently affecting the school calendar. Chikwawa district disaster office indicated that non-governmental organisations operating in the district constructed evacuation houses to ensure that learning is not disturbed during floods, a development which has positively led to continued learning by students even during floods. Furthermore, the district launched a campaign where they sensitise constructing houses with raised foundations and strong roofs in flood prone areas.

3.3. Sources of climate change information

Climate information is available to community members and groups from a number of sources. The use of radios (including farm radio trust) and extension officers were the most common sources of climate change information. Respondents from Chikwawa, Balaka and Zomba cited phones as a widely used platform for climate change messages dissemination. According to the climate justice FGD participants in Chikwawa, their phones are linked with the department of metrological services which send text messages on rainfall forecast for the season and weekly during the rainy season. The initiative is implemented by the Government of Malawi in collaboration with World Food Program (WFP) and the metrological services department. These sources were recognized as important especially in that they were made available when information was needed and in a format that was easy to use in making decisions by individuals or groups. Locally, communities use traditional methods to predict the onset of rainfall for example increase in the availability of ants.

4. Study Findings: Results of Key Questions

4.1. Key Question: How does an enhanced behaviour / knowledge of the local communities' human rights in relation to climate change impact individual smallholder farmers? To what extent have communities advocated for climate justice?

A number of district and community level stakeholders were trained in Climate justice by Climate Challenge Programme Malawi. To effectively carry out their roles, the community committees get support from local NGOs implementing the project and use their commitment as an energy to drive their advocacy agenda forward. The local level structures especially climate justice committees have embraced the concept of advocacy both locally with their leadership i.e., traditional authorities, chiefs, MPs, and councillors and with their local district council staff in advancing various development agendas. The trainings gave participants confidence that they could address challenges they faced. For example:

- A local committee in Machinga was able to track and monitor distribution of farm inputs such as seeds meant for irrigation scheme members unlike in the past when there was passive citizenry. This has improved transparency and accountability in distributions of farm inputs.
- The Mangamba Village Natural Resource Management Committee from Machinga district formulated by-laws which guide the management of the village forests and the enforcement mechanisms of the same. The enforcement of the by-laws has led to a reduction in cutting down of trees. In addition, farmers are no longer cultivating very close to the riverbank by leaving a distance of at least 20 meters from the river. Previously the committee engaged various local authorities including the member of parliament, the district commissioner, and councillor.

- In Zomba district, the climate justice team engaged a member of parliament of the area to finalise the construction of Mtsukamatumbo bridge which had stalled for a very long time despite its relevance in connecting the area to Lake Chirwa, hospital and other important social services in the area.

Reflections from participants on the breadth of climate justice advocacy include

“They have realized that use of manure is environmentally clean and cheaper than chemical fertilizers. When it floods chemical fertilizer is mostly washed along than manure which forms part of the soils. It is therefore doing justice to the environment when we use manures than chemical fertilizers. Lead farmers are therefore at forefront teaching farmers on how to make manures” **Khungubwa Lead Farmers, Chikwawa district**

“With the support of CADECOM, we mobilized the communities to renovate and reinforce the dyke along Phalombe River, which was constructed many years ago by Malawi Social Action Fund, but was heavily damaged by the flood water,” **Male FGD Participant, Machinga.**

“We realized that persistent flooding was a result of flatness of this area and poor drainage systems. We therefore mobilized our communities to dig a vast waterway, which drains much of the water from the surrounding communities to Lake Chirwa. The waterway has already made a great impact. For example, in 2020, the flooding was very minimal, causing the collapse of only 8 houses, compared to 652 houses which collapsed in 2019,” **Female FGD participant, Zomba district.**

“Mangamba Market is a big market and serves a vast area, but unfortunately there were no trash bins in the whole market. As the market users, we had no other choice, but to dump trash anywhere, causing sanitation issues in the process, and this was becoming worse during the rainy season until we petitioned the DC who consequently brought the trash bins” **Male FGD participant, Zomba district**

Climate justice advocacy actions: The climate justice committee in Machinga engaged a member of parliament, the district commissioner and the ward counsellor on several climate change related issues, they.

- Requested the Member of Parliament (MP) to consider supporting the upscaling of the irrigation scheme to increase the number of beneficiaries as a mitigation measure to persistent drought.
- Requested the MP to consider drilling more boreholes in the area to ease pressure on the available boreholes in the area.
- Asked the duty bearer to consider construction of a bridge across Masanje river, which was damaged due to heavy rains and floods in February and March 2021.
- Lobbied the government to support flood victims affected by the heavy rains which washed away crops, destroyed houses, classrooms, livestock among other properties through the disaster and relief office.

Mtsukamatumbo Bridge under construction

However several inhibitors to climate justice advocacy were identified including failure by the authorities to address community’s petition, the challenge of mainstreaming the training into action and the timing of capacity building at a time when government budgets had been passed so making it difficult to influence or allocate financial resources to priority causes.

Findings

Farmers can demand accountability from local leaders demonstrated in part in the monitoring of distribution of farm inputs, they are adopting and advocating climate smart agriculture technologies to enhance agricultural yield in the face of climate change such as minimum tillage, manure application, soil conservation measures, permaculture among other technologies. Community members understand the issues of environmental justice, demanding rights and accountability on the impact of interventions upstream of the rivers systems and downstream impacts. They have been engaged in a broad range of advocacy initiatives:

- Advocacy in forest management for example, policies and practice on illegal deforestation and riverbank management

- The formulation of by-laws to guide the management of natural resources and putting in place enforcement mechanisms for environmental conservation i.e., restraining farmers from cultivating close to rivers (leaving a distance of at least 20 meters from the river to their farming fields), barring the community members from unnecessary cutting down of trees and charcoal burning.
- Engagement of private sector companies such as the Chinese Cotton Ginnery Company which pollute areas in Balaka with smoke produced from their production plant to provide tree seedlings every year to improve the air quality in the area.
- Climate justice committees in Balaka engaged the Electricity Supply Corporation of Malawi which was cutting down a lot of trees when they were erecting poles in the area. Looking at the gravity of the damage, the committee wrote a letter to ESCOM, and the power utility body provided 1000 tree seedlings and were planted by the community members in the area.
- Engagement with government officials on matters related to climate change impacts have been recorded. For instance, a committee in Chikwawa engaged their MP and later district officials on the need to construct an evacuation center as the area is prone to recurring floods which disturbs learning in a nearest primary school as it is normally used as an evacuation centre. Also, climate justice committees in Machinga engaged their MP to consider the construction of a bridge across Masanje River, which was damaged due to heavy rains and floods in February and March.

4.2. Key Question: Has increasing the number of women present in community structures led to increased engagement of women in decision making processes within these structures.

Respondents from across study sites indicated that women occupy various top leadership positions in local structures including chairpersons, vice chairpersons, treasurer, secretary among others. Survey participants often noted that women and men listen to women leaders. Although many communities are embracing women leaders, the levels of support vary between different communities.

“We believe that people in the community listen to these women because the women themselves have proven to the community that given a chance in leadership positions, they can bring a change in developing the community” **Male FGD Participant, Matola, Zomba.**

“As of the case of the ACPC chairperson, she was elected in a committee whose membership majority are men and it is men that voted her into the position. However, fellow women passively support them because of jealous and usually do everything to pull them down to see them fail”. **FGD participant, Chikwawa**

Respondents noted that in a few areas, women leaders from poor families were less respected in comparison with their counterparts from relatively well to do families. There were occasions where respondents suggested that some men do not allow their wives to go to trainings and other important occasions because they suspect that their wives can meet other men.

Findings

Despite the varying levels of support, women take leading roles in diverse sectors including:

- Women lead in waterpoint management where more than 50% of committee members including the top leadership comprising women that contribute to decision making at different levels. Furthermore, over 40% of the area mechanics are women who play critical roles in repairing broken boreholes. However, this is very much affected by social and cultural context, norms, and expectations.
- Women take leading roles in agricultural extension advisory services where chairpersons of agriculture stakeholder panel committees, and lead farmers were women leading in providing crucial agriculture extension messages in their communities. For instance, one woman who is a lead farmer in Balaka provides extension services to farmers from 32 villages in Sub-Traditional Authority Matola and monitors over 25 fellow lead farmers including men.

- Women occupy leadership positions in forestry management. A good number of women led in the establishment of village forests through village natural resources management committees. Others were in the forefront of championing forest conservation initiatives. For example, A lead farmer in GVH Mchacha, Chikwawa who is a woman, successfully led in championing tree planting in the area where 7,550 trees were planted last season alone.
- Women play critical roles in anticipatory actions, for example women leaders played an active role in the construction of a dyke in Zomba to mitigate flood impact from Phalombe River.
- Women in disaster relief, a significant percentage of women were taking pivotal roles in Civil Protection Committees at various levels such as group village (VCPC) and Traditional Authority (ACPC) which put them in positions to contributing to decision making on relief management.
- Women were in forefront in child protection and nutrition programs. Other women leaders were on record in taking bold steps to end child marriages. Yet another section of women leaders reported leading programs aimed at reducing malnutrition in their communities by teaching other community members on food preparations and providing referrals.
- Women in primary school education. It was noted that a few women led primary school level structures such as Parents Teachers Association (PTA) and influenced decisions in implementation of infrastructure development projects such as construction of office and classroom blocks.

Across all sites, respondents reported that trainings that women leaders went through were key to support them into playing critical leadership roles and contributing significantly to their diverse sectors. In Zomba for example, women leaders indicated that having a female project facilitator/officer acted as a role model which gave them courage to take up leadership positions and contribute meaningfully to decision making.

