The Bridge Is Repaired Only After Someone Falls in the Water: Water Interventions and the Security-Development Nexus in Somaliland

244223

The dissertation is 10,041 words long, excluding the title, abstract, acknowledgements, list of acronyms, table of contents, bibliography, and appendices.

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Abstract

Climate change has put increased demand on water resources around the globe, making wet climates wetter and dry climates dryer than ever before. Over half of the population in Somaliland are either pastoralists or agro-pastoralists and are heavily dependent on seasonal rainfall patterns for drinking, cooking, sanitation, livestock and agriculture which makes them exceptionally vulnerable to extreme weather events. The current 2021/22 drought is anticipated to be more acute than in previous decades and will have the potential to cause famine and displacement in the most vulnerable communities in the country if action is not taken to mitigate the humanitarian crisis. The dissertation analyses how capacity-building interventions can help lessen the socioeconomic and environmental challenges arising from climate change in Somaliland. The paper argues that climate-smart, community-led interventions are key to (1) mitigating the detrimental environmental and socioeconomic effects of climate change and (2) capacity-building local communities to improve local livelihood resilience, sustainability and gender equality. The dissertation employs two types of impact assessments in order to determine the efficacy of interventions managed by Concern Worldwide in Somaliland. An *ex post* impact assessment analyses the efficiency, impact and sustainability of Natural Resource Management (NRM) projects to evaluate to what extent- and how the interventions have mitigated the effects of climate-induced insecurities. A gender impact assessment will analyses the impact of Self-Help Groups (SHGs), assessing the groups expediency and efficiency to promote gender equality and empower women by strengthening local resilience and capacities against climate change. Combined, the impact assessments will determine to what extent capacity-building interventions have been able to confront the challenges arising from climate change in Somaliland.

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List of Acronyms

CBDM	Community-based Disaster Management
CfW	Cash for Work
CLTS	Community-led Total Sanitation
CMC	Conflict Management Committee
CW	Concern Worldwide
DRR	Disaster Risk Reduction
ENSO	El Niño / La Niña – Southern Oscillation
FAO	Food and Agriculture Organisation
FEWS-NET	Famine Early Warning System Network
FFS	Farmer-Field School
GIM	Gender Impact assessment and Monitoring tool
GoSL	Government of Somaliland
IA	Irish Aid
IAPF/IAPG	Irish Aid Programme Fund/Grant
IDP	Internally Displaced Person/People
IGA	Income Generating Activities
IMC	Information Management Centre
MoERD	Ministry of Environment and Rural Development
MoWRD	Ministry of Water Resource Development
NCCP	National Climate Change Policy
NRM	Natural Resource Management
РРР	Private-Public Partnership
RBM	Results-Based Management
SHG	Self-Help Group
SPHERES	Strengthening the Poorest Households' Economy and Resilience to Shocks
SWALIM	Somalia Water and Land Information Management
VDC	Village Development Committees
WASH	Water, Sanitation and Hygiene

Introduction

Background

The proverb 'The bridge is repaired only after someone falls in the water' is a Somali adage which denotes that progress is only made once damage has been inflicted. In the context of climate change, humanitarian responses have, at times, focused on responding to the symptoms of extreme weather events, such as famine and displacement, rather than mitigating the root causes of food, livelihood and income insecurities.

Climate change has put increased demand on water resources around the globe, making wet climates wetter and dry climates dryer than ever before. Water is an integral component for every human and natural system on the planet, acting as the basis of all biological life and the building block for sedentary civilisations. Water is critical to all human systems not only as a source for drinking and cooking, but also as an irreplaceable resource for agriculture, pastoralism, sanitation and industry. For this reason, extreme weather events such as drought and flooding have the potential to inflict far-reaching and cascading damages on local populations. Drought is broadly defined as 'a period of moisture deficit relative to some baseline average or normal state' whilst the antithesis, a pluvial, is defined by moisture surplus and flooding.¹ The Horn of Africa has an arid climatic baseline which has worsened effects of erratic rainfall deviations in the El Niño / La Niña Southern Oscillation (ENSO) exacerbated by global warming. Since the 1990s, the region has experienced several droughts as a result of insufficient rainy seasons. The drought of 1992 caused a famine in Somalia which killed approximately 300,000 people and displaced 1 out of 5 people in the country.² Another drought in 2011/12 was predicted to be the 'worst in 60 years' and threatened the

¹ Cook, B. I., *Drought: An Interdisciplinary Perspective* (New York: Columbia University Press, 2019), p. 13. ² Federal Government of Somalia (FGS), 'Somalia Drought Impact and Needs Assessment (DINA)', *Synthesis Report*, Volume I (UNDP: World Bank Publications, 2018), p. 18.

livelihoods of 9.5 million people in the whole region.³ In Somaliland, a prolonged drought from 2015 to 2017 caused farmers to cull 70% of their livestock, causing a dramatic increase in Internally Displaced Peoples (IDPs) due to 'food insecurity and widespread hunger and malnourishment' across the country.⁴ Thankfully the famine was averted due to swift action by local leadership and humanitarian aid from international agencies who provided water trucking and other emergency response measures, but extreme weather and irregular rainfall patterns remain a looming risk for drought and flooding which could severely affect climate-vulnerable pastoralists.⁵



Figure 1: FEWS-NET Horn of Africa Food Insecurity Map

³ FGS, 'DINA', pp. 18-19.

⁴ Government of Somaliland (GoSL), *National Climate Change Policy (NCCP)* (Hargeisa: Ministry of Environment and Rural Development, 2019), 1-47 (p. 12).

⁵ Concern Worldwide (CW) and Irish Aid (IA), 'Strengthening the Poorest Household's Economy & Resilience to Shocks (SPHERES)', *IAPF II Proposal* - Somalia/Somaliland (2016), 1-27 (p. 6).

The current 2021/22 drought is set to be even more severe than in previous decades, with 70 percent higher food assistance needed than during the drought in 2015.⁶ According to the Famine Early Warning System Network (FEWS-NET), record low water and vegetation conditions have resulted in 20 million people in need of urgent humanitarian food assistance to prevent a crisis (see figure 1).⁷ The effects of drought are made even worse in this region due to the prevalence of pastoral and agro-pastoral livelihoods which rely heavily on seasonal rainfall to sustain grazing pastures and farmland.⁸ The degradation of pastures for livestock and wilting or absent crop growth has led to a sharp increase in staple food and livestock prices while agricultural labour demand has remained low which has, in turn, led to a decline in household purchasing power in rural and peri-urban settings across the region.⁹ In Somaliland, 55% of the population are either pastoralists or agro-pastoralists and the heavy reliance on natural resources combined with decades of unregulated resource exploitation has worsened the impact of climate-induced insecurities in the country.¹⁰

The Republic of Somaliland is situated at the entrance to the Gulf of Aden in the Horn of Africa region; bordering Djibouti to the north, Ethiopia to the south and west, and Puntland to the east. In recent years, the country has begun a new initiative to harness its natural resources for sustainable development. In 2019, the Ministry of Environment and Rural Development (MoERD) devised a National Climate Change Policy (NCCP) overseen by a Climate Change Coordination Unit (CCCU) to 'coordinate and harmonise climate change responses and interventions throughout key development sectors' in order to 'conserve,

⁶ FEWS-NET, 'Over 20 million people in need of urgent food aid in the Horn of Africa amid severe drought and conflict', EAST AFRICA Food Security Alert (December 29, 2021), 1-2 (p. 1).

⁷ FEWS-NET, 'Over 20 million people in need of urgent food aid', p. 1.

⁸ GoSL, NCCP, p. 11.

⁹ FEWS-NET, 'Over 20 million people in need of urgent food aid', p. 1.

¹⁰ Government of Somaliland (GoSL), *5 Years Strategic Plan (2021 - 2025)* (Hargeisa: Ministry of Environment and Rural Development, 2021), 1-25 (p. 5).

protect and sustainably manage the environment and natural resources' in Somaliland.¹¹ In addition, the Food and Agriculture Organisation (FAO) in coordination with the Somalia Water and Land Information Management (SWALIM) works in Somaliland to provide relevant ministries and NGOs with up-to-date datasets, hydrological surveys and monitoring tools to assist with water interventions.¹²

Concern Worldwide has been operating in Somaliland for 11 years, managing water interventions, resilience-building initiatives and emergency responses through different sectoral programmes.¹³ In 2017, Concern launched the 'Strengthening the Poorest Households' Economy and Resilience to Shocks (SPHERE) programme', aimed at 'enhancing the capacities of the extremely poor and vulnerable populations' in Somaliland through five envisioned outcomes: (1) strengthened, diversified livelihood opportunities, (2) equitable access to safe quality primary education, (3) improved access to safe drinking water, sanitation facilities and adoption of sound hygiene practices, (4) increased participation and influence of women and men from marginalised groups in leadership and decision-making, and (5) improved management of natural resources and Community-Based Disaster Management (CBDM).¹⁴ Since its outset, the programme has faced certain setbacks and constraints during the implementation process. Budget constraints limited the scale of Natural Resource Management (NRM) interventions, Water Sanitation and Hygiene (WASH) implementation, and agronomics training activities, whilst discoordination between stakeholders operating in the same localities affected the efficiency of the CBDM approach, and Self-Help Groups (SHGs) gender activities were affected by the Covid-19 pandemic.¹⁵

¹¹ GoSL, *NCCP*, pp. 4-5.

¹² FGS, *DINA*, p. 12.

¹³ Concern Worldwide (CW) and Irish Aid (IA), 'Strengthening the Poorest Household's Economy & Resilience to Shocks (SPHERES)', *Irish Aid Program Grant (IAPG) Final Evaluation Report (FER)* (2021), 1-34 (pp. 3-5).

¹⁴ CW and IA, *IAPG-FER*, p. 3.

¹⁵ CW and IA, *IAPG-FER*, p. 13.

That being said, the implementation of SHGs and NRM techniques have shown promise by tangibly building capacity in local communities and increasing their resilience to environmental and economic shocks. 'Climate-smart', Disaster Risk Reduction (DDR) NRM interventions have included the construction of berkeds, large concrete underground tanks, to store rainwater runoff; soil bunds designed to slow rainwater runoff and conserve soil moisture; and gabion check dams in gullies to slow soil erosion.¹⁶ Community-led interventions such as the implementation of CBDM and Cash for Work (CfW) schemes have been effective at mobilising collective-action and fostering vulnerable communities' resilience to economic and environmental shocks.

Indicator	Base	13	Year 2		Yea	Year 3		ar 4	Rating / Comment		
	me		Target	Actual	Target	Actual	Target	Actual			
Outcome 1: Strengthened, diversified livelihood opportunities for2180 people (Somaliland 1530; Banadir 650) that are extreme poor particularly unemployed youth. female headed											
households, drought-prone agro-pastoralists and marginalized groups											
Average Monthly Income from specific IGA/ micro	0	SL	45	61.8	60	77	75	56.6			
enterprise/ employment (USD)	0	Bnd	15	36.9	30	42	45	28.5			
Household Asset Index	4.18	SL	4.6	5.36	5.06	5.63	5.56	6.21			
	2.7	Bnb	2.97	3.88	3.27	3.93	3.59	4.16			
Average % of strategies utilized by households to cope	25.8	SL	46.6	66.7	51.3	38.5	56.4	30.8			
with livelinoods shocks that are	24	Dead	42.0	50.0	45.4	50	40.0	04.7			
(Insurance/reversible/positive) coping strategies (%)	34	Dhu	13.0	0.00 0.211 obile	10.1 kep in 11 er	DU boole from	0 Districts	Z1./			
% of hours and gide in Grade 3 (or equilibrium primary education	30.6	C	42	74.0	44.5	210015 ITOTI	47.5	A3.0			
60 cwnm on the Reading passage subtest of an Early	33.0	0	42	14.3	44.0	04.0	47.5	40.5			
Grade Reading assessment (%)	37.8	в	41.6	68.1	43.7	87.5	45.8	52.1			
Attendance rate - percentage of days that students	85	G	89	91	92	97.9	95	88.3			
actually attend school over a given period (usually per					~~			00.0			
month) (%)	86	В	90	92	93	98.1	96	88.7			
Percentage of teachers (m/f) who report no longer using	77.5	F	N/A	N/A	N/A	N/A	85	78			
corporal punishment (in the last academic term) (%)											
	65.5	M	N/A	N/A	N/A	N/A	80	79			
Grade Retention Rates - % of a cohort of pupils (or	87.8	F	N/A	N/A	N/A	N/A	91	91			
students) enrolled in one grade of a given level or cycle of											
education in a given school year who reach successive	90.1	M	N/A	N/A	N/A	N/A	94	94			
grades (%)											
Outcome 3: Improved access to safe drinking water, sanitati	on facilit	ies and a	doption to	sound nygi	ene practice	es for extrem	me poor 56	790 people	e in Somaliland and Banadir		
% of households that collect 15 litres per person per day	12.1	CI	12.0	c	16	21.1	10.4	12.2			
improved water source in Someliland (%)	12.1	SL	13.9	0	10	21.1	10.4	12.5			
% of households using improved sanitation facilities that											
are no more than 50m from dwelling and are adequately	82	SI	9	37	99	0.39	10.9	1.14			
maintained (Somaliland) (%)	0.2		Ŭ	0.1	0.0	0.00	10.0				
% of respondents who know three of the main causes of	21.3	SL	25.1	21.2	37.1;	47	43.1	69	Target achieved.		
diarrhoea and three ways to prevent diarrhoea (%)	13.1	Bnd	18	33.2	26	88.7	33	98			
Outcome 4: Increased participation and influence of wome	n and m	en from	marginalize	d arouns i	leadership	and decisi	on-making	at househo	Id and community level in target districts		
in Banadir and Somaliland.			morginanza	a groups i	ricoucionip		orrinalang	at nousene	in and community level in target districts		
Average score on scale relating to Gender Role Attitudes	5.22	SL	5.48	5.05	5.75	5.75	6	5.78	This indicator has been met		
									compared to the baseline in both		
	5.54	Bnd	5.8	5.54	6.1	6.25	6.4	6.01	locations. However, the targets for		
									year four have not been met.		
Average level of male domination of household	0.84	SL	0.75	0.53	0.68	-0.55	0.61	0.14	Positive progress made on this		
decision-making on resources, assets, and finances in									indicator, with the targets surpassed.		
male-headed households	-2.2	Bnd	-1.94	0.49	-1.74	-1.04	-1.57	-0.59			
Outcome 5: Improved management of natural resources an	d CBDM	processe	es for 25 co	mmunities	in Somalila	nd	_	_	-		
% of target communities with a functional community	0	SL	12	20	24	24	40	40	Targets achieved		
disaster management system in place (%)	0	01		2.0	2.0	2.0	0.5	0.0			
Soli erosion ieveis (Metres)	0	SL	4	3.9	3.2	3.0	2.5	2.0			
Very good performance (Target surga	assed)		S	atisfactory	performar	nce, with	mixed		Target not achieved		
Key	,		re	sults and s	ome limitati	ons					

Table 1: SPHERE Programme Annual Result Indicators

¹⁶ CW and IA, *IAPG-FER*, p. 26.