“In the past administering or treating livestock was a masculine task but we are now providing the same services around the communities which makes us feel proud” **FGD Female leader, Machinga district.**

It is recognized that women’s leadership is enabled by:

- Involving men whose wives hold leadership positions and encouragement from men
- Provision of mobility to women in leadership positions such as bicycles to ease mobility as sometimes they have to travel long distances to discharge their duties.
- Exposure and exchange visits for continued leaning. It was indicated that the majority of women have never had an opportunity to learn from their fellow women in diverse leadership positions outside their communities and they felt that may limit them to current practices.
- Support and encouragement from the local leaders
- Economic empowerment i.e., women leaders participate in various income generating activities including livestock pass on programme.
- Self-satisfaction that they are doing a good job of community service.

However, barrier to women’s leadership as a result of cultural norms. Whilst women leaders are fully respected in most of the assessment sites, there were still some cultural resistance that some men did not feel comfortable being led by women. The situation is worsened by some men and boys who deliberately chose not to attend meetings organized by women in leadership positions. The tradition in most of the areas visited is that women should spend much of their time at home, taking care of children and doing other household chores. This affects their activeness when they are elected to leadership in community structures. Survey participants also indicated that some men are jealousy of their wives attending meetings and make it difficult for the wives to discharge their functions as effective women leaders. As a result, women are often left out to choose between marriage and leadership roles. Some people deliberately chose not to follow rules set by women leaders which undermines their leadership power. In local settings, community members developed jealousy towards leaders pocket allowances for meetings and deliberately decide to sabotage agreed actions to see them fail. A significant section of women leaders mentioned inadequate exposure as a barrier to their leadership advancement. They observed that some women elected to various community structures’ have had no opportunity to broaden their knowledge by way of learning from what their fellow women are doing in other parts of the country.

“Some of us have had no opportunity to see and learn from what our colleagues in some parts of Malawi are doing, and it is hard to evaluate ourselves if we are doing well or not” – Female FGD Participant, VNRMC, Balaka district.

The other most cited barrier was mobility. Ownership and access to low-cost mobility such as bicycles appears to be heavily incumbent on men who traditionally are considered heads of the households.

“I oversee / monitor 24 farming villages, but my activities are sometimes affected by lack of mobility. I rely on my husband’s bicycle, and when he has other engagements which need the same bicycle, I fail to perform my leadership duties”. FGD participant, Machinga district.

One of the limitations to women’s leadership was that those from poor families are considered inferior and when in positions they are mostly looked down because of the poor background. This underscores the role of economic empowerment in enhancing the effectiveness of women leaders.

4.3. Key Question: What approaches are most successful at ensuring the functionality and sustainability of the water points constructed by the programme?

District level engagements show that stakeholders led by water development offices employ diverse strategies to ensure that boreholes and or water sources provided to the communities are sustainable. It was learnt that local government officials at district level came up with contextualized recommendations that each stakeholder should follow on the depth when constructing new boreholes. In addition, a technician from the district water development office is assigned to the stakeholders drilling boreholes in the districts where data was collected. Anecdotal evidence from respondents further indicate that low yield areas in Chikwawa has led to tapping water from a high yielding borehole in a different area and supply to a low yielding site. Community interviews and district level stakeholders identified the importance of District Water Development Office providing technicians to accompany drilling companies to ensure adherence to standards. The Malawi national standard guidelines dictate that boreholes be sunk at a minimum of 30 meters to a maximum of 80 meters deep. As of Balaka and Chikwawa districts, a minimum of 45 meters is recommended by the local district water development office.

*“With the climate change issues experienced in our district, the **aquifer** which we have here is relatively less and does not get recharged as per design which implies having less water. And if boreholes are drilled without following specific standards, they end up drying”. Female KII participant, Balaka district.*

However, the survey team found that there were a few stakeholders that do not pass through DWDO office as such they drill substandard boreholes that are shallow and end up drying. In addition, community contribution towards repair and procurement of worn-out parts was also key. Through this study it is identified that communities make contributions ranging from K100 to K500 monthly whilst other communities prefer to contribute when a need arise. Some WPCs have vegetable gardens near the water point, the proceeds of which help to meet the costs of borehole repair.

Water Governance with communities has been enabled through:

- Thoroughly training the community water management committees to be active in borehole operations and management. During the interviews, it was noted that migration of trained community members affected the operations of the boreholes. Where resources permit, conducting refresher training at intervals or three to five years will ensure that the committee members are up to date with the current practices of borehole operations and management and also adequately trained members of the committee are available.
- Mitigate the risk of false promises and politicization by people vying for political positions as a means of amassing votes. Respondents indicated that several boreholes were not operational at the time of the interviews because politicians told the community members that they will be responsible for repairing the water sources should they be elected to office. The challenge, however, was that after being elected, they did not live up to their promises, yet the borehole beneficiaries were still waiting for the duty bearers to fix the boreholes.
- Collaborative effort between the water points committees and chiefs in ensuring that the rules and regulations established are followed and that those who do not abide by the regulations face penalties. According to the

FGDs conducted, instances where people were reluctant to make contributions towards borehole repair or did not bind by the set community by laws regarding water governance, traditional leaders played critical roles in ensuring that the set laws were adhered to.

- Transparency and accountability in handling finances contributed by community members meant for the repair of the boreholes. Interviews with community communities brought to light that WPCs that were able to present expenditure reports back to the community had minimal challenges in mobilizing resources for the borehole maintenance.
- The assessment noted that the water management committees ensured a clean surrounding by having a roster of people to clean the borehole each day. Other WPCs have rules that each beneficiary who comes to fetch water early is supposed to sweep the surrounding. Further than that, nearly all FGDs conducted revealed that the committees banned washing of clothes at the water point.

Several issues were raised on sustainability. Communities indicated that low yield due to drought especially from October to December appear to be affecting sustainability of the boreholes. Some boreholes completely dry up during that period. It was further observed that sometimes the district water offices take a long time to help communities due to inadequate resources both human and financial. WPCs can only do minor repairs and the rest are done with area mechanics, they may fail to address the district water office. Unwillingness of other community members to make contributions towards maintenance costs was also mentioned by a significant section of the respondents. It is also important to note that political interference has left several boreholes in a broken state with communities failing to repair which cultivated dependency.

5. Understanding enablers of adaptation action: Learning from Malawi through TRACTION framework

5.1. Visioning, goals, targets and outcomes through policy and leadership

Malawi has a decentralized governance system which has been largely successful as structures have been put in place, providing an avenue for communities' views to feed into decision making at both district and national levels. Local consultations through various local governance institutions feed into the national policy dialogue and are consequently taken on board in formulating policies and strategies. For instance, in 2016, the country developed a National Climate Change Management Policy (CCMP) to guide programming of interventions for reduction of greenhouse gas emissions in the atmosphere, as well as adapting to the adverse effects of climate change and climate variability. Through the National Adaptation Programmes of Action (NAPA), the country identified sectors that are affected by climate change including agriculture, human health, energy, fisheries, wildlife, water, forestry, and gender. It was further observed that adaptation action was found to be integrated across sectors and scales with coherence or alignment between policies relating to livelihoods, agriculture, poverty reduction, disaster and climate change programs cascaded from national level through local Government programs. Again, a horizontal integration of the policy with other national policies such as the Malawi Growth and Development Strategy (II), and Malawi Vision 2063 was observed. Importantly, the CCMP recognizes diverse stakeholders operating across many sectors that must be engaged in the implementation of the Policy. Emphasis is made on embracing leadership and coordination at both district and local levels of government as well as seek community-based engagement and action.

Findings from the local consultations held with district level government officials and communities attest to the fact that elements of the policies are being implemented. For instance, local communities have adapted autonomously to the climatic hazards by among others diversifying their livelihood sources, adopting novel adaptive agricultural practices which include the climate smart agriculture highlighted in the national policy. Furthermore, the district level discussions brought to light the implementation of demand driven agriculture extension services policy where communities are given an opportunity to demand the extension services relevant to their conditions. This to a large extent demonstrates the existence of vertical integration of the policies from national to district and then the local level.

All the district councils reported having a district Executive Committee (DEC) with various sector specific sub committees whose membership comprise officials from various government departments such as water, forestry,

agriculture, disaster relief, NGO representatives, private sector players, and community representatives. This speaks to leadership and champions which is a critical component of the traction framework. It was noted that the local communities can petition the national level decision makers in various ways including when a disaster strikes. According to the FGDs conducted, the following illustrations highlights the relevance of the district and local level structures in implementation of policy dictates.

- Waterpoint management at both district and local levels. It was observed that national policy guidelines at district level are contextualized to suit the realities prevailing in the district. District Water Development Office provides technicians to accompany drilling companies to ensure adherence to standards. In a few exceptional cases, it was indicated that communities are able at times to verify with the district level authorities if any stakeholder do not come to drill a borehole. However, the survey team found that there were a few stakeholders that do not pass through DWDO office and some communities that were not fully trained do not alert the DWDO as such they drill substandard boreholes that are shallow and end up drying. The Malawi national standard guidelines dictate that boreholes be sunk at a minimum of 30 meters to a maximum of 80 meters deep. As of Balaka and Chikwawa districts, a minimum of 45 meters is recommended by the local district water development office.
- Agricultural extension advisory services at both district and community levels. The ministry of agriculture in Malawi is implementing a demand driven demand driven agricultural extension approach which gives the local communities an opportunity to choose extension services relevant in their areas and subsequently request extension services suiting the chosen agricultural value chains. The agriculture extension agents along with local level lead farmers are responsible to ensuring that farmers are adequately trained in their chosen enterprises.
- Disaster relief coordination within the district. Consultations with stakeholders indicate that civil protection committees (CPCs) play a critical role in ensuring that disaster victims are assisted accordingly. Focus group discussions indicates that they are the first to document the census of the number of people affected including the damages which is sent to the disaster relief office. The disaster relief office sends a verification team which then forward the information to the department of disaster management affairs at national level.
- Coordination among district level stakeholders and the local structures. It was learnt that at district level there is an overall coordinating committee called District Executive Committee (DEC) which is comprised of various government sectors and key players from the private sector, NGO representatives, and local leadership representatives. This multi sector committee plays a critical role in ensuring that there is proper coordination within the district and players an oversight role to ensure that all projects implemented adhere to government set standards in policy documents. This is key in ensuring that there is coordination between sectors and among diverse stakeholders including the local level institutions in promoting local level adaptation.
- Farmers are adopting climate smart agriculture technologies to enhance agricultural yield in the face of climate change such as minimum tillage, manure application, soil conservation measures, permaculture among other technologies.

*“With the climate change issues experienced in our district, the **aquifer** which we have here is reduced and does not get recharged as per design which implies having less water. And if boreholes are drilled without following specific standards, they end up drying”.* **Female KII participant, Balaka district.**

Key takeaways

- The importance of policies and governance structures working together across levels (local and district) and policies/programs within a decentralized approach is crucial in promoting adaptation planning and implementation as observed in Malawi’s case study.
- Climate change policy, goals, targets, and outcomes are communicated from national to local level with adaptation decisions and actions decentralized to district and communities. However, adaptive management or adaptation within district development plans and policies, which is key to having systemic impacts within policy and governance systems, is to a large extent dependent on contribution of multi-stakeholder governance structures

Enablers

- Largely, there is policy **coherence** and a close integration between CCMP and other policies such as Malawi Growth and Development Strategy, National Agriculture Policy among others. There is, however, an exception of a few districts level sectors` dictates that do not speak to each other, this needs more scrutiny.
- Demand driven agriculture extension approach which gives the communities an opportunity to choose agriculture value chains suitable in their area, based on their local climatic conditions and demand the extension services they need for specific commodity to produce.
- **Access to information by farmers.** It is on record that farmers through a program implemented by the World Food Programme in collaboration with the government of Malawi and the department of metrological services disseminates weather forecast through various mediums which help farmers to make production decisions. This is in tandem with the demand driven extension approach as farmers use the forecast to request the type of extension services needed.
- **Vertical and horizontal coherence at the sub-national (district level):** All districts have well established structures through the District Extension Committee (DEC) and sub-committees coordinating locally with Village Development Committees, village civil protection committees and other local structures. Furthermore, a strong coordination was observed especially with NGO actors in ensuring that all local organizations are complying with set government minimum standards and participating.
- **Champions and local leaders** are driving and ensuring compliance and coordination through the Village Development Committees.

Inhibitors

Notwithstanding, vertical integration is impacted by limited **financial and human resources, access** (physical), transport and mobility. This was noted at both district (financial and human resources) and local level (transport challenges for the local agents to fully execute their roles) end up affecting implementation of other policies. In Balaka for instance, about 2 – 3 extension planning areas do not have an agriculture extension officer which affects the implementation of the demand driven approach advocated at national and district levels. Whilst the ministry has lead farmers who are community volunteers, their workload is overwhelming, and they rely on extension officers to provide them with mentorship in areas they were not trained on. Other lead farmers lamented lacking a local transport modality such as bicycles to be able to fulfil their roles. The human resource constraint should be looked at both in terms of the relevance of the training and availability of the personnel to undertake their roles. Ownership and access to low-cost mobility enhancing mechanisms such as bicycles appears to be heavily incumbent on men who traditionally are considered heads of the households.

“I oversee / monitor 24 farming villages, but my activities are sometimes affected by lack of mobility. I rely on my husband’s bicycle, and when he has other engagements which need the same bicycle, I fail to perform my leadership duties”. **FGD participant, Machinga district.**

There is limited scrutiny of interventions both in terms of using (or by-passing) existing community groups or in financial accountability. Furthermore, the research also established that there is limited coordination between government departments aside from being members of district level structures. One informant indicated that sometimes the central government brings projects to the districts without thorough consultations with various government departments and others end up setting up parallel structures leaving out permanent decentralized local structures such as Village Development committees. A few stakeholders perceived lack of **transparency in financial utilization and management** of non-governmental organizations` projects which calls for enhanced accountability in use of funds allocated for the projects. Further, coordination is becoming challenging in some districts where NGOs fail to disclose the finances being used to implement projects as such government feels that not all resources meant for the project are channelled to the local communities. Policy translation to the local level can fully be realized if the stakeholders at district level hold frequent review meetings to assess progress being registered in the districts to ensure that all projects follow the dictates of the national policy. We noted during the interviews that local leadership (traditional leadership) offers a critical eye in collaboration with local structures, an element which the framework has not clearly articulated.

Recommendations:

- **Establishing strong partnerships with local organizations** to maximize local human resources to support stronger vertical and horizontal coherence.
- **Traditional leadership:** government mandated committees may be in place, but traditional leaders offer a critical viewpoint especially in natural resources management (water and forestry) and should be engaged as champions and local leaders as a part of the framing of the competency (to support vertical and horizontal coherence at the local level).

Illustrations:

Implementation of the demand driven agriculture extension services policy or natural resource management where communities are given an opportunity to demand services relevant to their conditions. According to KIIs conducted with District Agriculture Development Officers, they implement the policy through lead farmers (local agriculture extension agents) to ensure decentralization of agriculture extension services. At the GVH level, they also get support from Village Stakeholder panels which is a sub-committee of Village Development Committee.

Evidence suggest that local communities are able to advocate for climate justice and or demand accountability from duty bearers. For instance, local committees in Machinga district engaged local leadership, traditional chiefs, MPs, and councillors as well as local districts government staff in tracking and monitoring distribution of farm inputs such as seeds to enhance irrigation activities, or development of by-laws which guide the management of the village forests and rivers and enforcement mechanisms to minimize deforestation and riverbank protection. Through advocacy work, some communities in the areas visited formed by-laws to guide management of natural resources and put in place enforcement measures which led to a reduction in cutting down of trees carelessly. In addition, farmers were no longer cultivating very close to the riverbank (They were leaving a distance of at least 20 meters from the river to their farming fields).

Well-coordinated district level and local structures are in place in all districts. Evidence also indicates that there is proper coordination across sectors and between district and local level structures indicating vertical and horizontal integration. Stakeholders through KIIs indicated the adoption of integrated catchment management approach which enhance multi sector implementation of district level activities and gives room for more involvement of local communities to participate in adaptation planning and implementation.

5.2. Defining and developing pathways from the present towards envisioned outcomes – governance processes and capacity to respond

Multi-stakeholder governance structures exist and are facilitated by the District Executive Committee (DEC) and sub-committees. These are sector specific sub committees whose membership comprises officials from various government departments consisting of water, forestry, agriculture, disaster relief, NGO representatives, private sector players, and community representatives. The committees are responsible for coordinating and integrating policies and ensuring that all local organizations are complying and participating to ensure meaningful and local context alignment between the different sectors and link from national to local levels. DEC form the overarching executive structure to oversee implementation of activities and enhance cooperation of stakeholders within district. It is important to highlight that government bodies, NGO representatives, church groups, and other local stakeholders are well represented in the DEC.

The deliberations undertaken at the district level sometimes contribute to policy making at national level and one such key example is the inclusion of small livestock into the Affordable Input Program (AIP) which is a national flagship program to eradicate hunger and poverty in Malawi. Both Chikwawa and Balaka districts local government officials advocated for the program as drought made it extremely hard for smallholder farmers to produce enough to feed their households. That said, the development of different district level plans such as district development plans, multi-hazard plans, water development or forestry plans follows a consultative multi-stakeholder process with village, area development planning committees, agriculture committees, disaster and relief committees and water planning committees. It should be noted that district level stakeholders also conduct various consultations aimed at soliciting views of the constituents which aid in decision making triggered by shared access to information, through Participatory

Vulnerability and Capacity Assessment (PVCA), further described under Competence 3, the development of Contingency plans across sectors and stakeholders or the use of Participatory Integrated Climate Services for Agriculture (PICSA) where seasonal forecasts from the department for metrological services are shared with community and farmers groups.

DEC hold review meetings at district level outlining the impact of climate change or potential disasters on communities and local groups in a district to coordinate strategies, solutions and providing innovation through needs-based planning. The engagement in PCVA processes or PICSA equip farmers, women leaders and water users' groups with knowledge and confidence contributing to multi-stakeholder planning at district level and demand accountability on adaptation action and natural resource management. Furthermore, sector specific learning events are conducted such as meetings by water management committees' representatives with water monitoring assistants and other important district stakeholders, and those conducted by the disaster relief office with civil protection committees' representatives. These approaches offer important capacity building for all stakeholders to understand climate impacts across sectors and groups at the local level, through needs-based analysis, there-by better enhancing capacity to respond. The district governance structures put in place conditions to allow different sectors of government and different actors/groups to review the impact of climate change on their sector or concern based on lived experience of communities, with the engagement of village or other community groups in planning.