Literature Review

Over the course of the 21st century, the link between security and development has gained prominence in both academic and policy-making settings and has increasingly focussed on the complex challenges and insecurities related to climate change.¹⁷ Academic literature on the security-development nexus have proposed a variety of understandings to resolve cycles of environmental degradation and insecurity. Stern and Öjendal (2012) state that the nexus 'creates a double bind where security and development mutually reinforce each other' but when neither are attainable, the mutuality crumbles and the nexus becomes dysfunctional.¹⁸ Yet, unlike food, violence or energy, water poses a threat to human populations both in its presence and its absence.¹⁹ Achieving water security therefore involves 'both harnessing the productive potential of water and limiting its destructive impact' on local communities.²⁰ Grey and Sadoff (2007) define water security as the 'availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems and production, coupled with an acceptable level of water-related risks to people, environments and economies'.²¹ Literature on water management has generally emphasised the agency of institutional actors to tackle the conditions causing food and water insecurity. Mourad (2020) argues that the water sector needs 'coordination and cooperation among its different actors and stakeholders' through the establishment of a water compact that can affirm commitments through a five-year plan in order to tackle water insecurity.²² This view is shared by Somaliland ministerial officials such as Aidarius Muse and Abdi-Karim Omar from the MoERD who have expressed that

¹⁷ R. Amer, A. Swain, and J. Öjendal (eds.), *The Security-Development Nexus: Peace, Conflict and Development* (London: Anthem Press, 2012), pp. 14-15.

¹⁸ Amer, Swain and Öjendal, *The Security-Development Nexus*, p. 26.

¹⁹ David Grey and Claudia W. Sadoff, 'Sink or Swim? Water Security for Growth and Development', *Water Policy* 9(6) (2007), 545–571 (p. 547).

²⁰ Grey and Sadoff, 'Sink or Swim?', pp. 545-547.

²¹ Grey and Sadoff, 'Sink or Swim?', pp. 547-548.

²² Mourad, 'A Water Compact for Sustainable Water Management', p. 13.

institutional decentralisation has caused longevity issues, such as some sustainability initiatives only being temporary rather than generational, and that the lack of higher-level stakeholder coordination has caused implementation overlaps in target communities.²³ Since 2002, the FAO-SWALIM programme has been providing ministries and INGOs in Somaliland with 'up-to-date information on the scope, extent, quality, and quantity' of water and land resources in order to strengthen institutional capacity, foster an inter-ministerial strategy and provide resources to strengthen and develop institutions.²⁴ The programme has also recently been developing a new Information Management Centre (IMC) which enlists one officer from each ministry in Somaliland in order to promote inter-ministerial cooperation.²⁵ Land Resource Officer and SWALIM focal point, Ali Ismail, stated that the recent handover of the IMC to the government will enable the ministries to assume control of SWALIM's coordination role and build upon its legacy of information and expertise after FAO has exited Somaliland.²⁶

Research Aims and Purpose

The primary aim of the dissertation is to assess the impact of NRM projects and SHGs on climate-resilience, livelihood-resilience and gender dynamics in Somaliland. The paper argues that climate-smart, community-led interventions are key to (1) mitigating the environmental and socioeconomic effects of climate change and (2) capacity-building local communities to improve local livelihood resilience and gender equality. The United Nations Academic Impact (UNAI) defines capacity-building as 'the process of developing and strengthening the skills, instincts, abilities, processes and resources that organisations and

²³ See Appendix B, Transcript 5.

²⁴ ReliefWeb, 'EU and FAO handover a new Water and Land Information Management Centre to Government of Somalia in Puntland', *United Nations Office for the Coordination of Humanitarian Affairs (OCHA)* (7 Dec 2021). [Press Release]. Available at: <u>https://reliefweb.int/report/somalia/eu-and-fao-handover-new-water-andland-information-management-centre-government</u> [Accessed 07/08/2022].

²⁵ See Appendix C, Transcript 1.

²⁶ See Appendix C, Transcript 1.

communities need to survive, adapt, and thrive (...)'.²⁷ The dissertation will seek to provide capacity-building solutions which are attentive to both gender and environment in the target districts of Borama and Gabiley. To these ends, the paper will explore four research aims, each linked to a section of the dissertation, in order to address the main research question:

To what extent can capacity-building interventions confront the challenges arising from climate change in Somaliland?

- 1. Analyse the impact of rain-fed water interventions and WASH initiatives on local livelihoods, migration patterns and hygiene conditions.
- 2. Assess the effectiveness of soil conservation and regeneration NRM strategies in improving ecological restoration and arable land reclamation, and the expediency of 'climate-smart' agricultural training on local livelihoods and climate-resilience.
- 3. Investigate the cross-cutting benefits of afforestation initiatives for local ecosystems and livelihoods.
- 4. Consider how Self-Help Groups (SHGs) are changing local gender dynamics, liberating women's time, improving women's socioeconomic status and contributing to livelihood resilience to environmental and economic shocks, and the impact of synergies with NRM projects.

Methodology

The dissertation will employ an impact assessment in order to determine the efficiency, sustainability and expediency of NRM interventions and women's empowerment initiatives in Somaliland. In addition, semi-structured elite interviews, conducted with key informants from Concern and the Ministry of Environment and Rural Development, will supplement the

²⁷ United Nations Academic Impact (UNAI) (2022), 'Capacity-Building'. Available at: <u>https://www.un.org/en/academic-impact/capacity-</u>

building#:~:text=Capacity%2Dbuilding%20is%20defined%20as,in%20a%20fast%2Dchanging%20world [Accessed: 5 August, 2022]

analysis with qualitative data. The analytical framework consists of two forms of impact assessment, namely an *ex post* impact assessment and a gender impact assessment:

The ex post impact assessment will use the Results-Based Management (RBM) approach outlined in the 2030 Agenda for Sustainable Development Sub-Fund provided by the United Nations Peace and Development Trust Fund (UNPDF). The RBM approach is a management strategy used by programme/project managers to evaluate a project's 'outputs, outcomes and higher level goals or impact'.²⁸ Evaluation forms an integral part of the RBM strategy which uses five criteria to examine implementation chains, processes, contextual factors and causality.²⁹ The five criteria are related to a project's relevance, coherence, effectiveness, efficiency, impact and sustainability, and are used to inform the decision-making processes of organisations and stakeholders.³⁰ The dissertation will employ an *ex post* impact assessment which 'aims to understand to what extent and how an intervention corrects the problem it was intended to address'.³¹ For this reason, the analysis will only utilise the efficiency, impact and sustainability criteria in the assessment process: (1) efficiency analyses the progress towards the projects objectives along a causal pathway; (2) impact is concerned with 'the extent to which the intervention has generated significant positive or negative, intended or unintended, higher-level effects'; and (3) sustainability relates to 'whether the positive outcomes of the project (...) are likely to continue after the intervention'.³² Evaluation of the three criteria will also feed into the gender impact assessment which analyses the synergies of SHGs with NRM projects.

²⁸ UN Peace and Development Fund (UNPDF), 2030 Agenda for Sustainable Development Sub-Fund: Evaluation Framework (New York: UNPDF, 2016), 1-16 (p. 2).

²⁹ UNPDF, *2030 Agenda*, p. 4.

³⁰ UNPDF, 2030 Agenda, pp. 4-9.

³¹ OECD, 'What is Impact Assessment?', in *OECD Directorate for Science, Technology and Innovation*, 'Assessing the Impact of State Interventions in Research – Techniques, Issues and Solutions' (2014) [unpublished manuscript], 1-7 (p. 1).

³² UNPDF. 2030 Agenda, pp. 7-9.

Word count: 10,041

The gender impact assessment will use the 'Gender Impact assessment and Monitoring (GIM) tool', developed in the framework of the UN Women 2030 project by the Women Engage for a Common Future (WECF), in order to assess the impact of SHGs on local gender dynamics and livelihoods.³³ The GIM tool is intended for civil society organisations, policymakers and researchers to monitor the impact on women and marginalised groups, assess gender dynamics and both women's and men's needs, and generate transformational change by shifting discriminatory gender norms.³⁴ The GIM consists of seven thematic areas: (1) division of labour between men and women, (2) access to power and control over resources, (3) gender based violence, (4) recognition of differentiated needs/women's health, (5) decision-making ability, (6) status of men and women before the law and (7) most marginalised groups.³⁵ For the purpose of the dissertation, the gender impact assessment will only analyse the impact of the initiatives using the first five thematic areas. Moreover, the analysis will use the Sustainable Development Goal 5: Gender Equality, as a baseline for the analysis. Employing the first five thematic areas in the analysis will allow the dissertation to assess the expediency and efficiency of gender equality and women empowerment in the context of building local resilience and capacities against climate change.

The semi-structured elite interviews were conducted in Hargeisa from 24-28 July and included the participation of three technical staff from Concern Worldwide, consisting of a WASH engineer, NRM project officer and SHG project officer, as well as a land and resource officer from FAO-SWALIM, the director of planning and a technical adviser from the Ministry of Environment and Rural Development. The interviews were semi-structured in order to encourage dialogue and increase flexibility8 using a topic-based question guide divided into four stages per topic area: (1) the context and problematic of the specific

³³ WECF, The Gender Impact Assessment and Monitoring (GIM) Tool (WECF: München, 2019), p. 7.

³⁴ WECF, *GIM Tool*, pp. 7-8.

³⁵ WECF, *GIM Tool*, pp. 12-21.

project/programme, (2) a central *prima facie* question, (3) a set of sequent questions, and (4) an opportunity for the informant to address the future of the project/programme and any interview omissions.³⁶ The interviews will be used to supplement the two impact assessments with qualitative data.

Structure

The dissertation is divided into two chapters: the first chapter forms the ex post impact assessment of NRM projects using the RBM approach and consists of three sections analysing Concern water interventions in the districts of Gabiley and Borama. The first section analyses the impact of boreholes and berkeds to provide a safe and sustainable source of water. The second section explores the resilience-building effects of soil conservation and restoration techniques on local ecosystems and livelihoods, as well as the impact of 'climatesmart' agricultural training on local communities' resilience to environmental and economic shocks. The third section assesses the added benefits from afforestation on local ecosystems and livelihoods. The second chapter will use the GIM tool in a gender impact assessment to consider the expediency of Self-Help Groups (SHGs) to change local gender dynamics, empower women's livelihoods, and have trickle down effects for the larger community. In particular, the ways in which SHGs have promoted equal work opportunities, provided access and control over resources, resolved gender-based violence, considered women's differentiated needs, and increased women's decision-making capabilities. The gender assessment will also analyse the synergies with NRM projects to identify how women's engagement and socioeconomic empowerment improves community resilience to climateinduced insecurities.

³⁶ G. Thomas, *How to Do Your Research Project: a Guide for Students in Education and Applied Social Sciences*, Second ed. (London: SAGE, 2013), pp. 198-199.

Chapter 1: Ex post Impact Assessment

Section 1: Water Catchment and Storage Projects

The prolonged drought in Somaliland comes as a result of erratic ENSO rainfall patterns exacerbated by climate change, and has caused both water shortage and flooding in Somaliland. A UNICEF survey conducted in 2015 has shown that only 56% of households in Somaliland have access to safe drinking water and that it still takes, on average, over 30 minutes to reach the nearest water source, which can potentially be contaminated by nearby livestock and human waste.³⁷ Water resources for people and ecosystems are closely linked to rain-fed sources sustained by rainwater runoff (blue water) and soil moisture (green water).³⁸ Groundwater sources in Somaliland are dependent on localised aquifers and require external expertise, materials and funding. Rain-fed water catchment and storage methods have proven to be a more cost-effective and sustainable method by capturing and storing rainwater run-off instead of relying on localised, hard-to-reach, subterranean water sources. The implementation and maintenance of both these interventions involve engagement between communities, organisations/companies and government, often through Private-Public Partnership (PPP).³⁹ The third outcome of Concern's SPHERES programmes aims to improve 'access to safe drinking water, sanitation facilities and adoption of hygiene practices' by constructing or renovating major community level water sources in at least 5 locations in Somaliland.⁴⁰ This has involved the construction of berkeds for water catchment and storage, construction of household latrines, and local training from WASH staff. The berkeds vary in size depending on the target communities, but on average hold 250 cubic metres of water and function as an annual water supply by catching excess rainwater runoff

³⁷ FGS, DINA, p. 85.

³⁸ Cook, *Drought*, p. 106.

³⁹ See Appendix C, Transcript 2.

⁴⁰ CW and IA, *IAPF Proposal II*, p. 16.

in underground concrete tanks during the rainy season from February to June for sustained storage throughout the dry season from October to September (see figure 2).⁴¹ Considering the effectiveness, impact and sustainability of berked projects in nearby villages involves answering a set of questions: How effective are berkeds at capturing water runoff? To what extent have WASH measures and training helped improve local sanitary conditions? In what ways has the construction of water-catchment facilities influenced local livelihoods and regional migration patterns? How sustainable are these interventions? How has the introduction of a fee-based system in Borama lessened berkeds maintenance and reparation dependencies?