Farmer driven advocacy is driving coherence between climate risk, environmental management, and poverty reduction, especially for those whose livelihoods are collapsing because of the changing climate (because farmers can clearly articulate the impact of climate hazards on their lives and livelihoods). A good number of respondents that went through the climate justice trainings indicated that they have not been able to integrate the trainings because the capacity building initiative came at a time when government budgets had been passed already making it difficult to allocate financial resources to this cause. That said, there were several references to advocacy work that communities have undertaken because of the climate justice trainings. Mangamba Village Natural Resource Management Committee from Machinga district for instance, formulated by-laws which guide the management of the village forests and the enforcement mechanisms of the same. The enforcement of the by-laws has led to a reduction in cutting down of trees carelessly. In addition, farmers are no longer cultivating very close to the riverbank by leaving a distance of at least 20 meters from the river. Previously the committee engaged various local authorities including the member of parliament, the district commissioner, and councillor. Mangamba Village Development Committee chairperson had this to say about the local leadership engagement.

In a similar fashion, a community in Zomba district engaged their MP to finalise the construction of Mtsukamatumbo Bridge which stalled for almost a year despite being crucial in connecting the communities to the market, lake, and a community hospital.

"Mangamba Market is a big market and serves a vast area, but unfortunately there were no trash bins in the whole market. As the market users, we had no other choice, but to dump trash anywhere, causing sanitation issues in the process, and this was becoming worse during the rainy season until we petitioned the DC who consequently brought the trash bins" **Male FGD participant, Zomba district**

Enablers

- Governance structures that are supported through an upsurge of evidence from the local level, which challenge or informs higher level decision making for influencing policy, planning and resilience action.
- Needs based planning through Participatory Vulnerability and Capacity Assessment (PVCA) which offers innovation in knowledge flow and contributing to multi-stakeholder and multi-sector planning. PVCA is reviewed at the district level, indicating the impact of climate change on communities and local groups in a district whose purpose is to coordinate strategies, and solutions (contributing to knowledge sharing and innovation through needs-based planning).
- Governance structures: review meetings at district level (multistakeholder and multi-sector)
- Knowledge flow from local district councils to national level. Advocacy to include livestock as a part of the Affordable Input Program (AIP) to help farmers suffering from the impacts of climate change on agricultural productivity based on the findings of climate impacts on farmer productivity (PCVA) were successful.

Inhibitors

- The most significant barrier is accessing resources to implement adaptation. There was some anecdotal evidence that the government is largely able to provide funding for the running of various structures at district level but falls short in providing special funding to promote local adaptation. By implication, the government largely plays a supervision role and there is dependency on outside funding to finance adaptation action. It is also important to highlight that the funding available for implementing adaptation action is not sustainable in the long term as it is dependent on the available partners implementing various adaptation initiatives in the districts.
- It was observed that no clear mechanism was in place in all districts to formalize multi-sectoral exchange and learning or M&E beyond the review meetings at the district. Nevertheless, there are means to manage information and compliance with policies within the technical sectors. For instance, water technicians are guided by local policies on water extraction based on national policies and local water availability conditions.

Recommendation:

A review of the linkages between **leadership, vision and governance and capacity to respond** is crucial, especially in terms of coherence between national, sub national structures and local structures.

Illustrations

Governance /policy influence at national level where district level stakeholders advocated for the inclusion of small livestock into the Affordable Input Program (AIP). Affordable Input Programme is a successor initiative for Farm Input Subsidy Programme aimed at reducing poverty and ensuring food security at household and national levels. Previously, the programme administered the same package of inputs to farmers even in areas where traditionally maize does not do well due to changes in climatic conditions. Both Chikwawa and Balaka districts made suggestions to have small ruminants (goats in particular) included in the program as drought reduced rainfed farming produce for smallholder farmers. Persistent effort in advocating for the change yielded positive results seen in 2021/2022 farming season where goats were included as part of the input package to enhance resilience of the farming households.

Building of resilient dwelling structures in Chikwawa district. Discussions with the disaster relief officer revealed that the district has been lobbying communities especially in flood prone areas to be building strong houses that can withstand strong wind and floods. Particularly, the houses are to be having a raised foundation and a strong roof a development which has reduced the number of victims relocating to evacuation centres. In a similar development, several development partners in the district including Red Cross have constructed houses meant to be used as evacuation centres in case of floods to mitigate disturbances of classes.

Districts develop a multi-hazard contingency plan in consultations with civil protection committees. The plan has the most likely scenario, best case scenario, and the worst-case scenario and how the district will respond. It is activated if a disaster strike. Furthermore, the development of the plan is all stakeholder inclusive as various sector committees are engaged along with the local institutions such as the civil protection committees at village, traditional authority, and district levels.

5.3. Synthesis and utilisation of knowledge – understanding knowledge systems for society and the natural environment

Detailed plans are developed by the districts to better understand the impact of climate change at the local level. Plans are based on a range of information sources and sector plans which include:

- Participatory Vulnerability and Capacity Assessment (PVCA) which provides a framework for analysis of existing and needed capacities to cope with the impacts of a changing climate on different groups and themes at the local / community level. The results of the PVCA are reviewed at the district level, indicating the impact of climate change on communities, local groups, and proposed solutions. The knowledge generated through

the process with different government departments and actors in DEC help to create a needs-based analysis of climate risks on local conditions.

- Disaster contingency plan is a multi-hazard disaster contingency plan which act as a preparedness and a response tool based on the annual seasonal forecast and what this means in terms of main systems in the district (hazards, disaster response, health, education, food security, water etc.). The PVCA data on climate vulnerability contributes to the contingency planning process. Contingency plans are generated annually and are not as exhaustive as the development planning and demand focus on specific risks and the implications on different sectors, and groups in the district. The district contingency plan supports decision making and offers a shared framework that all sectors and actors can work on, putting in place clear incentives for cooperation in the form of shared plans, financing plans, policy, or implementation arrangements. These allow for response to climate impacts at the local level since the plan gets activated whenever the anticipated disaster strike.
- Deeper understanding of environmental and water conditions has enabled accessing boreholes that have significantly more water table to be channelled to a borehole where there is limited water. Furthermore, identifying the extremes in two districts has resulted in changes to agricultural planning, shifting from dependency on rainfed agriculture to irrigated agriculture following extreme floods and droughts.

At district level information on the impact of climate change is formalized through DEC multi-stakeholder and multi-sector review meetings. These gatherings are attended by both government and non-state actors including NGO representatives, different government departments, partners` fraternal representatives, local structures` representatives, traditional leadership representatives among others. Furthermore, the districts have devised ways of disseminating climate change related messages through two non-traditional methods which are Short Message Services (SMS) through cell phones and the use of agriculture extension agents from district to the local levels. With regards to the use of SMS services, the challenge is that only 40.2% (MACRA, 2014) of the rural farmers have access to a cell phone in rural areas. To get the messages across to everyone, it does depend on local message transmission mechanisms among the local community members. The alternative approach as highlighted above is the use of an agricultural extension system to disseminate weather forecast messages where the district office gets the information and collaborate with disaster relief offices and other stakeholders to engage extension officers at extension planning areas, who share the messages with agriculture sections officers at section level.

Officers at section level are responsible for transmitting the message to lead farmers who then engage local farmers with the messages received. Traditionally, radios (including farm radio trust) are a common source of climate change information. Other communities rely on traditional methods to predict the onset of rainfall like increase in the availability of ants. Nevertheless, the blending of tradition and scientific messaging was not clearly established as the meteorological services department shares the scientific forecasts and it is the end users that use this message in consideration of the traditional indicators of the weather condition. As reported, using the weather forecast information has led to an increase in the agricultural production as the messages help farmers to make critical farming decisions such as choosing the right variety, crop to plant, amount of folders for livestock to keep among others.

Enablers

The importance of locally relevant information, presented in many ways and media throughout communities, and based on the different needs, contexts cannot be over emphasized. As noted during the assessment, the communities are given both annual weather forecast (long-range information), monthly, and weekly expected weather conditions which enabled them to make short term faming decisions such as fertilizer application, weeding and other activities. Moreover, the scientific messages disseminated are translated into local language, making messages more user-friendly to people in communities. Another important enabling factor was the district level contingency planning which provides a shared framework across sectors as a basis of coordination, decision making and budgeting.

Inhibitors

It was observed that there was no clear mechanism to formalize learning and exchange beyond the review meetings at the district. On a positive note, however, it was noted that there are means within the technical sectors to manage information and compliance with policies (for example water technicians are guided by local policies on water extraction based on national policies and local water availability conditions). The districts also have inadequate capacity to support local groups in planning and community engagement especially during the development of the multi-hazard plan. As indicated during interviews, a district has a huge number of local structures that are supposed to be trained but financial and human resource constraints limit the capacity building initiative of these structures making it difficult to carry them on board during consultations of the plan. Nevertheless, agricultural extension workers, and other local government officers help in reducing the burden. As expected, inadequate resourcing in terms of both human capacity and financial aspect jeopardize the engagement processes. Contingency planning results in itemizing activities and budgeting but there is never enough funding through the government programs and there is a need for additional help from outside.

Illustrations:

Knowledge sharing at district level is done through multi stakeholder meetings. Whilst at farmer group level, using the weather forecast, agricultural production has been recorded on the increase as the messages helped farmers to make critical farming decisions such as choosing the right variety, crop to plant, number of folders for livestock to keep among others. One key enabling factor for the message dissemination is the fact that the scientific message is translated into local language which is easier for farmers to understand and apply. Furthermore, we noted that farmers, particularly leaders, were well trained in various aspects including the amount of rainfall required for various crops to do well.

5.4. Facilitation of cross-sector and cross-organisational collaboration via stakeholder and public engagement

Implementation of climate change related policies in local communities are all stakeholder inclusive. For instance, districts visited for the qualitative data collection develop disaster contingency plans, which is a multi-hazards disaster plan (a preparedness and response tool developed after annual seasonal forecast). The plan has the most likely scenario, best case scenario, and the worst-case scenario and how the district will respond. Annual planning demands a focus on specific risks and the implications on different sectors, and groups in the district and provides a clear mechanism for collaborations and reflexivity on the technical aspects of collaboration

- The development of the district development plan engages all stakeholders in the districts including the civil society, faith leaders, private sector companies, local structures of governance among others. All four district make use of the district executive committee (DEC) and its sector specific sub committees to coordinate various adaptation programs.
- Through the same platform, district level stakeholders are able to review any incoming initiatives and also assess progress of on-going development activities implemented in the district. The relevance of this process as indicated by stakeholders ensures that development projects minimize the duplication of effort and adhere to government policies and regulations.

The public is fully consulted during the Participatory Vulnerability Capacity Assessment development which highlights climate hazards affecting communities and proposed local solutions. Planning cycles focus on specific risks and the implications on different sectors and groups in the district combined with clear mechanism for collaboration and ensure that the underrepresented vulnerable groups i.e., women, elderly and the youth are included in various local structures on the technical aspects of collaboration. KIIs with district level officials indicated that deliberate seats were created in Civil Protection Committees either at area (Traditional Authority level) or group village level (Village). The assessment further brought to light that the voices of the local structures are taken on board during the planning processes through the Village Development Committees (VDCs), Area Development Committees (ADCs), Stakeholder Panels, Civil Protection Committees and other related local bodies in District development or other sectoral planning and plans. The assessment did not find evidence enough to conclude that the adaptation initiatives implemented in the districts by government structures are evaluated. For instance, government stakeholders in Balaka indicated that

the impact of the integrated catchment management approaches employed were not assessed despite showing positive outcomes on the lives of beneficiaries. Whilst in different cases, the fruits of other adaptation actions such as construction of dykes and evacuation houses showed some positive outcomes learnt from the reduction in the number of flood victims.

The climate change adaptation initiatives implemented in these districts by the civil society organization are evaluated to assess the effectiveness of such projects in achieving set objectives. It should be noted that this is also a requirement by donor agencies to have them commissions end of project assessments mostly led by external consultants. With regards to adaptation action planning consultations, decentralization demands that the grassroots communities be consulted in the development phase of the adaptation actions.

Enablers

- Decentralization of planning processes. Malawi adopted a decentralized system of government in October 1998 as a vehicle for poverty reduction in terms of delivering better services to the Malawian population but also as a means for strengthening democratic institutions and participation at the local level. The practice appears to have been ingrained that development has to start from the grassroots and ensuring that no one is left behind.
- NGOs have been advocating strongly on women's leadership, empowering women that they also can drive change within their communities.
- Deliberate approach by the district stakeholders to include women in civil protection committees to ensure women's voices are heard in many sectors of planning
- NGOs play a critical role in building local capacities (skills, knowledge, and practice). The majority of the local governance structures are trained with support from external agencies which enables them to meaningfully participate in adaptation planning and implementation.

Inhibitors

- Resource constraint: district development plan identifies challenges to be addressed but full implementation is largely dependent on funding/resourcing which is partially funded by the central government through the local district councils.
- Inadequate capacity to both develop and implement the contingency plan by the local structures that were not trained. Each district has over 100+ CPCs that needs to be trained to meaningfully participate in the development processes of various plans.

Illustrations

The PCVA mechanisms and DEC structures enable local groups and community organizations to engage in planning and are therefore key in enabling effectiveness of planning to respond to local issues.

5.5. Consideration of ethics and justice via normative competence

Malawi's Climate change management policy recognizes that women and girls are disproportionately affected by climate change and are more vulnerable to its impacts. The policy calls for promotion of gender equality as a response both in terms of mainstreaming as well as through specific focused interventions. Whilst we were unable to establish the availability of activities that were women focused, we noted that women are taken on board in most of the project activities and their specific needs are considered. We further observed that women representative posts were established to ensure that their specific issues are integrated into various initiatives. However, Women's participation is very much affected by social and cultural context, norms, and expectations. As a result, women are often left to choose between marriage and leadership roles. Most women agree to take up these leadership challenges but may become passive due to social and cultural expectations and norms.

There is a need for means to support women (and other underrepresented groups that are disproportionately impacted by climate change) to be a part of driving processes at local level through supporting skills, confidence,

inspiration through leadership, helping (or putting in place conditions for women to fulfil their mandate) such as economic empowerment. **The use of the PVCA** as a means of data collection and analysis has helped to identify how climate affects different people and groups in different ways, these are used as a basis of a response/action, the variations emerging because of the PVCA are evident in different districts and conditions. This offers a means to consideration of vulnerability drivers (across different areas of government, and groups in society) through both policy and practice.

Deliberate efforts ensure that underrepresented vulnerable groups are included in understanding the challenge and are engaged in various local structures and greater involvement of communities in decision making for adaptation. Deliberate approach by the district stakeholders to include women in civil protection committees to ensure women's voices are heard in many sectors of planning, and NGOs have been advocating strongly on women's leadership, empowering women that they also can be drivers of change within their communities. It is necessary to offer underrepresented groups to be a part of the process which requires challenging the social norms.

Political interference was cited as one of the constraints to the provision of access to clean water in some areas. Respondents indicated that some political figures choose to disregard the set procedures on the recommended depth of borehole by drilling a shallow borehole which ends up being used for only a few months. Other interviewees were of the view that they do so to embezzle a good share of the money allocated but also amass the popular vote. Yet in other discussions, respondents revealed that politicians perpetuate dependence syndrome among local communities by promising to shoulder the cost of borehole maintenance only to vanish during the time that the borehole breaks down. For instance, one community in Balaka is failing to rehabilitate a borehole costing less than \$5 saying that their member of parliament promised to be responsible for the rehabilitation of the same. In some areas, environmental management efforts were hampered by local chiefs that were making agreements with other people to harvest trees whether for burning charcoal or for any other uses. The committees failed to bring the local leadership to the book because of their position. In Balaka, a borehole that was sunk on a chief's residential premise made the water management committee ineffective as the chief claimed having overall authority over anything happening on the borehole.

Victims of disasters have in the past been involved in overall assessment of the damages by the Village Civil Protection Committees. The figures are then sent to Area Civil Protection Committees who then forward them to the disaster office. The Relief and Disaster office dispatch a team for confirmation of the damages and then forward the figures to the Disaster Management department at national level. It is this office that then sends assistance based on the number of people affected. This is in recognition of the fact that people get affected by climate change disproportionately. Survey participants often noted that women and men listen to women leaders though it varies, in some areas men do respect women leaders, whilst in others both men and women and in a few areas fellow women. However, there is an agreement that majority of the people are embracing women leaders.

"We believe that people in the community listen to these women because the women themselves have proven to the community that given a chance in leadership positions, they can bring a change in developing the community" **Male FGD Participant, Matola, Zomba.**

"As of the case of the ACPC chairperson, she was elected in a committee whose membership majority are men and it is men that voted her into the position. However, fellow women passively support them because of jealous and usually do everything to pull them down to see them fail". **FGD participant, Chikwawa district.**

There were numerous instances where women were reportedly leading in various sectors playing critical roles in adaptation planning and implementation. Below are some of the key areas.

- Women in disaster relief. A good percentage of women were taking pivotal roles in Civil Protection Committees at various levels such as group village (VCPC) and Traditional Authority (ACPC) which exposed them to contributing positively in decision making.
- Women take leading roles in agricultural extension advisory services where chairpersons of agriculture stakeholder panel committees, and lead farmers were women leading in providing crucial agriculture extension messages in their communities. For instance, one woman who is a lead farmer in Balaka provides

extension services to farmers from 32 villages in Sub-Traditional Authority Matola and monitors over 25 fellow lead farmers including men.

- Women occupy leadership positions in forestry Management. A good number of women led in the establishment of village forests through village natural resources management committees. Even beyond that, others were in the forefront of championing forest conservation initiatives. For example, A lead farmer in GVH Mchacha, Chikwawa who is a woman, successfully led in championing tree planting in the area where 7,550 trees were planted last season alone.
- Women plays critical roles in anticipatory actions where a section of women leaders played an active role in various action to mitigate hazards impact which among others include construction of a dyke in Zomba to mitigate flood impact from Phalombe river.
- Women were in forefront in child protection and nutrition programs. Other women leaders were on record in taking bold steps to end child marriages. Yet another section of them reported leading programs aimed at reducing malnutrition in their communities by teaching other community members on food preparations and providing referrals.
- Women in primary school education. It was noted that a few women led primary school level structures such as Parents Teachers Association (PTA) and influenced decisions in implementations of infrastructure development projects such as construction of office and classroom blocks.

Enablers

Women involvement according to the FGDs conducted is being fueled by self-satisfaction that they are doing a good job of community service. Others said that training (and confidence) from different organizations were helping women to be working hard and talk in front of men without fear, giving a VDC Chairperson as an example of a woman who has managed to solicit support in construction of the bridge washed away by floods. Against the tradition, most men are in the forefront supporting women with respect and this feels great to women which encourages them to keep doing the work. Other women draw their inspiration from fellow women working for partner organisations and they are seen as role models, pushing development agenda, and working with different people including men.