Effectiveness

Annual indicators of the percentage of households with safe drinking water, sanitation facilities and sanitary practices in the target villages have shown mixed results. The baseline indicator for the effectiveness of water access was set as 12.1% of households at the beginning of the programme in 2017. Progress has been varied since then: the second year results were 6%, failing the target of 13.9%; the third year results were 21.1%, succeeding the goal of 16% that year; and the fourth year results were 12.3%, failing the target of 18.4%.⁴² Concern attributed the failures of reaching the target goals in the second and third years to delayed rainfall in April which was due to climate change prolonging periods of drought in the region.⁴³ In addition, indicators show that the percentage of households using improved sanitation facilities that are no more than 50m away have had limited effect and were unable to reach their annual goals in each consecutive year.⁴⁴ These setbacks are attributed to stakeholder overlaps; reports indicate that while Concern supported CLTS' constructing

⁴¹ CW and IA, *IAPG-FER*, p. 22.

⁴² See Appendix B, Table 1.

⁴³ CW and IA, *IAPG-FER*, p. 23.

⁴⁴ See Appendix B, Table 1.

sanitation facilities themselves, other stakeholders were building latrines for free which disincentivises the targeted households from adopting the approach.⁴⁵ Intervention effectiveness was also reported to depend on household incomes, with less affluent households prioritising water use over waste disposal.⁴⁶

Impact

The construction of berkeds has had a significant impact on local livelihoods. Households were allocated two 20 litre jerrycans per day for their daily needs and were taught to follow seasonal calendars in order to use the water catchment and storage facilities efficiently during the dry season to avoid water shortage.⁴⁷ Berked projects have facilitated the utilisation of water in the target villages which has reportedly been appreciated by the locals when seeing the benefits to their livestock, drinking water and time spent gathering water.⁴⁸ Seasonal water replenishment and storage has increased local resilience to climate-induced shocks by extending the water accumulated during the rainy season for use into the dry season. Furthermore, Concern and other organisations are in the process of constructing larger earth dam projects which are designed to capture larger amounts of surface runoff. Concern is finalising construction of one such project in Oodweyne, which will be able to hold 12,000 cubic metres of water.⁴⁹ WASH Engineer, Harun Emukule, from Concern explained that 'if it rains [enough to fill the dam], a community will never have problems with water [throughout both the rainy and dry seasons]'.⁵⁰ The project is still in its infancy but is expected to greatly

⁴⁵ CW and IA, *IAPG-FER*, p. 24.

⁴⁶ CW and IA, *IAPG-FER*, p. 24.

⁴⁷ CW and IA, *IAPG-FER*, p. 23.

⁴⁸ CW and IA, *IAPG-FER*, p. 23.

⁴⁹ See Appendix C, Transcript 2.

⁵⁰ See Appendix C, Transcript 2.

reduce rural communities' water insecurities and allow for sustained water utilisation

throughout the whole year.

Figure 2: Berked in Shirwac village, Borama district. Photo taken by Eamon Timmins/Concern Worldwide.



Due to the communities' pastoralist livelihoods, water storage has been used for both human and livestock consumption which can carry the risk of faecal-oral disease transmissions. Mafuta, Zuwarimwe and Mwale (2021) state that rural communities are especially prone to disease outbreaks, maternal mortality and undernutrition due to unsanitary practices, such as contaminating water supply with livestock and human waste, and argue that initiatives must construct separate latrines and water storage facilities for local households to tackle the unsanitary conditions.⁵¹ Concern constructs the berkeds with guidance from the Ministry of Water Resource Development (MoWRD) to assure physical and chemical safety, but also consults with local villagers on where to construct latrines, adjusting for proximity to water

⁵¹ Wonder Mafuta, Jethro Zuwarimwe, and Marizvikuru Mwale, 'Universal WASH Coverage; What It Takes for Fragile States. Case of Jariban District in Somalia', *PloS One* 16(2) (2021), 1-11 (p. 9).

sources, households, livestock and where women feel the most safe.⁵² They have further sought to mitigate contamination risks by conducting routine annual water quality tests, distributing emergency aquatabs and creating local water management committees where WASH trained volunteers promote using water points to 'sensitise users on safe hygiene practices to reduce public health-related diseases'.⁵³ The success of WASH training and knowledge is evident by the annual indicators from the third outcome of the SPHERES programme (see Table 1).⁵⁴ These risk mitigations ensure sanitation measures are at safe levels in the water catchment facilities despite the unintended effects of water utilisation in pastoral contexts.

Construction of water facilities has reduced the risk of displacement, but has also become an incentive for migration. Migration is a way of life for many pastoralist communities in Somaliland, and is characterised by 'a subsistence economy, trade to procure necessities not domestically produced, and transhumance to adapt to cycles of climate in search of "green pastures".⁵⁵ During the implementation of the IDRISS project in 2017, the intervention was informed by hydrophysical surveys from the MoERD on suitable aquifers for boreholes and combined the metrics with local knowledge of animal migration patterns from lowland arid areas to greener highland areas, to find a suitable location for a borehole.⁵⁶ Harun Emukule stated that 'before construction there was no community in a 40km radius' but once the borehole was built along the animal migration route, a small settlement was able to grow around the water source.⁵⁷ This demonstrates that water interventions have the potential to

⁵² CW and IA, *IAPG-FER*, p. 24.

⁵³ CW and IA, *IAPG-FER*, p. 23.

⁵⁴ See Appendix B, Table 1.

⁵⁵ Joakim Gundel, 'The Migration-Development Nexus: Somalia Case Study', *International Migration* 40(5) (2002), 255–281 (p. 262).

⁵⁶ See Appendix C, Transcript 2.

⁵⁷ See Appendix C, Transcript 2.

not only mitigate the effects of climate change on displacement, but also encourage migration to more climate-friendly regions.

Sustainability

The sustainability of the water interventions are linked to the cost of maintaining the berkeds and latrines, in addition to the capacity of locals to replicate construction. Berked construction requires excavation for the water tank and building materials for the berked structure. Concern created a modality for cost-sharing in which communities are engaged in the excavation process whilst the organisation supplies the materials, such as iron sheers, wood and cement, for construction of the facilities.⁵⁸ This would help familiarise locals with the construction process and encourage community-led action. The location for the berkeds are informed by engagement with Village Development Committees (VDCs) and ministries to ensure a community approved location.⁵⁹ The same cost-sharing modality and skills training is applied to the latrines.⁶⁰ Both structures are overseen by a paid WASH engineer to ensure proper sanitary measures and overall architectural standards are met, although the latrines are also partly built by the locals who are provided on-job masonry skills training.⁶¹ This improves the communities ability to replicate and repair the facilities. The implementation of technical training and the cost-sharing modality has had a cumulative effect on communities maintenance capacities although field-observations have indicated that repair capabilities are limited, especially if external materials are required, and therefore often depend on Concern to arrange PPP engagement for maintenance of the berkeds and latrines.⁶²

⁵⁸ CW and IA, *IAPG-FER*, p. 24.

⁵⁹ CW and IA, *IAPG-FER*, p. 12.

⁶⁰ CW and IA, *IAPG-FER*, p. 24.

⁶¹ CW and IA, *IAPG-FER*, p. 23.

⁶² CW and IA, *IAPG-FER*, p. 23.

Conversely, water facilities in the district of Borama have been functioning autonomously since 2000, proving that locals have the capacities to sustain functionality of their berkeds and latrines. The NRM project officer, Mohamed A. Ibrahim states that the water interventions in Borama are able to sustain themselves without the assistance from the government or Concern to coordinate PPP for maintenance purposes.⁶³ This can largely be attributed to the effectiveness of a fee-based collection system, which generates funding for maintenance work through a water tax collector at the facility, combined with direct local engagement with market suppliers, as opposed to the services being provided and funded through INGOs.

Section 2: Soil Conservation and Restoration Projects and Climate-Smart Agricultural Training Schemes

Drought in Somaliland has caused extensive damage to land reserved for pastures and farmlands which pastoralists and agro-pastoralist depend upon to survive and prosper. Land degradation is defined as 'a sustained (...) loss of ecological productivity and ecosystem services' and can be caused by changes to soil property, vegetation, climate, or human activity such as excessive farming or overgrazing.⁶⁴ Degradation in drylands, such as in Somaliland, has a particularly severe impact due to marginal productivity levels and limited resource availability, and is classified as desertification by the United Nations Convention to Combat Desertification (UNCCD).⁶⁵ The fifth outcome of the SPHERES programme aims to 'improve the management of natural resources and CBDM processes' for communities in the districts of Gabiley and Borama.⁶⁶ Concern has used Community-Based Disaster Management (CBDM) in NRM implementation to combat the effects of desertification. This

⁶³ See Appendix C, Transcript 3.

⁶⁴ Cook, *Drought*, pp. 143-144.

⁶⁵ Cook, *Drought*, p. 143.

⁶⁶ CW and IA, *IAPG-FER*, p. 26.

has involved the construction of gabion check dams and soil bunds to control soil erosion and conserve soil moisture in areas impacted by drought and flooding. The CBDM also employs two forms of capacity-building mechanisms: (1) Cash for Work (CfW) schemes in which locals are given a monetary incentives to partly construct gabions and soil bunds, and (2) the 'Lead Farmer' approach which involves Concern agricultural experts teaching local farmers in Farmer Field Schools (FFSs) to use 'climate-smart' agronomic methods such as 'crop rotation, crop choices, contour farming, intercropping and mulching' to strengthen climate and livelihood resilience.⁶⁷ The CfW schemes enlists both women and men from the community, whilst the Lead Farmer approach involves supporting members of the community who are regarded as being an example based on their skills and inputs, and then the Lead Farmers share their knowledge, causing a cascading epistemic effect to others in the community. The majority of Lead Farmers are usually men since women are traditionally excluded from farming practices.⁶⁸ Analysing the socioeconomic and environmental impact of these interventions involves considering a set of questions: How effective are soil bunds at conserving rainwater runoff? How cost-effective are these interventions? What effects have soil bunds had on local livelihoods and climate-resilience? How effective have gabion check dams aided in reclaiming land lost to soil erosion? To what extent have climate-smart agricultural techniques helped make local farmers more resilient to economic and environmental shocks?

Effectiveness

Annual indicators have shown that CBDM-NRM interventions have achieved their targets in the last four years with notable success for 25 communities in Somaliland. The baseline indicator for the percentage of households with functioning CBDM systems was set at 0% at

⁶⁷ CW and IA, *IAPG-FER*, p. 29.

⁶⁸ CW and IA, *IAPG-FER*, p. 23.

the beginning of the programme in 2017 whilst successive annual targets from 2018, 2019 and 2020 increased from 12%, 24%, and 40% respectively.⁶⁹ The soil conservation and restoration projects succeeded in achieving their set targets every year: 20% of households had a system in the second year and implementation in the third and fourth were just able to reach the successive targets of 24% and 40%.⁷⁰ Qualitative results from the agricultural training schemes are mixed, but have shown epistemic progress overall. The initial Lead Farmer aspiration to foster a knowledge-building 'snowballing effect', where 'training one person would lead to getting a number of community members on board', was shown to be too ambitious and the FFSs could have been more effective if the farmers had more time and staff guidance to get accustomed to the new NRM techniques and FFS crops.⁷¹

Figure 3: Gabion check dam in Korji village, Gabiley district. Photo taken by Mohamed A. Ibrahim/Concern Worldwide.



⁶⁹ See Appendix B, Table 1.

⁷⁰ See Appendix B, Table 1.

⁷¹ See Appendix C, Transcript 3.

Impact

Land reclamation and protection involves using NRM techniques to capture 'blue water' rainwater runoff and retain 'green water' soil moisture in farmlands impacted by desertification and soil erosion. These techniques are used through CBDM implementation and are divided into two components: (1) soil restoration and (2) soil conservation measures. Soil restoration measures involve constructing gabion check dams in gullies to prevent exorbitant water from flooding in the soil and accumulate sediment behind the stratified gabions in order to steadily rebuild the eroded land to pre-flood levels (See figure 3).⁷² These dams contribute to facilitating land reclamation and mitigate gully development, increasing vegetation levels, arable land use and productivity.⁷³ Soil conservation measures include the development of soil bunds around fields to help retain 'green water' soil moisture levels and reduce water run-offs from farmlands, thereby enhancing land productivity and resilience to water scarcity.⁷⁴ Both NRM interventions have yielded significant agricultural and socioeconomic benefits to the local communities. Concern agricultural expert, Mohamed Ibrahim, stated that the soil bunds have led to better grain quality and has increased crop quantity significantly since their construction, as can be seen by the soil bund in Korjii village in the Gabiley District (See figure 2).⁷⁵ The Lead Farmer approach complements these NRM techniques by teaching communities how to use crop rotation, contour farming and mulching to increase soil fertility, and plant diversification and intercropping to increase crop saleability and climate resilience.⁷⁶ Combined, soil restoration and conservation techniques have strengthened the foundations for agricultural production by reclaiming land lost to erosion and conserving rainwater run-off, whilst agricultural training has strengthened

⁷² See Appendix A, Figures 2 and 3.

⁷³ CW and IA, *IAPG-FER*, p. 26.

⁷⁴ CW and IA, *IAPG-FER*, p. 26.

⁷⁵ CW and IA, *IAPG-FER*, p. 26.

⁷⁶ CW and IA, *IAPG-FER*, p. 26.

farmers' capacities to respond to climate- or economic- induced shocks through adoption of 'climate-smart' practices which boost soil fertility, crop saleability and resistance to drought. The community-led aspect of the CBDM process has contributed to the intervention's sustainability.

Figure 4: Gully view of gabion check dams in Satiile, Borama district. Photo taken by Mohamed A. Ibrahim/Concern Worldwide.