“Our extension officer from CADECOM has managed to do things that men did not do, people in the community have kitchen gardens because of her encouragement and as women we feel encouraged by her achievement” Female FGD participant, Zomba.

Inhibitors

Respondents indicated that participation is dependent on the cultural norms, especially women’s leadership and cultural beliefs that women cannot be leaders. Secondly, political interference was cited as one of the constraints to accessing clean water. A good example is in Balaka where a politician promised to be shouldering all borehole repair costs during campaign only to disappear after elections. Lastly, mobility was mentioned as one key constraint to women leadership. Provision of push bicycles will help women leaders fulfil their mandate as sometimes they have to travel long distances to discharge to fulfil their mandate. To enable women, undertake the leadership roles, others suggested economic empowerment through Village Savings and Loans which positions women to be equally influential as men by engaging in small scale businesses. Another important barrier is the risk of false promises and politicization of adaptation actions by people vying for political positions as a means of amassing votes. Respondents indicated that several boreholes were not operational at the time of the interviews because politicians told the community members that they will be responsible for repairing the water sources should they be elected to office. The challenge, however, was that after being elected, they did not live up to their promises, yet the borehole beneficiaries were still waiting for the duty bearers to fix the boreholes.

Whilst women leaders are fully respected in most of the assessment sites, there were still some resistances culturally that some men did not feel comfortable being led by women. The situation is worsened by some men and boys who deliberately chose not to attend meetings organized by women in leadership positions. Moreover, the tradition in most of the areas visited is that women should spend much of their time at home, taking care of children and doing other household chores. This affects their activeness when they are elected to leadership in community structures. Survey participants also indicated that some men are jealousy of their wives to attend meetings which makes it difficult for them to discharge their functions as effective women leaders. As a result, women are left out to choose between marriage and leadership roles. There were also mentions that some people deliberately chose not to follow rules set

by women leaders which undermine their leadership power. In the local settings, community members developed jealousy by thinking that leaders pocket allowances for every meeting they attend and deliberately decide to sabotage agreed actions to see them fail. A significant section of women leaders mentioned inadequate exposure as a barrier to their leadership advancement. They observed that some women elected to various community structures' have had no opportunity to broaden their knowledge by way of learning from what their fellow women are doing in other parts of the country

The other most cited barrier was mobility.

"I oversee / monitor 24 farming villages, but my activities are sometimes affected by lack of mobility. I rely on my husband's bicycle, and when he has other engagements which need the same bicycle, I fail to perform my leadership duties". FGD participant, Machinga district.

One of the limitations to women's leadership was that those from poor families are considered inferior and when in positions they are mostly looked down because of the poor background. This underscores the role of economic empowerment in enhancing the effectiveness of women leaders.

Illustrations

Women occupy various leadership positions such as chairperson and other influential positions in local structures. Both women and men listen to women leaders, there was recognition that many people are embracing women leaders

"We believe that people in the community listen to these women because the women themselves have proven to the community that given a chance in leadership positions, they can bring about change in developing their community" Male FGD participant, Matola, Zomba

"I believe that a leader must lead by example and must be able to listen to other people's views. This has helped me to have a good working relationship with all groups of people" female chairperson, ASP.

"Some of us have had no opportunity to see and learn from what our colleagues in some parts of Malawi are doing, and it is hard to evaluate ourselves if we are doing well or not" – Female FGD Participant, VNRMC, Balaka district.

6. Enablers and inhibitors in adaptation planning and implementation

Enablers: Based on learning in Malawi an effective government and governance in adaptation planning and implementation illustrates the following enablers

- **Policy coherence** and a close integration between climate change management policy and other policies such as Malawi Growth and Development Strategy III, National Agriculture Policy, Malawi vision 2063 agenda among others.
 - Clearly articulated national climate change management policy that is vertically and horizontally integrated and linked to poverty alleviation strategies.
 - Recognizes the role of local champions both governmental and non-governmental in the implementation of the policy to ensure its long term effectiveness

- **Demand driven** agriculture extension approach which gives the communities an opportunity to choose agriculture value chains suitable in their area, based on their local climatic conditions and subsequently demand the extension services they need for specific commodities to produce.
- **Access to information by farmers and water users.** Farmers through the department of metrological services gets weather forecast through various mediums which help farmers to make production decisions. Communities are given both annual weather forecast (long-range information), monthly, and weekly expected weather conditions which enabled them to make short term faming decisions such as fertilizer application, weeding and other activities.
 - The scientific messages disseminated are translated into local language, making messages more user-friendly to people in communities. The annual weather forecast enable farmers to request the type of extension services needed.
 - Information access, flow, and accessible media of dissemination are vital in ensuring that the local communities are prepared and are able to take anticipatory actions before a disaster strikes and make important decisions influencing agriculture and water management.
- **Decentralization of planning processes** that enable **vertical and horizontal coherence at the sub-national (district) level.** All districts have well established structures through the District Executive Committee (DEC) and sub-committees coordinating locally with Village Development Committees, village civil protection committees and other local structures. Furthermore, a strong coordination was observed especially with NGO actors in ensuring that all local organizations are complying with set government minimum standards and participating.
 - District and local level structures that are well coordinated within and with other important stakeholders is key in ensuring harmonization of adaptation actions, compliance to government guidelines and leveraging both human and finance resources.
- **District level contingency planning** which provides a shared framework across sectors as a basis of coordination, decision making and budgeting. Needs based planning through Participatory Vulnerability and Capacity Assessment (PVCA) offers innovation in knowledge flow and contributing to multi-stakeholder and multi-sector planning. PVCA is reviewed at the district level, indicating the impact of climate change on communities and local groups in a district whose purpose is to coordinate strategies, and solutions (contributing to knowledge sharing and innovation through needs-based planning).
- **Farmer driven advocacy** which is driving coherence between climate risk, environmental management and poverty reduction efforts. Knowledge flow from local district councils to national level. Advocacy to include livestock as a part of the Affordable Input Program (AIP) to help farmers suffering from the impacts of climate change on agricultural productivity based on the findings of climate impacts on farmer productivity (PCVA) were successful.
- **Capacity building trainings** helped women and other vulnerable groups to have confidence in adaptation planning and implementation. These trainings came from different organizations and enabled women to be working hard and talk in front of men without fear.
- **Women draw their inspiration from fellow women** working for partner organisations and they were seen as role models, pushing development agenda, and working with different people including men.
 - Well trained, economically empowered women and other underrepresented groups are key in advancing adaptation actions. Removing social and cultural barriers will ensure meaningful participation meaningfully.
- **Deliberate** approach by the district stakeholders to **include women** in civil protection committees to ensure women's voices are heard in many sectors of planning
- NGOs play a critical role in building local capacities (skills, knowledge, and practice). The majority of the local governance structures are trained with support from external agencies which enables them to meaningfully participate in adaptation planning and implementation.
- **Informed local water governance** committees with an active community that can contribute resources and time and working with local leaders is key in driving the adaptation agenda forward. Other important considerations with regards to water governance include

- Officials at district level develop contextualized recommendations on the depth that each stakeholder follows when constructing new boreholes based on local conditions and a government technician from district water development office is assigned to the stakeholders drilling boreholes to ensure that there is adherence.
- Community's contribution towards repair and procurement of worn-out parts.
- Thoroughly training and refresher trainings of the community water management committees to be active in borehole operations and management.
- Collaborative effort between the water points committees, traditional leaders and chiefs in ensuring that the rules and regulations established are followed and that those who do not abide by the regulations face penalties impartially.
- Transparency and accountability in handling finances contributed by community members meant for the repair of the boreholes. WPCs who were able to present expenditure reports back to the community had minimal challenges in mobilizing resources for the borehole maintenance.
- The keeping of the borehole surrounding clean and tidy, daily maintenance responsibilities and rules to be adhered to be all users to ensure the facility is cared for

Inhibitors: Whilst numerous enablers support successful adaptation planning and implementation, a number of inhibitors hinder progress, including:

- **Vertical** integration is impacted by limited **financial and human resources**, transport and mobility. This was noted at both district (financial and human resources) and local level (transport challenges for the local agents to fully execute their roles) end up affecting implementation of adaptation actions.
 - The districts also have inadequate capacity to support local groups in planning and community engagement especially during the development of the multi-hazard plan.
 - The most significant barrier is accessing resources to implement adaptation. There was some anecdotal evidence that the government is largely able to provide funding for the running of various structures at district level but falls short in providing special funding to promote local adaptation.
 - Means of mobility will help women leaders fulfil their duties as sometimes they have to travel long distances to fulfil their mandate.
 - District development plans identifies challenges to be addressed but full implementation is largely dependent on funding/resourcing which is only partially funded by the central government through the local district councils.
- Women's participation is affected by social and cultural context, norms, and expectations towards women's role in the home and family duties over and above community leadership roles
- Lack of clear mechanism in districts to formalize multi-sectoral exchange and learning or M&E beyond the review meetings at the district.
- Expectation by some district sectors that they would not speak or align with other sectors, an issues that needs more scrutiny (a comprehensive policy analysis).
- The risk of false promises and politicization of adaptation actions by people vying for political positions as a means of amassing votes.
- Perceived lack of transparency in financial utilization and management of non-governmental organizations' projects which calls for enhanced accountability at district level.
- Inadequate capacity to both develop and implement the contingency plan by the local structures that were not trained. Each district has over 100+ CPCs that need to be trained to meaningfully participate in the development processes of various plans.

7. Malawi experience in using Traction Framework

Using the Traction framework has helped in exploring what are the enablers to effective government and governance in adaptation planning and implementation within the context of four districts in Malawi. The learning in Malawi recognized the important role a decentralized system of governance plays in enabling adaptation at the local level. However, it is recognized that the availability of policy alone may not be sufficient if the same is not translated to the local communities. Furthermore, using the framework has helped in understanding interlinks between policies and the level of interaction by different actors. The Traction framework in its current form offers a tool to understand adaptation efforts implemented and how various actors can contribute to planning and implementation. However, the issue of how Each of the enablers contribute and reinforce each other is identified a crucial area of further analysis within the framework and how this understanding might be able to support others in utilizing the framework in the future

8. Suggestions: taking the learning forwards

Findings from the study in Malawi generate important inputs for policy makers, implementers, academia, communities and stakeholders implementing climate change adaptation actions in the country. As such disseminating the results is helpful in igniting a debate on various issues including long term adaptation funding, community engagement in climate change adaptation among others. The following next steps are suggested as opportunities for discussion with CCPM partners

- National level virtual discussions on the Malawi learning through CCPM findings. The virtual meeting is proposed in view of the pandemic, cost effectiveness, and its potential in engaging participants that may not be physically present. A national partner for CCPM – Civil Society Network on Climate Change (CISONECC) may be tasked to lead in organizing this meeting to be attended by its members (affiliates) implementing related programs / projects, donors, and government key staff (ministry of finance, environmental department, metrological services, agriculture, gender among others.
- District level learning events (one in each district). A collaborative learning event per district may be organized in collaboration with CCPM partners where participants from diverse government departments including district level structures` representatives may be invited to the workshop.
- A Comprehensive policy analysis of the district level policy documents to establish complementarity and differences that may affect adaptation planning and implementation.

Annex 1: Summary Findings using TRACTION framework

<p>TRACTION competence / Enabling areas and components</p>	<p><i>Findings from Malawi Traction research on enablers and inhibitors</i></p>
<p>Visioning, goals, targets and outcomes through policy and leadership</p>	
<ul style="list-style-type: none"> National policies and legislation 	<p>Findings</p> <ul style="list-style-type: none"> At national level and based on decentralization in Malawi, the policy, goals, targets, and outcomes are in place. This is evident at local level. There is also a horizontal integration of the policies from national to district and then the local communities. These policies are linked. Coherence between climate change policies and outcomes and poverty reduction, strong evidence of this cascaded to local level. <p>Enablers:</p> <ul style="list-style-type: none"> Importance of policy coherence between livelihoods and agriculture, especially significant through agricultural extension workers. demand driven farmers can identify the extension services they need for specific commodity to produce because farmers have access to information (on seasonal climate forecasts) they then can demand capability building through extension services to respond to anticipatory actions to address climate risks (diversification of agricultural activities) vertical and horizontal coherence at the sub-national (district level): structures very clearly in place through District Extension Committee (DEC) and sub-committees coordinating with Village Development Committees. Coordinating and integrating policy and ensuring all local organizations are complying and participating. Champions and local leaders are driving and ensuring compliance and coordination through the Village Development Committees however there is inconsistency in application* <p>Inhibitors:</p> <ul style="list-style-type: none"> Vertical integration impacted by limited financial and human resources, access (physical), transport and mobility. Risk of setting up parallel systems (power?)*. Perceived lack of transparency in financial utilization and management of Government projects: the need for enhanced accountability in use of funds allocated for government projects <p>Recommendations:</p> <ul style="list-style-type: none"> establishing strong partnerships with local organizations to maximize local human resources to support stronger vertical and horizontal coherence Traditional leadership: government mandated committees may be in place however traditional leaders offer a critical viewpoint especially in natural resources management (water and forestry) and should be engaged as
<ul style="list-style-type: none"> Integration of adaptation across sectors and scales 	
<ul style="list-style-type: none"> Leadership and 'champions' from government in driving adaptation processes forwards 	

	<p>champions and local leaders as a part of the framing of the competency / enabler (to support vertical and horizontal coherence at the local level)</p> <p>Illustrations:</p> <ul style="list-style-type: none"> • climate justice: access to information, farmers demanding accountability but also, advocacy in linking and responding to poverty reduction especially for those whose livelihoods are collapsing as a result of the changing climate
<p>Defining and developing <u>pathways</u> from the present towards envisioned outcomes – governance processes and capacity to respond</p>	
<ul style="list-style-type: none"> • Fostering innovation and learning 	<p>Findings</p> <ul style="list-style-type: none"> • Governance structures at district and local levels, review meetings at district level (multistakeholder and multi-sector) in place for this purpose • Participatory Vulnerability Capacity Assessment: (PVCA) knowledge flow from local to district: reviewed at the district level, indicating the impact of climate change on communities and local groups in a district, to coordinate strategies, coordinate solutions, contributing to knowledge sharing and innovation through needs-based planning <ul style="list-style-type: none"> ○ PVCA offers innovation in knowledge flow contributing to multi-stakeholder planning and plans however, the biggest barrier is accessing resources to implement ○ no clear mechanism to formalize learning and exchange beyond the review meetings at the district, within the technical sectors there are means to manage information and compliance with policies, for example water technicians are guided by local policies on water extraction based on national policies and local water availability conditions ○ knowledge flow district to national: advocacy to include livestock as a part of the poverty reduction program to help farmers suffering from the impacts of climate change on agricultural productivity based on the findings of climate impacts on farmer productivity (PVCA) were successful and implemented <p>Enablers</p> <ul style="list-style-type: none"> • Needs based planning (PVCA) contributing to strategy and program planning • Governance structures: review meetings at district level (multistakeholder and multi-sector) <p>Inhibitors:</p> <ul style="list-style-type: none"> • Accessing resources to implement: provision of special funding to promote local adaptation appears to be inconsistent and largely the government plays the supervision role. Very dependant on outside funding, no funding results in no project implementation
<ul style="list-style-type: none"> • Financing, resourcing and assets 	

	<ul style="list-style-type: none"> ● Reliance on collaboration effort with other partners is driving adaptation of effort in these districts. The challenge is that the partners depend on outside support as a part of driving this collaborating ● Lack of multi-sectoral exchange and learning or M&E systems (which is identified as a specific need by participants) <p>Recommendation:</p> <ul style="list-style-type: none"> ● Review the linkages between competency / enabler 1 and 2 and how this is used as a basis of competency / enabler mapping (maybe descriptors to be enhanced) <p>Illustrations:</p> <ul style="list-style-type: none"> ● Review meetings conducted at district level - attended by both government ministries and NGO representatives operating in the district ● Government push the adaptation agenda through the existing structures such as the agriculture extension network ● Limited funding perpetuates dependence on external support thus most of the adaptation efforts are driven by development partners.
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Synthesis and utilisation of knowledge – understanding knowledge systems for society and the natural environment

<ul style="list-style-type: none"> ● Knowledge availability and accessibility 	<p>Findings</p> <ul style="list-style-type: none"> ● Central entry point is the district disaster contingency plan which offers a range of scenarios and responds to both quick onset and slow onset disasters, considering medium and short range weather/climate patterns, environment and society, structured anticipatory analysis and planning ● Weather forecast and what this means in terms of main systems in the district (hazards, disaster response, health, education, food security, water etc) influence the district contingency plan as does the PVCA ● Knowledge for decision making centred around the district contingency plan which generates a detailed budget for resourcing, across sectors and programs presented to the DEC, used as basis for allocating of existing resources and to request new funding from donors ● Mechanisms stakeholders use to disseminate information to communities to support decision making?, <ul style="list-style-type: none"> ○ Through mobile phones on weekly weather especially during the rainy season (area specific information which is important) ○ Through radio and TV (daily weather forecast and not area specific information) ○ Through agricultural extension workers who provide seasonal forecasts to small agricultural units leaders who work with lead farmers, a voluntary farmer support means. Sometime the
<ul style="list-style-type: none"> ● Knowledge of policymakers 	
<ul style="list-style-type: none"> ● Synthesis of knowledge across disciplines and scales 	

information comes late, or the expectation that lead farmers may have too many farmers to support

- Limitations in resources (bicycle, time, money for mobile networks)

- The importance of locally relevant information, presented in many different ways and media throughout communities based on the different needs and contexts, importance of both long range information for farmers decision making versus short term information for example disaster risk awareness and preparation/response.

Enablers

- Locally relevant information, presented in many different ways and media throughout communities based on the different needs and contexts, importance of both long range information for farmers decision making versus short term information for example disaster risk awareness and preparation/response.
- Scientific messages are translated into local language, making messages more accessible to people in communities
- The district level contingency planning provides a shared framework across sectors as a basis of coordination, decision making and budgeting (PVCA evidence based and locally owned?)