Sustainability

The Cash for Work (CfW) schemes in NRM implementation combined with Lead Farmer training have proven to have epistemic and economic benefits which has helped strengthen the sustainability of targeted communities. Gabion check dams and soil bunds have proven to be a cost-effective and relatively simple solution to combat soil erosion because the interventions can be replicated by hand using local sourced materials such as soil and stones and can be shared between 2-3 farms.⁷⁷ Through the CfW scheme, locals construct 15% or

⁷⁷ CW and IA, *IAPG-FER*, p. 28.

six-seven metres of the gabions or soil bunds themselves, and are involved in every step of the construction process in order to sensitise them to the techniques and ensure they can maintain and replicate the interventions.⁷⁸ These results are epitomised in Satiile village in the Borama district where locals have said that participation in the programme has been a 'game-changer' for the community, who can now construct the soil bunds and gabions without tractors or outside help in order to reclaim and rejuvenate their land lost to desertification (see figure 4).⁷⁹ The addition of FFS training has also been useful to locals in Satiile, who stated that agronomic training has bolstered crop output and increased household incomes for local communities.⁸⁰ This demonstrates that the CfW schemes within NRM interventions in tandem with FFS training have had an epistemic, capacity-building effect on local communities, enabling them to sustain and replicate the interventions themselves.

Figure 5: Soil bund after the rainy season in Korji village, Gabiley district. Photo taken by Mohamed A. Ibrahim/Concern Worldwide.



⁷⁸ See Appendix C, Transcript 3; CW and IA, *IAPG-FER*, p. 26.

⁷⁹ CW and IA, *IAPG-FER*, p. 26.

⁸⁰ CW and IA, *IAPG-FER*, p. 26.

Mohamed Ibrahim also explains that CBDM Committees are taught how to draft community action plans for disaster mitigation, preparedness and contingency.⁸¹ This enables communities to subjectively assess the level of risk to their communities by climate change and autonomously coordinate the resources available, locally or externally, to mitigate, prepare or respond to extreme weather events. This further strengthens community climate resilience and autonomous capabilities.

Section 3: Afforestation Initiatives

Vegetation plays an important role in mitigating the effects of environmental degradation in their ecosystems but are also victims of climate change and anthropogenic expansion. Similar to the security-development nexus, the symbiotic relationship between habitats and their occupants are mutually reinforcing and destructive; deforestation increases soil erosion and desertification levels which, in turn, causes more environmental degradation.⁸² Deforestation is particularly devastating because it also induces changes to regional weather patterns. This occurs in three principle ways: (1) bare soil exposure raises atmospheric stability, inhibiting regional precipitation and convection; (2) loss of deep roots hinders 'green water' moisture levels from reaching the atmosphere, reducing precipitation recycling rates; and (3) reduced canopy coverage limits the amount of water absorbed through leaves and increases wind turbulence, thereby reducing precipitation rates.⁸³ For this reason, planting trees and shrubs is crucial to mitigating the effects of extreme weather in vulnerable rural communities. Considering the cross-cutting benefits to afforestation initiatives benefited local resistance to climate-

⁸¹ See Appendix C, Transcript 3.

⁸² Cook, *Drought*, p. 157.

⁸³ Cook, *Drought*, p. 157-158.

induced insecurities? What other benefits do trees provide local communities and ecosystems? How has the introduction of foreign tree species benefited local communities?

Efficiency

Afforestation measures form part of Concern's NRM techniques in the aforementioned fifth outcome of the SPHERES programme. This has involved planting sisal in gully-affected areas to combat soil erosion and around berkeds to increase evapotranspiration and decrease wind turbulence.⁸⁴ Qualitative data shows that these afforestation measures have been successfully implemented and adopted in the CBDM process. Mohamed Ibrahim states that Concern has contributed to planting of 10,000 sisal plants in 2022 with the help of local communities through CfW in CBDM implementation.⁸⁵ Conversely, Concern has also documented farmer opposition to afforestation because they would rather use the space for farmland.⁸⁶ In the NCCP, the MoERD aims to provide communities with saplings for afforestation measures reclaiming land lost to erosion, and create forest reserves to conserve biodiversity and seasonal rangeland reserves for local livestock.⁸⁷ By 2022, the ministry has established eight forest reserves and five seasonal rangelands, which are defended by 400 range/forest guards and legally protected by the Forest and Wildlife Act 69/2015 to deter and penalise poaching, deforestation and overgrazing.⁸⁸ Semi-quantitative data has shown mixed results: the MoERD has produced and distributed 820,000 saplings which had a planting success rate of 70% in targeted communities; and the forest and seasonal rangeland reserves

⁸⁴ CW and IA, *IAPG-FER*, p. 26.

⁸⁵ See Appendix C, Transcript 3.

⁸⁶ See Appendix C, Transcript 3.

⁸⁷ GoSL, NCCP, p. 32.

⁸⁸ GoSL, *Strategic Plan 2021-2025*, p. 8.

have been successful at restoring forests and seasonal grazing levels, but have come into conflict with pastoralist private enclosures.⁸⁹



Figure 6: MoERD sapling growing facilities. Photo taken on placement by the candidate.

Impact

Afforestation measures have had resilience-building benefits to the local environment and targeted communities. The planting of sisal has successfully reclaimed land lost to soil erosion and helped retain 'green water' moisture levels in the surrounding areas, leading to further increases in vegetation levels.⁹⁰ Planting around berkeds has also had the lessened evaporation rates by providing shade and windbreak for the catchment component, leading to additional benefits such as the creation of micro-biomes for insects and fauna, and increased

⁸⁹ GoSL, *Strategic Plan 2021-2025*, p. 12; see Appendix C, Transcript 5.

⁹⁰ CW and IA, *IAPG-FER*, p. 26.

evapotranspiration rates from plants and capturing carbon from the atmosphere.⁹¹ Afforestation has also led to socioeconomic benefits for target communities. Sustainable forestry has provided households with wood for construction, fibre for rope, and cash crops such as mango and dates.⁹² Other communities in Somaliland have also been provided with eucalyptus saplings from Australia by the MoERD, which are drought resistant and provide locals with a source of income from eucalyptus oil.⁹³ Afforestation has had a net-positive impact on local environments and community livelihoods by stabilising soil levels, decreasing catchment evaporation, increasing precipitation and, in some cases, providing a source of income from eucalyptus and fruit trees. Overall, this has contributed to strengthening resilience against climate and economic induce shocks from drought.

Sustainability

Planting trees is a cost-effective and self-regenerating solution to hinder soil erosion. Seeds are nurtured at MoERD sapling growing facilities before being distributed for a small fee to target communities who can then learn to plant the trees in the gully-affected areas through the CBDM approach (See figure 4).⁹⁴ In Concern's interventions, the organisation ensures the interventions can be replicated and sustained by locals by providing guidance and teaching on where to plant the sisal, as well as by changing perceptions to ensure sustainable practices and hinder rampant deforestation.⁹⁵ The minimal expertise and costs required improves the interventions sustainability. In the government programme, tree propagation is intended to occur through seed dispersion and takes no involvement from the local community. This makes the interventions self-regenerating as long as the trees are left untouched. That being

⁹¹ See Appendix C, Transcript 2.

⁹² See Appendix C, Transcript 2.

⁹³ See Appendix C, Transcript 2.

⁹⁴ See Appendix C, Transcript 2.

⁹⁵ See Appendix C, Transcript 3.

said, extreme weather has increased risks of wildfires and cyclones which have disrupted the continuity of the initiatives.

Chapter 2: Gender Impact Assessment

Section 1: Self-Help Groups (SHGs) and NRM Synergies

The climate change induced security-development nexus has been shown to have a geophysical impact which has far-reaching implications for pastoral and agro-pastoral communities. In Somaliland, women have historically been excluded from the economic and political spheres of men due to cultural norms and values. The clan-based social structure has effectively excluded women from formal politics on presumptions of clan loyalty due to marriage, and the patriarchal nature of the system has curbed women from economic and agricultural activities.⁹⁶ This lack of inclusion has lessened women's 'capacity to adapt to climate change' by limiting their access to resources 'including land, credit, agricultural inputs, decision making bodies, technology and training services'.⁹⁷ The distribution of responsibilities has also influenced women's involvement in Income Generating Activities (IGAs). Women are often responsible for gathering water and firewood, which can involve trekking sometimes tens of kilometres to the nearest source of water or spending up to three hours fetching firewood.⁹⁸ The time consumption of these activities has constrained women's involvement in local economic and political spheres, and needs to be liberated and mobilised in order to enhance communities resistance to climate-induced insecurities and, ultimately, leave communities able to cope with climate challenges by themselves.

⁹⁶ Hansen and Bradbury (2007), cited in Jami Nelson-Nuñez and Christopher Cyr, 'Women's Work in Fragile States: Evidence from a Firm-Level Dataset in Somaliland', *Social Politics: International Studies in Gender, State & Society* 26(3) (2019), 419–443 (p. 424).

⁹⁷ E.N. Ajani, E.A. Onwubuya and R.N. Mgbenka, 'Approaches to Economic Empowerment of Rural Women for Climate Change Mitigation and Adaptation: Implications for Policy', Journal of Agricultural Extension 17(1) (2013), 23–35 (p. 25).

⁹⁸ Ajani, Onwubuya and Mgbenka, 'Approaches to Economic Empowerment of Rural Women', p. 25.

Section 1: Self-Help Groups (SHGs) and NRM Implementation Synergies

The OECD states that 'empowering women and girls and strengthening gender equality in fragile settings can help transform vicious circles into virtuous ones, supporting inclusive societies, sustainable peace and development'.⁹⁹ Community consultation and participation is woven into multiple aspects of the SPHERES programme' planning, implementation and exit strategies in order to give locals 'more control over issues affecting their lives' and cumulatively strengthen endemic resilience to economic and environmental induced shocks.¹⁰⁰ The fourth outcome of the SPHERES programme aims to 'increase [the] participation and influence of women and men from marginalised groups in leadership and decision-making at household and community level in target districts in (...) Somaliland'.¹⁰¹ SHGs play a key role in achieving this aim, and were established with the purpose of 'empower[ing] women as well as hold[ing] duty bearers in the community to account' to increase women's economic opportunities and promote gender equality in targeted communities.¹⁰² SHGs function in two principle ways: firstly, as a capacity-building mechanism providing training sessions transferring leadership and basic entrepreneurial skills to local women; and secondly, as a gender equality promoting platform conducting routine awareness sessions to encourage inter-gender dialogue to alter gender dynamics.¹⁰³ SHGs have also experienced synergies with mechanisms in NRM projects, namely through the CfW schemes and, to a lesser extent, Lead Farmer aspects of the interventions. Evaluating the expediency of the SHGs and the synergies with NRM interventions requires investigating the five GIM criteria: In what ways have NRM synergies impacted gender roles and local

⁹⁹ OECD, 'Gender Equality and Women's Empowerment in Fragile and Conflict-Affected Situations: A Review of Donor Support', *OECD Development Policy Papers 8* (2017), 1-104 (p. 5).

¹⁰⁰ CW and IA, *IAPG-FER*, p. 3.

¹⁰¹ CW and IA, *IAPG-FER*, pp. 7-8.

¹⁰² CW and IA, *IAPF Proposal II*, p. 4.

¹⁰³ CW and IA, IAPF Proposal II, pp. 13-17.

division of labour? How has access to proximate water sources and skill-based training sessions impacted women's time-management and socioeconomic statuses? What measures have Concern taken to address gender-based violence? How have WASH initiatives and household consultation raised awareness and satisfied women's differentiated needs and health? To what extent have awareness sessions helped change local gender norms and increase women's decision-making capabilities?

Division of Labour Between Men and Women

Changing traditional divisions of labour between men and women in rural communities in Somaliland can be supported by providing women with equal employment opportunities and skill-based training. Studies have shown that division of labour can decrease rural communities ability to confront climate-induced insecurities. Ajani, Onwubuya and Mgbenka (2013) argue that women's livelihoods in rural settings are more susceptible to climate change than men due to their role in 'harvesting and preparing food, gathering firewood for fuel, [and] collecting water' which becomes more time consuming as extreme weather becomes more acute.¹⁰⁴ The construction of berkeds and boreholes has greatly reduced the time spent gathering water, which has provided women with more time for more productive IGA.¹⁰⁵ Field-reports from CBDM implementation has shown that men tend to be employed more often in CfW schemes due to the heavy manual labour involved, but also that husbands register their wives as the recipient of the cash transfers.¹⁰⁶ Whilst manual labour jobs continue to be dominated by men, the change in financial responsibilities shows that women have gained more control of household finances and that the scheme has succeeded in influencing gender roles. The Lead Farmer initiative has also experienced some

¹⁰⁴ Ajani, Onwubuya and Mgbenka, 'Approaches to Economic Empowerment of Rural Women', p. 25

¹⁰⁵ CW and IA, *IAPG-FER*, p. 23.

¹⁰⁶ CW and IA, *IAPG-FER*, p. 25.

improvements to labour inequality. Women were empowered to participate in agricultural activities as a result of the FFSs, such as growing cash crop vegetables, which is traditionally a male domain.¹⁰⁷ That being said, women were reported to be farming in home gardens whilst the men were engaged as the lead farmers on the larger fields, showing that these improvements were not able to fully tackle entrenched gender roles.¹⁰⁸ Although the synergies between SHG and NRM techniques failed to yield tangible improvements to labour divisions, the allocation of financial responsibilities from CfW schemes shows how women are increasingly gaining more independence from and trustworthiness with the men of the household.

Changing traditional divisions of labour also involves providing equal opportunities for employment and starting businesses. The UNDP estimates that more than 75% of employment opportunities in Somaliland are in the informal sector, which significantly reduces rural capabilities to find work or build a business without the proper connections or skills.¹⁰⁹ Concern has sought to address this issue through SHGs by providing women with a training package which includes business start-up grants and training which includes IGA management lessons and 9 months of literacy and numeracy classes.¹¹⁰ This has contributed to more women becoming breadwinners of their households, which SHG project officer, Ayanle Farah, says is being appreciated by the majority of men at the targeted households.¹¹¹

Concern ensures the SHG business sustainability by conducting biannual tracer surveys to estimate how well the businesses are performing and to inform the distribution of vocational training schemes.¹¹² Overall, entrepreneurial training has been successful at empowering

¹⁰⁷ CW and IA, *IAPG-FER*, p. 25.

¹⁰⁸ CW and IA, *IAPG-FER*, p. 25.

¹⁰⁹ UNDP (2014) in Nelson-Nuñez and Cyr, 'Women's Work in Fragile States', p. 429.

¹¹⁰ Concern, *IAPF II Proposal*, p. 9; pp. 13-14.

¹¹¹ See Appendix C, Transcript 4.

¹¹² Concern, *IAPF II Proposal*, p. 13.

women's employment opportunities which has led to increased IGA levels in SHG communities and epistemic spillovers, altering men's perceptions of women as capable breadwinners of the household.

Access to Power and Control Over Resources

Unequal access to power and control over resources has also been shown to reduce climate resilience. Women's lack of property rights and control over natural and economic resources means a community has fewer means and manpower to deal with climate change.¹¹³ Concern has sought to improve women's access to power and control over resources through SHG awareness sessions, access to SHG credit facilities, and involving women in micro, meso and macro levels of decision making processes. Awareness sessions have targeted gender-related attitudes at a household and communal level in order to empower women's role in decisionmaking but also to change attitudes regarding access to resources and distribution of labour. Concern has used the 'Engaging Men' approach during the sessions to change perceptions on labour divisions. Ayanle expressed that whilst changing perceptions has been hard due to their perceptions of masculinity and religious practices, the men have cooperated when letting women use farmland or start a business because they see the benefit to themselves and the household as a whole.¹¹⁴ This positive change is evident in the annual result indicators, which have shown that the 'average level of male domination of household decision-making on resources, assets, and finances in male-headed households' has decreased significantly, surpassing the target goals in every year of SHG implementation.¹¹⁵

¹¹³ Ajani, Onwubuya and Mgbenka, 'Approaches to Economic Empowerment of Rural Women', p. 25.

¹¹⁴ See Appendix C, Transcript 4.

¹¹⁵ See Appendix B, Table 1.
IGA management training has had a capacity-building effect on women in SHGs, allowing women to manage and mobilise SHG credit facilities.¹¹⁶ This has a significant effect on local women's access to power and control over resources in target villages because they are now able to initiate various income generating activities, pool their assets and make community level decisions on expenses and investments.¹¹⁷ Furthermore, Concern also provides a shariacompliant model for savings and loans for the SHGs, in order to enable the women to grow their savings.¹¹⁸ As heads of households or community leaders, women can provide different solutions and perspectives on local challenges related to climate change than men. Moreover, case studies have shown that women actually 'have a better understanding of the causes and consequences of climate change and have the knowledge and skills to mitigate and adapt to changing weather conditions' ¹¹⁹ During periods of drought, Concern staff have observed women in SHGs have reserved a portion of their business savings to help the wider community cope with the economic shocks from water scarcity. ¹²⁰ The development of a financial safety net for the larger community demonstrates that women in vulnerable settings tend to be more cautious and tentative to the risks associated with climate-induced insecurities. Moreover, it shows that IGA management through SHG implementation has provided women with access to power and control over resources and increased women's abilities to alter socioeconomic outcomes in their respective communities.

Gender Based Violence

Whilst SHG implementation has mostly received support from men in the households, some continue to cling to cultural and religious values which has caused resentment during SHG

¹¹⁶ CW and IA, *IAPG-FER*, p. 19.

¹¹⁷ CW and IA, *IAPG-FER*, p. 19.

¹¹⁸ Concern, IAPF II Proposal, p. 14.

¹¹⁹ Ajani, Onwubuya and Mgbenka, 'Approaches to Economic Empowerment of Rural Women', p. 26.

¹²⁰ Concern Worldwide (CW) and Irish Aid (IA), 'Strengthening the Poorest Household's Economy &

Resilience to Shocks (SPHERES)', IAPG II Mid-Term Review in Somalia/Somaliland (2019), 1-22 (pp. 12-13).

implementation. Concern has sought to address the risk of gender-based violence through its 'Engaging Men' approach in target communities and, when needed, requested intervention from local Conflict Management Committees (CMCs). Whilst attitudes have proven to be difficult to change, field observations indicate that progress has been made in the target communities. Ayanle has stated that domestic abuse incidents reported to the CMC have declined, constituting a small percentage of cases, and that overall, men have been appreciative of women contributing to the household income.¹²¹

Recognition of Differentiated Needs/Women's Health

Consideration of women's differentiated needs and health is also important in the implementation of capacity-building initiatives. Women's workforce participation has shown to be lower during menstrual cycles, which affects labour distribution, and lack of privacy near sanitary facilities can pose a risk to women's safety.¹²² Concern has sought to mitigate these risks and ensure women's disparate needs are met through its WASH package and consultation on the construction of latrines and berkeds. The WASH package includes menstruation provisions to provide women with a safe alternative to their hygienic needs, whilst consultation on the construction of latrines fitted with night lamps ensured that women have a safe and private sanitary space close to their households.¹²³

Decision-Making Ability

Concern has sought to empower women's decision-making capabilities through awareness sessions and inclusion in micro, meso and macro decision-making processes. Awareness sessions have targeted gender-related attitudes at a household and communal level and have

¹²¹ See Appendix C, Transcript 4.

¹²² Nelson-Nuñez and Cyr, 'Women's Work in Fragile States', p. 428.

¹²³ See Appendix C, Transcript 4.

shown mixed results. Annual indicators on the average scores relating to gender role attitudes have failed to exceed their targets in every year of implementation by a small margin.¹²⁴ Concern attributes the marginal results due to the inherent challenges imposed by the Covid-19 pandemic, which has affected the effectiveness of the awareness sessions due to lockdown restrictions. Nevertheless, reports show that awareness sessions have helped women gain leadership skills and status in decision-making processes at a household level which has gradually disseminated into community levels.¹²⁵

Concern also ensures women participate in higher levels of decision-making by facilitating joint attendance meetings and field days linking SHG members and farmers on a household level to VDCs on a communal level, and to district, regional and national authorities on a government level.¹²⁶ This not only directly improves women's access to power and control over resources, but also contributes to changing gender attitudes in various levels of society. Moreover, involvement in these power structures have cascading effects for women's empowerment. Encouraged by the prospects of gender equality, women are now nominated and represented in VDCs and, increasingly, take a leading role in household as well as communal affairs.¹²⁷ This demonstrates that, while the SHG has increased involvement of women in decision-making structures and has led to epistemic cascades which has acted as a catalyst for women's empowerment on communal and local levels.

¹²⁴ See Appendix B, Table 1.

¹²⁵ CW and IA, *IAPG-FER*, p. 25.

¹²⁶ CW and IA, *IAPF II Proposal*, p. 19.

¹²⁷ CW and IA, *IAPG-FER*, p. 25.

Conclusion

Climate change has caused extensive environmental degradation which has worsened the preexisting socioeconomic conditions in rural communities in Somaliland. The dissertation has demonstrated that Concern has not only sought to 'repair the bridge after someone falling in the water' but has also used capacity-building interventions to strengthen local resilience and sustainability, allowing communities to build and repair the proverbial bridge themselves. The SPHERES programme played an instrumental role in this endeavour by employing NRM techniques and SHGs to 'enhance the capacities of the extremely poor and vulnerable populations' in Somaliland.

The application of climate-smart NRM techniques through CBDM has had rejuvenating and resilience-building effects on local livelihoods and environments. Berkeds have increased local climate resilience by providing a sustainable source of water during the dry season, strengthened livelihood resilience by liberating women's time spent gathering water which provides more time for IGAs, and mitigated contamination risks from livestock and human waste through adoption of hygienic practices and latrine construction aided by WASH expertise and community consultation. Boreholes have also increased climate resilience, and have the potential to both mitigate risks of displacement but also incentivise migration to more climate stable regions. Gabion check dams have strengthened local climate and livelihood resilience by reclaiming, protecting and regenerating land lost to soil erosion, increasing arable land and reinforcing communities' agronomic foundations against economic shocks. Soil bunds have increased climate resilience by retaining soil moisture during periods of drought, which has had the added benefit of increasing livelihood resilience due to greater agricultural efficiency and crop output. Agronomics training in Farmer-Field Schools using the Lead Farmer approach have had a complimentary, capacity-building effect on communities employing soil bunds and gabion check dams. Climate-smart agricultural

techniques such as crop rotation, contour farming and mulching have increased soil fertility, crop output and livelihood resilience, whilst plant diversification and intercropping has increased crop saleability and communities' resistance to environmental and economic shocks. Afforestation has proven to have direct resilience-building benefits to communities with indirect elemental benefits to local ecosystems and weather. Planting trees in gullyaffected areas hinders soil erosion whilst trees around berkeds reduce evaporation by providing shade and windbreak. Teaching locals sustainable forestry practices has also increased livelihood resilience by providing households with a renewable source for wood for construction, fibre for rope, and fruit and eucalyptus oil for income generation. Furthermore, community learning through CfW and skill-based training schemes in the CBDM approach increased the renewability of the interventions, enabling locals to maintain and replicate NRM and agricultural techniques themselves without the expertise, funding or coordination from Concern.

The implementation of Self-Help Groups, and synergies with NRM interventions, has had a significant effect on gender dynamics and women's time utilisation, socioeconomic statuses, and livelihoods in target communities in Somaliland. SHG training packages and, to a lesser extent, CfW and FFSs, have had a net-positive effect on gendered divisions of labour. SHG entrepreneurial training providing business start-up grants, toolkits, IGA management lessons, and literacy and numeracy classes have improved women's socioeconomic statuses and livelihood resilience, contributing to more women becoming breadwinners in their households. Whilst men continue to dominate manual labour and farming professions, CfW schemes and FFSs have increased women's financial responsibilities on a household level and participation in agriculture on a communal level. Awareness sessions and IGA management training have improved women's access to power and control over resources. Awareness sessions have been successful at changing men's perceptions on traditional labour divisions

on a household level. IGA management training has had a capacity-building effect on women in SHGs, providing direct access to power and control over resources by equipping women with a platform to manage and mobilise SHG credit facilities. Furthermore, women have been shown to be more tentative and capable of responding to climate-induced insecurities by using credit facilities to help the wider community during periods of drought. The 'Engaging Men' approach and CMCs have reduced the risk of gender-based violence in target communities. Women's differentiated needs and health are assured by WASH packages including menstruation provisions, and consultation on the location of latrines fitted with night lamps ensure women have safe and private sanitary spaces close to their households. Women's decision-making opportunities and abilities have been strengthened through awareness sessions, providing leadership skills and recognition in decision-making processes at household and community levels, and joint attendance meetings and field days between SHGs, VDCs and government authorities have led to epistemic spillovers which have changed gender attitudes in various levels of society.

From a larger perspective, the dissertation has shown that institutional actors must be attentive to both gender and the natural environment when formulating solutions for climate vulnerable settings. Promoting gender equality distributes the responsibilities of mitigating, resisting and adapting to climate change to the benefit of the whole community, and will be crucial for fragile states to overcome the far-reaching and complex implications of climateinduced insecurities in the decades to come.

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Appendix A - Figures



Figure 1: FEWS-NET Horn of Africa Food Insecurity Map

Famine Early Warning System Network (FEWS-NET), 'Conflict, weather, and economic shocks likely to drive alarming increase in humanitarian needs', *EAST AFRICA Food Security Outlook* (March, 2022). [online]. Available at: <u>https://fews.net/east-africa</u> [Accessed: 16/08/2022].



Figure 2: Berkeds in Shirwac village

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Figure 3: Stone check dam in Korji village

Stone check dam in Korji village, Gabiley district. Photo taken by Mohamed Ahmed Ibrahim/Concern Worldwide.

Figure 4: Gully view of the stone check dam in Satiile



Gully view of the stone check dam in Satiile, Borama district. Photo taken by Mohamed Ahmed Ibrahim/Concern Worldwide.





Soil bund after the rainy season in Korji village, Gabiley district. Photo taken by Mohamed Ahmed Ibrahim/Concern Worldwide



Figure 6: MoERD Sapling growing facilities

Saplings being prepared for reforestation initiatives at the MoERD. Photo taken by candidate on placement.