Inhibitors

- Resourcing: both human capacity and financial aspect
- Capacity of the local social structures for community engagement, in the preparation of the plan, engaging the local communities. the processes are very human resource heavy and therefore there just is not enough capacity to deliver
- Contingency planning results in itemizing activities and budgeting but there is never enough funding through the government programs and there is a need for additional help from outside
- Issues where emergency response for example cannot be delivered because of a lack of resources i.e. boats for emergency response result in risk of loss of lives, livelihoods and assets

Recommendations:

- Issues around Ownership (information, decisions, implications) has not emerged through the use of the Traction lens

Illustrations

- District Government starts initiating adaptive actions, such as flooding protection for housing for new build

	<ul style="list-style-type: none"> • Knowledge of the area based on the enhanced context analysis has enabled accessing boreholes that have significantly more water to be channelled to a bore hole where there is limited water • Identifying the extreme weather conditions in two districts has resulted in changes to agricultural planning, shifting from dependency on rainfed agriculture to irrigated agriculture following extreme floods and droughts
Facilitation of cross-sector and cross-organisational <u>collaboration</u> via stakeholder and public engagement	
<ul style="list-style-type: none"> • Public, stakeholder and civil society inclusion 	<p>Note: this enabler offers very practical illustration of what the national policies are saying</p> <p>Findings</p> <ul style="list-style-type: none"> • PVCA as practical entry point to engage communities and local groups • DEC structure and contingency plans that engage all local stakeholders and both government and non government and provide coordination mechanisms • District planning is done every 5 years, contingency plans are generated annually and are not as exhaustive as the development planning and <i>demand focus on specific risks and the implications on different sectors, and groups in the district</i> • Alignment between adaptation and poverty reduction programs planning and engagement of communities and local groups • Local voices through the Village Development Committees (VDC) included in District development or other sectoral planning and plans: <i>deliberate strategies to ensure that the underrepresented vulnerable groups, especially women are included in various local structures, women leading groups that are traditionally dominated by men</i> • Very strong evidence in all districts visited <p>Enablers</p> <ul style="list-style-type: none"> • Decentralization of planning processes, various district stakeholders need to be engaged as a part of development planning which mandates the structures of DEC and local planning. <i>becoming ingrained that development has to start from the grassroots and ensuring that no one is left behind</i> • NGOs have been advocating strongly on women's leadership, empowering women that they also can be drive of change within their communities • Deliberate approach by the district stakeholders to include women in civil protection committees to ensure women's voices are heard in many sectors of planning • NGOs play a critical role in building local capacities (skills, knowledge and practice) <p><i>Inhibitors:</i></p>
<ul style="list-style-type: none"> • Reflexivity on collaboration 	
<ul style="list-style-type: none"> • Linking adaptation policy with development goals 	

	<ul style="list-style-type: none"> • District development plan will identify challenges to be addressed but full implementation is largely dependent on funding/resourcing which is partially funded by the central government through the local district councils. • Inadequate capacity to both develop and implement the contingency plan by the local structures that were not trained <p><i>Recommendations</i></p> <ul style="list-style-type: none"> • Deliberate framing of competency / enabler 4 which focuses on practical local mechanisms as compared with competency/ enabler 1 which focuses on policy enabling environment to allow/enable competencies 4 to be attained, describe the links • Describing the attributes of locally driven through decentralisation • Government investments at local level for integrated adaptation and development planning <p><i>Illustrations</i></p> <ul style="list-style-type: none"> • Engagement of ADCs, VDCs, CPCs, Stakeholder panels in planning and implementation • Local adaptation effort aimed at improving smallholder agriculture production and consequently food security and poverty reduction (irrigation farming, income diversification, livestock passon, forestry based entripes). • involvement of NGOs in joint planning and implementation of adaptation initiatives such as PVCA, Multi hazard contingency plan, district development plan.
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Consideration of ethics and justice via normative competence

<ul style="list-style-type: none"> • Inclusion of equity and justice issues in core national climate adaptation policies and statements 	<p>Findings</p> <ul style="list-style-type: none"> • Significant challenges associated with risk from political attention cycles, perpetuating dependency syndrome especially impacting water and access to decision making • PVCA: there is a clear identification of how climate affects different people and groups in different ways, these are used as a basis of a response/action, the variations emerging as a result of the PVCA are evident in different districts and under different conditions • National policy aligns and puts focus on the role of girls and women in being a part of tackling climate impacts <p>Enablers</p> <ul style="list-style-type: none"> • Especially focused on enablers to support women to be a part of driving processes at local level through skills enhancement, confidence building, inspiration through leadership, helping (or putting in place conditions for women to fulfil their mandate), economic empowerment <p>Inhibitors:</p>
<ul style="list-style-type: none"> • Actions to understand and address unequal exposure to climate risks depending on 	

<p>gender, ethnicity, race</p>	<ul style="list-style-type: none"> ● Participation is dependent on the cultural norms, especially women’s leadership and cultural beliefs and that women should not be leaders. <p>Recommendations</p> <ul style="list-style-type: none"> ● Enhanced mechanisms for accountability and transparency, expanding who is involved and broader base of leadership is important ● Enhanced information flow to communities so there is a reduced scope for mistrust ● Approaches need to challenge the cultural norms do not accept the cultural norms ● clear articulation of enablers to support women (and underrepresented groups) in the competency / enabler descriptor <p>Illustrations</p> <ul style="list-style-type: none"> ● Women took up key decision making positions and contributed significantly to various development initiatives in forestry management, borehole operations and management, agriculture extension service provision. ● deliberate inclusion of women representative post in CPCs to ensure issues affecting women are dealt with ● Disaster relief office engages the CPCs during disasters to establish the extent of damage and they get assisted
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Annex 2: Coding framework

Main theme/code	Sub theme/code	Theme description/definition
Community knowledge on climate change and human rights	<ul style="list-style-type: none"> ▪ Community knowledge on climate issues ▪ Sources of knowledge ▪ Impacts of human rights knowledge & climate justice training ▪ Benefits of human rights knowledge ▪ Benefits of climate justice training ▪ Farmers' response to climate issues ▪ Climate justice success stories 	
Climate change issues and their impacts	<ul style="list-style-type: none"> ▪ Critical climate change and climate justice issues <ul style="list-style-type: none"> ○ At district level ○ At community level 	
	<ul style="list-style-type: none"> ▪ Impacts of climate change <ul style="list-style-type: none"> ○ Impacts on food security ○ Impacts on schooling ○ Impacts on water access/quality ○ Impacts on animal/livestock farming ○ Impacts on health ○ Impacts on income ○ Other impacts 	
Climate change and community coping mechanisms	<ul style="list-style-type: none"> ▪ Coping strategies in dry season <ul style="list-style-type: none"> ○ Impact of irrigation facility ○ Alternative water sources ○ Water conservation practices ▪ Coping strategies in wet season <ul style="list-style-type: none"> ○ Water harvesting ○ Maintaining water facilities ▪ Sustainability of water facilities <ul style="list-style-type: none"> ○ Sustainability inhibitors ○ Sustainability enablers 	
Community climate change adaptation measures	<ul style="list-style-type: none"> ▪ Preparing for climate hazards <ul style="list-style-type: none"> ○ Planning activities ○ Importance of preparing ▪ Stakeholder engagement <ul style="list-style-type: none"> ○ Names of stakeholders involved in planning ○ Roles stakeholders played ○ Mechanisms for engaging stakeholders 	

	<ul style="list-style-type: none"> ▪ Factor affecting stakeholder engagement <ul style="list-style-type: none"> ○ Inhibitors ○ facilitators ▪ Coordinating with other stakeholders <ul style="list-style-type: none"> ○ Coordinated actions ○ Impacts of the actions ○ Coordination mechanisms ○ Managing expectations and interests of stakeholders ▪ Benefits of coordinating 	
	<ul style="list-style-type: none"> ▪ Recommendations <ul style="list-style-type: none"> ○ On stakeholder engagement ○ For sustainability of intervention 	
	<ul style="list-style-type: none"> ▪ Integrating adaptation into existing initiatives <ul style="list-style-type: none"> ○ Integration mechanisms 	
	<ul style="list-style-type: none"> ▪ Water preservation measures <ul style="list-style-type: none"> ○ Repairing water points ○ Setting and implementing rules 	
Gender and community decision making	<ul style="list-style-type: none"> ▪ Women influence in community structures ▪ Roles women play ▪ Women ability to speak ▪ Who listens to women ▪ Decisions women have influenced ▪ Women influence success stories ▪ Support women need to influence change ▪ Factors limiting women influence 	
	<ul style="list-style-type: none"> ▪ Women participation in climate change response <ul style="list-style-type: none"> ○ Roles women play in climate change adaptation ○ Benefits of engaging women 	

Annex 3: Study Photo Documentation, field study June 2021



Farmers adapting to climate change by diversifying away from maize and planting drought tolerant crops such as bananas at Chiweza, TA Mwambo, Zomba. Photo credit: Missi Kapalamula – Research Assistant



Irrigation scheme, Kathebwe village, TA Mwambo Zomba. They are promoting mixed cropping at the same time taking care of the existing trees. Photo credit: Semu Kamowa- team supervisor: Angella Laviwa– Research Assistant



Agroforestry field where nitrogen fixing trees were planted as an effort to mitigate the impact on climate change on agricultural practices in Chaweza, TA Mwambo, Zomba district. Photo credit, Angella Laviwa – Research Assistant.



Ngongondo, TA Liwonde, Machinga. Managed by Ngongondo Water point Committee. Photo credit: Semu Kamowa – Field Supervisor.



FGD with Climate Justice Committee, TA Matola, Balaka. Photo credit: Tamala Mhone – Research Assistant.



FGD with women in Leadership at Mangamba, TA Nsanama, Machinga District. Photo Credit: Baxter Chirombo.



FGD with the Climate Justice Committee at Gaga, TA Chapananga, Chikwawa. Photo Credit: Baxter Chirombo – Research Assistant.

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