Appendix B - Tables

Table 1: SPHERE Programme Annual Result Indicators

Indicator	Base	13	Ye	ar 2	Year 3		Year 4		Rating / Comment
			Target	Actual	Target	Actual	Target	Actual	
Outcome 1: Strengthened, diversified livelihood opportuni	ties for2	180 peop	le (Somali	land 1530;	Banadir 65	0) that are	extreme p	oor particul	arly unemployed youth, female headed
households, drought-prone agro-pastoralists and marginalized groups									
Average Monthly Income from specific IGA/ micro	0	SL	45	61.8	60	77	75	56.6	
enterprise/ employment (USD)	0	Bnd	15	36.9	30	42	45	28.5	
Household Asset Index	4.18	SL	4.6	5.36	5.06	5.63	5.56	6.21	
	2.7	Bnb	2.97	3.88	3.27	3.93	3.59	4.16	
Average % of strategies utilized by households to cope	25.8	SL	46.6	66.7	51.3	38.5	56.4	30.8	
with livelihoods shocks that are									
(insurance/reversible/positive) coping strategies (%)	34	Bnd	13.8	50.0	15.1	50	16.6	21.7	
Outcome 2: Equitable access to safe quality primary educate	ion for th	e extrem	e poor for '	10,311 child	fren in 11 so	chools from	9 Districts	in Banadir	
% of boys and girls in Grade 3 (or equivalent) scoring	39.6	G	42	74.9	44.5	84.6	47.5	43.9	
60 cwpm on the Reading passage subtest of an Early	07.0			00.4	40.7	07.5	45.0	60.4	
Grade Reading assessment (%)	37.8	B	41.6	68.1	43.7	87.5	45.8	52.1	
Attendance rate - percentage of days that students	85	G	89	91	92	97.9	95	88.3	
actually attend school over a given period (usually per					00	00.4		00.7	
month) (%)	86	B	90	92	93	98.1	96	88.7	
Percentage of teachers (m/t) who report no longer using	11.5	F	N/A	N/A	N/A	N/A	85	78	
corporal punishment (in the last academic term) (%)	05.5		A1/A	NUA	NUA	AU/A		70	
Orada Datastian Datas . N of a school of surally (as	05.5	M	N/A	N/A	N/A	N/A	80	79	
Grade Retention Rates - % of a conort of pupils (or	87.8	F .	N/A	N/A	N/A	N/A	91	91	
students) enrolled in one grade or a given level or cycle or education in a given school year who reach successive	00.1	м	NI/A	N/A	N/A	N/A	0.4	0.4	
anadas (%)	90.1	M	IN/A	DV/A	N/A	N/A	34	34	
Outcome 3: Improved access to safe drinking water sanitat	ion facilit	ies and a	dontion to	sound hyoi	one practice	e for extrer	ne noor 56	790 neonle	in Somaliland and Banadir
% of households that collect 15 litres per person per day		ico allu a	ooption to	sound nygi	ene practice	S IOI CAUCI	ne poor oo	,750 people	
for drinking cooking and personal hygiene from an	12.1	9	13.0	6	16	21.1	18.4	12.3	
improved water source in Somaliland (%).	12.1	or .	10.0	Ŭ	10	21.1	10.4	12.0	
% of households using improved sanitation facilities that									
are no more than 50m from dwelling and are adequately	82	SI	9	37	99	0.39	10.9	1.14	
maintained (Somaliland) (%)									
% of respondents who know three of the main causes of	21.3	SL	25.1	21.2	37.1;	47	43.1	69	Target achieved.
diarrhoea and three ways to prevent diarrhoea (%)	13.1	Bnd	18	33.2	26	88.7	33	98	
Outcome 4: Increased participation and influence of wome	and m	en from	marninalize	d arouns in	leadershin	and decisi	on-making	at househo	and community level in target districts
in Banadir and Somaliland		GITTOTT	manginanza	a groups i	neadoranip		on-making	at nousene	in and community level in target districts
Average score on scale relating to Gender Role Attitudes	5.22	SL	5.48	5.05	5.75	5.75	6	5.78	This indicator has been met
And age acone of acade relating to contest hore relationed	U.L.L	02	0.40	0.00	0.10	0.10	Ŭ	0.70	compared to the baseline in both
	5.54	Bnd	5.8	5.54	6.1	6.25	6.4	6.01	locations. However, the targets for
	0.01		0.0	0.01		0.20		0.01	year four have not been met.
Average level of male domination of household	0.84	SL	0.75	0.53	0.68	-0.55	0.61	0.14	Positive progress made on this
decision-making on resources, assets, and finances in									indicator, with the targets surpassed.
male-headed households	-2.2	Bnd	-1.94	0.49	-1.74	-1.04	-1.57	-0.59	
Outcome 5: Improved management of natural resources and CBDM processes for 25 communities in Somaliland									
% of target communities with a functional community	0	01	40	20	24	24	40	40	Targets achieved
disaster management system in place (%)	0	SL	12	20	24	24	40	40	
Soil erosion levels (Metres)	6	SL	4	3.9	3.2	3.6	2.5	2.6	
Key Very good performance (Target surp	assed)		S	atisfactory	performar	nce, with	mixed		Target not achieved
,			re	suits and s	ome limitati	ons	_		

Appendix C - Interview Transcripts and Questionnaires

Note – transcript incoherence and grammar mistakes are as a result of poor sound quality and participant accents during recording.

Transcript 1: Ali Ismail, FAO-SWALIM

Issue context:	Question(s):			
<i>Capacity Development</i> The Somali Water and Land Information Management project (SWALIM) has integrated capacity development in all its activities along the lines of the capacity development paradigm targeting individuals, organisation and environment.	 How significant has SWALIM been in the incorporation of capacity- building measures of water interventions in Somaliland? I. How has SWALIM helped improve natural resources management, planning, investment, disaster preparedness / response and resilience building? II. How important has SWALIM salary support and provision of supplies and equipment been as a more direct and less conventional means of encouraging the development of partner capabilities? III. Has SWALIM encouraged or made use of tripartite agreement when undertaking interventions? If so, how significant has this been to avoid humanitarian dependency? 			
<i>Coordination and information</i> <i>sharing</i> The main prerogative of SWALIM in Somaliland has been to strengthen the capacity of Somali institutions to make better use of factual information when making decisions on sustainable natural resources management, planning, investment, disaster preparedness / response and resilience building.	 How has SWALIM aided INGO coordination by making better more comprehensive decisions on local interventions? I. How has the creation of ministry data centres for the ministry of Water and Agriculture increased the efficiency of local interventions? II. How has ministerial partnerships helped make interventions more efficient? III. In what ways has the establishment of "Regional Coordination Committees" helped coordinate SWALIM and INGO activities to avoid intervention overlap? IV. How has provisions of monitoring equipment and supplies helped ministerial 			
<i>Training programme</i> SWALIm has developed a training programme covering a wide range of courses in water and land information management.	 How has the development of a training programme made interventions more efficient? I. Are local beneficiaries provided with training for more efficient data collection? And if so, how has this helped local capacity building? II. How has this made them more resilient to natural disasters? 			
Additional information at the discretion of the participant:	What are your thoughts on the future of NRM initiatives in the context of climate change? Is there anything else that I might have omitted in the interview, that you would like to add?			

⁽AI = Ali Ismail; I = interviewer)

(// = overlap ; - = discussion transition or interruption)

I: Okay well so, thank you so much for taking the time to be here and to talk to me about these issues and WASH interventions, and how much you have done and SWALIM is doing at the moment. I would like to discuss two discussion areas in this interview: the first is SWALIMs capacity development paradigm, so the interaction between individuals, organisations and enabling the environment. And then the second discussion area that I would like to touch on is how SWALIM is strengthening the capacity of Somali Institutions and helping coordinate, manage and inform local ministers and INGOs. So yeah, I'll be going around, you know, the capacity development activities and looking at the five points that I found on the SWALIM website. It is a semi-structured interview so its flexible, relaxed and discussion based, and I'd just like to hear your take on my questions, so the Somali Water and Land Information Management project (SWALIM) has integrated capacity development in all its activities along the lines of the capacity development paradigm targeting individuals, organisation and environment. How significant has SWALIM been in the incorporation of capacity-building measures for water interventions in Somaliland?

AI: When I look at the capacity development relator on water resources, we work with two ministries: the ministry of water resource development and the ministry of agriculture for metrology. So when I look at the ministry of water resource development we work on water aquifers, so water infantry, although water infantry is more to do on strategic water sources; how to collect underground water sources. We dig boreholes, shallow ones and other underground water springs, so we carry on water saving, so that water saving we give training for capacity building the technical people and the water experts in the ministry so then they carry on water saving so that water saving they have to go to different parts of the country to collect the data, the kind of data they're collecting they have to look at the water source gps, source name, and also they're looking at the ecstatic water level, water table fluctuations, drawdowns, I am not sure if you are familiar with...

I: I have read up a bit on hydrology but I am not an engineer

AI: You are not an hydrologist, so this kind of data we have been collecting, also we collect the quality of the water, we measure the salinity based on the elector connectivity, (...) we look at the PH that is the acidity and the persisity, so we test it on the spot and we send it to specialised laboratories who can make an analysis of the water quality so we look at it when the water is portable and test if it is up to the WHO standard. So most of the water here in Somaliland is brackish except for the eastern part of the country, so it depends where. And then another one is the water management, who is managing the water source, is it the community? Is it public? Is it public-private? Is it, you know, sometimes boreholes, in cities it is the government utility company you know.

I: -Ah yes, PPP?-

AI: Yes they do that sort of activity, so then we look at what kind of infrastructure is available, is it for the borehole or for water tankers, or it could be used for trapping or some of them have animal traps who get the water. So all this information we put into software, then we map it, so when we map it we look at it, you know, we see exactly the status of the water and how the situation is.

I: And that informs both the water ministry and the agricultural ministry?

AI: No, thats only for ministry of Water Resources

I: Only for the ministry of water, and the ministry of agriculture is metrology?

AI: And actually, the last survey we did, it was April until May, and now we are compiling the data analysis and with the support of the ministry technical people we are carrying all this kind of data. And another one is sometimes we do highly specialised technical surveys, hydroecological assessment, where we have already mapped the hydrological map of an area of one to seven hundred and fifty thousand so thats been done in 2013 together with two universities, belgrade university of Serbia and the other one is Dar-e-Salam from Tanzania. So we trained both puntland and somaliland with the professors of two universities are coordinating that assessment. It is a very detailed assessment which is already available on the SWALIM website, so its very technical but and then we have discovered where there are water aquifers. So far we have found three water aquifers, then there are other small aquifers, so thats the kind of the information. It is very comprehensive and focused on Somaliland and puntland, and also we do some other parts in the southern of the country...

I: South, in Elwaqq?

AI: It is desert region

I: Ahh okay, thats where I am writing on, I am writing on Borama and Gabiley

AI: Ahh yes that is a safe part, you selected Borama and Gabiley the safest part of the country

I: So yes, great thats been really helpful.. //

AI: Thats for water sources, we also give capacity building for the ministry with a geophysical survey, is a methodology of how we can measure the underground water exfoliation, it is kinda an instrument that can detect the underground water, so we have trained ministry staff although they are not continuous but they have bene requested. We also provide training for water collecting in laboratory thats the kind of training that we provide to the min of water, when it comes to the ministry of agri we work very closely with metrology. Metrology, we have already been established in metrology in offices with SWALIM when I was in charge at that point, and we have already been collecting and installing monitoring rain gages across the country. At that time it was more concentrated in the western part of the country where rain is higher than in eastern part of the country but we have now been a number of the rain gages has been installed is about fifty six and manual rain gages and 48 is paid by SWALIMbecause rain gages on the surface we just give out of our allowance, and we give also capacity building training to rain gage observers to the ministry of agriculture. We also train the people who are running the department of metrology, because the department of metrology is run by the ministry of agriculture, we are the one responsible so we give basic training as well as some specialised training to three of them: to the Kenyan metrological ministry, where we give our first training at a statistical level so they have that kind of exposure. So then another one is that we have what we call automatic rain station because the manual rain gages only measures the amount of rain, but the autonomic gives six parameters; one is wind direction, wind speed and anemometer, it is very technical, then another one is air humidity where we measure the also temperature, we measure also solar radiation, which is very important, and also as well as the rain fall so it is about six parameters who are measuring. So this automatic one is the automatic rain stations, one we have ammul, another one we have in gabiley, another one we have in the evergreen, another one we have in hargeisa, six weather stations. Then another one is synaptical stations, synaptic means that it is more immersually, have you seen UK there is a screen with white woollen things?

I: Yes, yeah

AI: So that is called synaptic weather stations, it is measured in temperature, which is minimum temperature max temp, air humidity, and it has to be read twice a day; so that is quite limited, the station one in gabiley, one in Hargeisa, and one in Abrol, only weathering stations we have, and also including evaporation because the amount of evaporation, so each day, each morning, at nine o'clock they have to measure how much water has been evaporated. So we use evaporation pan, it is a big pan where he water is full, and each morning they have to look at how much of water has evaporated, so that gives you indication how much evaporation per day, then the month and then the year.

I: Okay wow, and that informs- how does that inform disaster risk reduction?

AI: Because, when you look at climate change, you need to take a very highly quantitative parameters of weather, weather parameters, so this can take it, for example, you can see the amount of water which has been evaporated, like look at this plant, the rain is totally failed in the main rainy season. So we look at it the amount of evaporation, evaporation is usually, it has to- water temperature is very high it has more evaporation when the solar radiation is very high, it has more evaporation, when the wind is very high, look at this season now; it is a windy season. If you compare with the other seasons of the years, the previous years, it is more windy. So now we have to look at the change of the wind, you see, how many metres per second, the speed of the wind, where is the direction of the wind? So all this kind of parameters we are looking at it in the long term // but what we that the panel of meteorology, we are being established it is still prematurely, we are not that quite good at this level, so we have been trying for the government at least this climate change has to take into account because, where is the influence data? You know, if you say yes, there is a climate change, what other influences, you know; this is scientific data.

I: That is so important, and this information gets shared with the ministers?

AI: And I have done study around something called mahroudiche together with some, do you know of a dutch consultancy metameta and then another akeche consultancy, they help us with these reports also. Because sometimes we look at the trends of the, all this, and also you can get the data from the satellite, do you know that?

I: Yes, I am using GRACE.

AI: I see, that is good, so use all that one. So when there is a gap in the framework of somaliland, whereby the data is very basic, which is not even long term data, we are forced to use satellite data. So this is the kind of information, but it is just for the last sixteen years which I was involved with this kind of data, we still have not much highly developed and it is still basic. We are supporting the ministry on this climate data, which is basically meteorological data, but when you look at the pre-war data, it was continuos data from colonial period until now, so this data- but there was some gap during the war, so thats why we are having to be supplementing the data with the satellite.

I: Yeah, thats very smart, so all the information gets shared with the ministries which then get shared with the INGOs, or do you just- SWALIM doesn't do that?

AI: Definitely, no, this data is free for everybody // to students, to anyone- we don't sell the data; in Kenya meteorological they sell the climate data

I: Really?

AI: Yes, really!

I: How much for each package?

AI: I do not know how much they sell it- but this [our] is data for free.

I: Yeah, so moving on to the next- you have already covered a lot of what I intended to ask; so, how important has SWALIM salary support and provision of supplies and equipment been as a more direct and less conventional means of encouraging the development of partner capabilities?

AI: For confer shares*?

I: Yes, yeah.

AI: Are you talking the Climate UNFCCC or?

I: Providing, you know, monitoring tools, and not only training, but the equipment and provisions for local-

AI: Okay, what we do- one of the capacity building, extra knowledge training, is not only training, we also provide equipment, all this kind of thing, SWALIM is the one who provides

I: And that is directly to the ministries?

AI: Yes to the ministries, rain gages- all this is provided, all this kind, as well as the repairing. One of my colleague who work in reparation, now he works also in Borama and Gabiley using an automatic divers, so these divers have already been installed and the data, he has been trying to take out of these divers. So the divers usually- it measures the fluctuation of water table, underground water table, so even we monitor the underground water, although thats not across the country, aquifers are found near certain towns around the country, Gabiley, Borama, Boro, Tripura, Aynabo, Erigavo, all this kind of thing we have already been doing through automatic stations.

I: And these geometrics, do they inform other organisations, like Concern, where to build boreholes and where to build dam checks?

AI: That is eh- boreholes can be drilled when there is a very specialised study which is called geophysical survey

I: Yeah you mentioned-

AI: We train the ministry people and provide also equipment, one time we have provide every expensive equipment called terameter SA 1000, it is a geophysical tool measuring the underground water.

I: Oh okay wow, and the subterranean water flows..

AI: Yes, yeah.

I: Okay, yeah so SWALIM- as I have mentioned, you know, the capacity development paradigm is between individuals, organisations and the environment. Does SWALIM use an tripartite agreement when involving beneficiaries, or is that-?

AI: We use only- we work with the government, and that's why we have a letter of understanding between FAO and partner line ministry, like the ministry of agriculture where we capacity development on metrology, while the ministry of water resources we work on water infantry, saltwater survey, so that is- it is not a tripartite but it is a government- we just give capacity development for government institutions. But also, in the training we also provide with INGOs and local NGOs, but that training is like, GI training, thats kind of data analysis and collection. So we used to organise such kind of training but also together with the government technical staff as well as-

I: How come it has ended?

AI: For the last four years, no but- actually for the GIs researching we been have already training with a different line ministry also with some majors.

I: So the GI training is for INGOs but also for ministries?

AI: Now we are most focused on the government side.

I: Okay okay, fascinating. Yeah that covers basically the capacity development section of what I wanted to cover. Now I would like to move on to the next part which is coordination and information sharing between the ministries, so the main prerogative of SWALIM in Somaliland has been to strengthen the capacity of Somali institutions to make better use of factual information when making decisions on sustainable natural resources management, planning, investment, disaster preparedness and response. How far has SWALIM aided INGO coordination and ministry coordination by making better, more comprehensive decisions on local interventions?

AI: Ehh let me give you another one; in SWALIM now, we are trying to reaching out, so we are preparing another phase, which is SWALIM cannot stand forever-

I: Ahh so it needs an exit strategy?

AI: yes, exit strategy- so we have already been integrating land and water resource management project, and we have created an information management centre which is equivalent to the SWALIM at a national level, or subnational level, in Somaliland and in Puntland we have already been established information management centre. This information management centre is for water online, it has to be collected all the data SWALIM used to be collecting but we have already been trained, recruit six people locally: one is water resource officer, the land resource officer, GIs officer, information management officer, and finance officer. That's the six people that have already been manned at IMC centre so IMC centre is a centre of excellent and research who will be bringing different institutions, government institutions, like we work in the ministry of environment when we it comes to environmental and natural resources; water with the ministry of water, we work with water; ministry of agriculture on metrology as well as land, land- livestock also. Then another one is NADFO the disaster risk management agency, so all this six institutions, they are members of committees called inter magisterial commendation committee which are controlled from the director general on each ministry, so this has got- this IMC it is managed by the government with all six different institutions, who are responsible to the director generals, so we have a biannual meeting to the ones who are responsible. The strategic level of the centre, so this we have now- the project has already been started in 2019 and is going to end in september and it will already have been the information management centre at the ministry of the environment, but it is separate - and now that it finishes, it is to quit; they are going to move with the six people from- who have already been trained, we have given a lot of training capacity building development, we even sent to Egypt for study too, one month, so those six institutions they have already secured the staff; each ministry has sent one person, who are also work hand in hand with the six people- and it is a big institution, so that's why now I am quite pleased to hear, so that's why at the end of the day, SWALIM will be phased out and this national institution should be responsible. And then when it comes to enabling the effect, we have already been drafted and hired international legal expert as well as national- this institution should be issued with presidential decree, not yet come, so it can be an institution that stands alone and running the information regarding on land animals.

I: So they will take the place of SWALIM when SWALIM has left?

AI: That's the objective, because if you so that if they say "so how long will you be sitting here", this information we have been collecting-

I: I mean, it is important to, as well, to avoid dependency right?

AI: That's the way we are doing now, for the last three years I have been involved with that sectors

I: So the IMC is really key to SWALIMS exit strategy?

AI: Yes, it is.

I: Great, thats really good- Yeah I think we already touched upon the regional coordination committees as you mentioned, right?

AI: Yeah yeah, but also SWALIM they mutually attend like a wash coordination committee

I: Oh do they? Is that from all six ministries?

AI: No it is the cluster, it is the cluster

I: The cluster which works with water?

AI: Yes it is water, hygiene and sanitation

I: Ah okay

AI: And then we are also part of material forums like emergency, food security clusters, that's so we are different kinds of coordination committees. // for the food security each has got a- I think a WASH- the ministry of water to provide better coordination from the ministry of environment and UNDP we have member, so we are member of different coordination committee

I: And these are all in the regional, which coordinates-?

AI: And thats the area usually the way they formation, when something came up then we have to make presentation and share the information through coordination forums.

I: Yeah, the last question I sort of have been interested to ask, and when we are looking at the bit on dependency, but how has SWALIM coordination helped avoid overlap between INGO and ministry interventions

AI: You know thats why, to avoid overlap, thats why we established information management centre because that- usually they have to be bringing together; but bringing them together with the different ministries they are competing also with each other- there could also be a challenge, so up to now when we bring six institutions together for information management, up until now we are very difficult to bring together all these kind of things-

I: And the funding, to distil that.

[Participant takes a phone call]

I: Yes that was really the last topic and question that I'd- well there was another one, the training program? But you have already provided enough information to cover my other section, is there anything- what are your thoughts on the future of SWALIM in the context of climate change? I mean, not necessarily looking at- you've already explained exit strategy, but how long do you think it will take for SWALIM to exit?

AI: You know, the baby we have already been- now, the IMC, it is still crawling, so it still needs some time to build up.

I: Okay okay, and is there anything you think I might have omitted from the interview that you'd find important to my topic?

AI: No nothing.

I: Okay great, well I think we are done- thank you so much for your time and effort and excellent insight into this topic its been really really useful to hear your expertise on the matter. Mehezenik, thank you very much.

Issue context:	Project(s):	Question(s):			
INGO discord resulting in undue influence which encourages local dependency and free- riding behaviour: Communities have on occasion been reluctant to fund construction themselves when there is the perceived option of another INGO willing to cover construction costs. The impact of other INGOs' activities on the adoption of ODF practices, therefore, poses a significant challenge to Community Led Total Sanitation (CLTS) initiatives in target villages.	Community Led Total Sanitation (CLTS) to hinder cycles of fecal–oral contamination	 How has the transition from a hardware approach, such as latrine construction, to the open defecation-free (ODF) village approach influenced community capacity-building? I. How has discoordination between implementing stakeholders and INGOs influenced local dependency behaviours? II. How would linking the behavioural change WASH activities with targeted groups and beneficiaries solve this issue? How does Concern intend on incentivising local capacity-building behaviour to counter the unintended, undue influence of other INGOs on the adoption of ODF practices? I. How has Concern management of the water points ensured communities have the right set up, training and agreed rules? II. Would the introduction of a fee-based system for training packages avoid dependency similar to the outcome of subsidy incentivisation? III. How would such a system incentivise local capacity-building behaviour? IV. Could Self-Help Groups (SHGs), or a similar scheme, provide an alternative source of funding for the maintenance and repair of water facilities, as opposed to a fee-based system? 			
Long-term unsustainability of local water supply and storage facilities: Despite the growing positive effect of the on- job masonry skills training conducted to WES committees, local communities are unable to perform repairs and upkeep of the constructed water catchments and storage tanks.	On-job masonry skills training to WES committees	 How effective has the on-job masonry skills training been for locals to replicate and repair water facilities? How does Concern intend on lessening the material and fiscal constraints imposed by the maintenance and upkeep of water catchments and storage tanks? I. How has the introduction of WES committees to oversee maintenance and upkeep solved this problem? II. How would Concern provide communities with better linkages and business plans to repair and maintain the constructed facilities? III. In what ways would adequate funding for the initiative solve the issue of fiscal, material and expertise dependency? 			
Unintended consequences from water catchment Albeit a minor consequence, the polythene sheets for general water catchment have caused a notable rise in mosquito populations at field-sites, risking the spread of	Durable polythene sheets for general water catchment	 How cost-effective are the polythene sheets for access to water? I. Is it used for irrigation purposes? If so, what impact has it had for local communities? II. How has Concern raised awareness of the hazards of human consumption? III. Are there any other, more sustainable alternatives to preventing this issue? 			

Transcript 2: Harun Emukule, Concern Worldwide

malaria and other airborne diseases. The water supply is also not suitable for human consumption.		
Lack of coherence and homogeneity in the SPHERE programme. The SPHERES programme suffers from a lack of coherence and homogeneity and as such is not perceived by staff working on it or by external observers as one programme.	Implementing a SPHERE programme manager	 What issues have the WASH initiatives experienced as a result of the lack of programme coherence and homogeneity? I. In what ways would implementing a programme manager improve local WASH initiative efficiency? II. Is there a need for greater cooperation and information sharing between stakeholders and INGOs to improve local WASH initiative efficiency and implementation?
<i>Gender dynamics</i> Women in Somali society are often responsible for gathering water and taking care of the household. The community sanitation committees participatory clean up campaigns have increased community sanitary activities and has increased awareness of unhygienic conditions.	Effects of interactive hygiene promotion sessions in the context of gender dynamics Community Health Workers (CHWs) have facilitated interactive hygiene promotion sessions through house to house visits to target households.	 How has the proximity of water supply and sanitation facilities impacted women's livelihoods? I. In what ways have participatory clean up campaigns impacted women's livelihoods? II. Are women also provided menstrual hygiene facilitation and training? III. What is the gender proportions of the communities taught on-job masonry skills?
Additional information at the discretion of the participant:	Future of the project and interview omissions	What are your thoughts on the future of Water, Sanitation and Hygiene initiatives in the context of climate change? Is there anything else that I might have omitted in the interview, that you would like to add?

(HE = Harun Emukule ; I = interviewer)

(// = overlap ; - = discussion transition or interruption)

I: Ah yes, okay so now we have begun- yeah so I've reviewed the term review document and from there I'd just like to sort of discuss with you the wash initiatives thats been done in shirwac, both looking at community led sanitation initiatives, in particular, the open defecation free ! approach, the buildings of latrines and garbage pits, constructing the target villages, and the instruction of the four underground water tanks and the roof water catchment. Yeah and also the on job masonry training that was provided to WES committees. And obviously Ive already received a lot of the success and positive feedback from the projects which have been really promising and Ill def use that in the diss already, but what I am more interested in in this interview and to really get from you is more your thoughts on the future, but also the limitations of, and the problems of the wash initiatives that

i have read in the document. So this includes really the renewability and the sustainability of the projects, and then also the dependency behaviour that might be sort of, affected by- or that affects the efficiency of these initiatives in the targeted villages. So those are really the two- the two things that I'd like to clarify and build upon with this interview.

HE: Mhm okay okay, so it is just a general discussion?

I: Yes, very general,

HE: Okay

I: And I've got a few, sort of, the issue contexts so we can build upon from there, and then I've got questions related to that- connected but also you might already know- [or] answer the questions. Either way, I'll just begin, so the communities have on occasion been reluctant to fund construction themselves when there is the perceived option of another INGO willing to cover construction costs of the water facilities in the villages. The impact of other INGOs' activities on the adoption of ODF practices, therefore, pose a significant challenge to Community Led Total Sanitation (CLTS) initiatives in the villages. So my question really is, How has the transition from a hardware approach, so building the latrines, to the open defecation-free (ODF) village approach influenced community capacity-building?

I: I can repeat the question if you need to-

HE: Yeah If i can understand you, I can understand your question; are you actually want to know how the building of the latrines have actually affected the issues of the ODF?

I: Not exactly, the way I understood it was the hardware approach is one direct you know benefit to the communities, but I am more interested in, and thats sort of already outo\line dint he report, what i am interested in is how has the societal and socieoeconomic benefits from the ODF to the open-defecation free approach, how has that affected capacity building capabilities? So are they able to, now that they have been provided with the emans and the knowledge and- to sanitise themselves and- how has that affected?

HE: the approach here is CLTS, and ODF is just as a result of this approach

I: Okay it is as a result of that?

HE: Yes, so when you have- when implement the CLTS approach you achieve the open defecation free.

I: Aha, so you build the latrines but you- is it they build the latrine snad you teach them how to build them, and the garbage pits?

HE: Yes, let me first of all explain the concept of CLTS. The community-led total sanitation it is actually an approach that is based on something that has to do with what we discusses, which is that communities are actually approached privatists seeking open defecation, and they are taken through some kind of training, and the training actually removes the shame of having the solid waste that is in the surroundings. So based on that, we work with the community to help them look for ways of ensuring that this human waste is actually properly taken care of, and concealed in a way that can not cause any disease and in that way we look at some stages, and these stages we call sanitation ladder.

I: Sanitation ladder?

HE: Yes, sanitation ladder. And the sanitation ladder essentially based on one principle of- as human waste disposal and we start with the best basic one, the catchment, for example at night if you want to go out, you know what they need to cover, and for example if there are people who are actually unable to access the tools, like djembe used for digging, they can actually go with it at night, for example, dig a pit and dispose the human waste and then cover it. That is the very basic method. The other basic one which we can talk about is just having a pit, but it might not have the superstructure

I: Okay yeah.

HE: Then another one you can have now a pit, a super structure that is made with the locally available material, but does not have a roof

I: Okay wow so it's a pseudo latrine, so not quite a latrine but it is-

HE: Yeah it is open but it's just covered so it gives you privacy so that you can use it at night. The previous one is open and you use it only at night, because during the day theres no privacy. But this one, if you cover it with local available materials found- it means you will have privacy even during the day so it goes that they improve on and on and start the roof and we will now go further, where we will have the one which is more improved, covered with bricks and it has brick wall and it has iron sheets to cover, and it has a lockable door, maybe a concrete kind of floor which is washable now meeting standards. So when we go to the community we want to have many of them get used to these particular problems without necessarily impacting a lot of costs, and it has to be their own initiative. And the brunt here is that once the knowledge is impacted to them, on the issues to do with the solid waste will cause, the rare diseases and water related diseases and all those things, then it becomes their initiative to be able to now influence the other community members, so it is like a snowballing effect-

I: Ahh a snowballing effect? And is this were the ODF comes in?

HE: Exactly! Now that is how it is coming in, now the other community members who are trained and now are able to construct their own latrines. They are able to now influence, like, the other community through sharing, like how can you be able to have feaces around you? This is shameful and it can bring diseases! Now based on that the other community members that have not constructed, they want to learn from the one shtat have already constructed latrines, and in that way they are able to exchange way of solid waste management, human waste management, in their own simple way. So you will find it in a form of a ladder, thats how we put it,

I: Wow that's extremely- exactly what I'd hoped to get. So that's how it is capacity building and allowing for participatory projects- allowing for a snowball effect in other communities. There was also mention in the report, the discordination between stakeholders and INGOs and how that has influencing, how has that been influencing the local attraction with this project? Is there sort of a discoordination between other INGOs? I know, just in relation to- theres a section that there is no need to construct water facilities and catchment facilities if another INGO is going to cover the cost, has this perception been an issue? And how has concernhow has this influenced their behaviours?

HE: Are we talking still about the latrines right?

I: Yes, yeah.

HE: Now the major challenge, I will just put it like the main challenge which is around this is also cutting across so many other areas, but I will specifically talk about this particular area. When you have an area which actually it is completely underserved, and you come in and there is no INGO working there, the approach works so well. Because it is actually an initiative which is made by the community themselves, I mean think about solutions for that specific problem, but now a problem can be seen when you have other INGOs, local NGOs, that come and want to implement constructing the latrines. Now, the main problem is one of the- youll find that some of the INGOs they will come and build a latrine, a very nice latrine made out of bricks, and it has iron sheet roof, a lockable door, very standard, however when you look at houses, the housing unit that the community is staying in is made of sticks.

I: So its worse? The toilet's better than the houses?!

HE: Yes exactly, yes. And you know now in some of the cases, you go and find someone in these communities, you'll find they see it is [the latrine] as a more safe place to store their things- at the end of the day it doesn't really solve the problem for latrine. But now fast forward, you'll find communities are- they are mostly donar dependant and this is something that concern trues to pull them out of, to be able to have their own contributions for sustainability purposes. Maybe later on talk about sustainability of the WASH project, water related projects, but for this one I would say the community would love to have free handouts, and in fact, INGO and local NGOs are providing this for free, you'll find that this fails of this CLTS approach and that communities actually prefer it- those that give it for free. And to solve this problem we are looking at better coordination at the national level and we do have is phonometrics to show who are doing what where, so those topographical areas they are very well demarcated and you cannot have a partner coming in, so like we are supposed- we all shift after the cluster and we know like, geographically who- and in terms of partners- who is working where to actually be able to avoid problems. I think with that, it is going to improve..

I: Yeah that's great, so that's WASH cluster coordination which is helping now specify the needs for the target villages but also avoid this dependency behaviour, or the perception at least, of you know trying to freeriding on INGO funding instead of actually, you know, doing it themselves.

HE: Yes, the cluster set standards and at the same time encourages partners to work in specific geographical areas and to avoid overlap and better use of resources. Because if we- if you have more than more two partners working in the same area, under competing funding from the same donor, it doesn't make sense, and especially but clearly by doing the same thing. So we encourage that partners needs to work in their own specific geographical areas in the event that we are working more than one partner in one area then it has to be an integrated project, and structured in a way that probably one partner handles WASH, another one handles malnutrition, another one handles protection, and another one handles another thing so that we do not have any form of overlap but we are able to build on eachothers strengths.

I: So it has also been helping collaboration to enhance current work within the target villages?

HE: Correct

I: Yeah and I mean, well that actually answers the second questions of how linking the behavioural change with WASH activities with target groups and beneficiaries solves the issue. So yeah-

HE: And maybe something which I would just like to add, we also work very closely with government line ministries because without them it is impossible to enforce some of the things. So you will find in terms of standards, in terms of even when we are putting issue s to do with infrastructure generally related to WASH, we need to have community agreement which we now have to involve the government so that they can be able to actually cement that because after we get out as an organisation you will find that the government will stay and the community will be there so there will be an agreement within there where the community will be able to respect some of those agreements and be able to follow.

I: So setting standards, like you mentioned before, snowballing effect of that sort of culture of creating a culture of sanitation and yeah, thats the main thing. So now I would like to touch more upon, yeah, how exactly- more behind the funding the maintenance and reparation of these latrines, and water points, how has concern management of the water points- and I think this is on another issue more on the fact that- because I mentioned in the report of hand cleaning water points but also yeah, so how has this secured that the community have the right setup, training and agreed rules. Oh wait you actually already mentioned this with the WASH coordination- cluster coordination, setting standards, correct?

HE: Yes that is on a higher level, we call it the higher-level, but now at the community level what we do after the construction of water infrastructure- in fact, even before the construction we decide to do the consultation with the water committees and here it is a committee of normally seven to eight people, three men and three female, and five men- so we will have that committee who are actually in charge of the day to day management of these water infrastructure. And I must say that these committees they are good at small projects, say for example shallow well or you can have a roof catchment which they can manage, however when it come sto bigger projects like a borehole our current approach is to ensure that we have a public private partnership approach whereby we adjoin and identify private business people who are dealing with water to be able to manage this water schemes, and before we bring them on board it has to be a very cooperative team and it has to also be able to- they have to actually be able to ensure the capacity to manage that percentage. Now, what we do here, we do a sort of lengthened cost analysis of the- we trained the team on the robust analysis, and when I say the team here I mean the people from the government, the community and these private companies. Now, under the training of the lengthened cost analysis we look at the key elements of the normal original costs, and thosewe don't really look at the capture costs, just the normal operational and maintenance cost, and this includes for example if you have a to pay the cart, pay the water attendant, if you have to maybe repair small problems there, we quantify the costs and project it over the life of the project.

I: So is that a fee-based systems?

HE: Now, now, I am going there- once this one is kind of projected, you know like, when a system is new you expect a lot of maintenance, but when it is like, three or four years it is more prepared. Now we are looking at a period of twenty years, and when I say twenty years most of our systems are solar raised, we actually used a solar pump system so the lifespan we look at twenty years, then you are able to renew some of the components. So when you look at that, that one is broken down and once it is broken down, we have a small margin of the

private operator then that one in itself, looking at the number of households that are going to benefit constitutes the challenge.

I: I see, so you collaborate directly with the households-?

HE: Exactly

I: -to identify their needs and also quantify the costs for maintaining the project?

HE: Yes, we agree like in a most of the cases like, for example, if we are talking about pastoral communities, they may not have money but they may have, maybe, a goat or a camel to give after a specific period, that is fine! So if those who are able to pay quarterly, or monthly, or whatever, it is a great and all this helps sustain. The most important thing now is the collection of revenue and the affordability, which we are now trying to really work on. So that is a model for the slightly bigger projects

I: I see, so is that where the fee based system comes in?

HE. Yes, that one comes in, because for that case we find- we have a lot of- water is consistent and they are able to- it can be expanded yeah? And something that is very important that we do in the event of where we want to come in again to expand the system, we also like, liberating onto that and we tell the company, we are increasing the consumers so you have to lower the pay rates.

I: That's really good, because in the case of extreme weather or you know unforeseen circumstances you are able to regulate the amount they have to pay in the case they cant pay or-

HE: Yes, and for the vulnerables- they are also identified and they are provided water at normal costs

I: And that is also arranged through PPP?

HE: Yes that is arranged

I: Okay yeah, perfect that's- yeah so, i am also looking at, you know, the self help groups. Would that by any chance have any funding capabilities or as a possible solution? I know that SHGs have been able to share the funding with other communities to coordinate their own-pooling of their own assets, would that- have they been able to use that on latrines or construction of water facilities? Or has that been a very-

HE: I will tell you how the self help groups work, I don't know the specific ones but Ill tell you the whole concept about it; these are like a group of households that come together, and of course they have contributions, like today we contribute for example one dollar for a hundred people to give- everybody's contribution tomorrow will be another person, until all the hundred people have paid. Now in the specific households, there are settled groups which are actually a specific about what they want to achieve, like iof we get your contribution we need you to buy a specific thing, but there are those who are open to people to come- based on your needs on a household level. So naturally it may depend, there are those who may want to contribute directly towards training for example, or household needs, but maybe if there is another self help group that are very specific about how they need to utilise the plants then that one may buy.

I: And Concern is in direct collaboration with the SHG regarding latrines and garbage pits and water WASH projects?

HE: No no not really specific, not specific.

I: Ah okay

HE: And you know most of these self help groups find that a lot of women are involved, and they are the ones who actually look at the pits at the household and they prioritise; they cook a lot of meats but now they will actually look at the disparity and where to spend. I wouldn't say that it was directly but I would say it affects.

I: I see, so the reason why I asked that question in particular was because it previous cases, subsidy incentives had generated dependency behaviour. The approach you do now, how does that try to counter that tendency? The training is one aspect of how they are now abel to do their own reparation and maintenance, and you mentioned how the funding is on needs basis with concern. Is there any sort of dependency behaviour or free riding behaviour as a result of the fee based system?

HE: Well, with regards to the fee based system, you'll find that there is not even tendency at all. Because it is the best model, and Ill tell you- when the private company comes there, it has one objective: to make profit. And based on, I don't know if I mentioned, but we have a tripartite agreement which we have with the government, the people- the community, and the water provider. And the water providers main obligation is to maintain the system and provide a quality service..

I: And that's the PPP?

HE: Yes, and the community is to be able to ensure they pay for water. The government is to regulate, yeah?

I: And enforce?

HE: And enforce, because you'll find that if you leave the private company, if you leave it open the private company will be able to change the tarifs and destroy the community, and they do not invest the capital costs there so we are able to put them in check- and more importantly the government is able to put it on contractional components based, so that if for example the community comes and they say, this community, this particular water provider 'sometimes is no water, sometimes there is water', then they need to get another person. So thats the model we are looking at

I: So that legally obligates the PPP to, you know, be accountable to the communities? But also by government?

HE: Correct

I: That's perfect, thank you so much for clarifying that because that's really- I am looking at dependency and how Concern has solved that problem and that was exactly what I'd hoped to get from that.

I: So now looking at another aspect of the training process, and here's another question: Despite the growing positive effect of the on-job masonry skills training conducted to WES committees, local communities are somewhat unable to perform repairs and upkeep of the constructed water catchments and storage tanks in the case by case basis, not obviously not all of the cases but- so what I am interested in is how effective has the on-job masonry skills training been for locals to replicate and repair the water facilities?

HE: For the on job training, what happened here was basically for the construction. That was limited to that, however what we do and constantly use mostly if, for example, if we are maintaining a water project, at the end of the day- first of all require the contractor to ensure, like, 80% of the funding is coming from the local community. So that way it is not only, like, knowledge transfer but also it empowers the community economically. And also we encourage the community, the contractors to try as much as possible to source the materials locally, so that to also be able to have the effect, the economic effect, for the community. So when it comes to now the construction of some of these facilities, engineering itself I would say something which isyou have to be very careful when, say for example you train a person for a day and it's a simple project and then you leave them. It is not enough, that is what i would say, in the construction because when it comes to the construction- they will be there as a casual workers but at the same time on the job training, so when that one grows you need several carts carrying during projects for them to actually utilise and probably you may find one project there another one fifty kilometres away, you can not carry them between communities. We do it in a small way, but personally- as an engineer-, I would not like, recommend- I would not certify that now they are able to be able to construct the water tanks, that is still a sustainability issues. But small ones, we can be able to link them up within the community, in most of the cases you find some of the community members they are bringing in them- bringing in the people working on the projects to actually construct latrines. So for small projects it works but for the big ones you need to dedicate //

I: Because, I mean, you have already mentioned how obviously, you know, just digging pits- these are just temporary for sanitary purposes. Water catchment and soil banks, they are relatively easy to gain the materials, and the training in that is relatively simple, but as you said there needs to be recurrent sessions.

HE: Yes for the small- like the soil banks, that one is fine. But constructions of bigger structures, it requires some serious training.

I: Okay, I mean that can be expected of engineering level of expertise. Okay so that sort of answers my second question as well, on how does Concern intend on lessening the material and fiscal burdens and constraints imposed by the maintenance and upkeep of these water tanks. Yeah, how would Concern provide communities with better linkages and business plans to repair and maintain the constructed facilities? This goes for under the tripartite agreement, of how government, PPPs or contractors interact with communities.

HE: And also like the training son the water management committees, what we also do is linkage with market.

I: Oh okay

HE: Because when we drew- when we handover at that time we also introduce some of the key persons, for example the solar technicians, yeah? And their contacts with the communities, in case there is a problem we can give them the technical kind of support, but tey need to look for money and pay for the technicians to go and repair their system. We provide them with a link to the market and also to the local people together with the government as well, but the most important thing is- now that the people who repair the system we are able to link them up with the community and it is working well, the only thing is what we train them for it is- don't come to us when it is broken down, you need to be able to- this is their contact, we can give you technical advice but you need to pay. So that's what happens.

I: And some sort of forewarning of, you know, what exactly is about to break down, okay. And regarding a market, are they provided some sort of- if they cant pay for the materials through the market, are they provided any benefits or relief in that aspect?

HE: The communities?

I: Yes

HE: Now, I would call it- conceptualise it in two ways: capital maintenance and this, how to classify it as- like cooperation maintenance, so for operation maintenance, there are small things which may not require a lot of funds and can be fixed with twenty- thirty- a hundred dollars, but when it comes to capital maintenance here we are talking about things like a broken down pump, its a massive pump for example which can cost between 3000 and 4000, maybe a tank has a problem, that is a capital expenditure. So when that one happens, there are two things-a number of things that happens. One option is to look for an INGO or local NGO to be able to support, the other way that the community does is the diaspora, communities members who are in the diaspora sometimes send their contribution, so that is the new. And it may depend, if the season is okay it means there is less drought and the conditions are very optimal, people are able to contribute. However, when the situation is dire, meaning it is dry and communities are more vulnerable, we sit down as a cluster. There is certain legal pressures involved of the cluster, I am a member, so what we do is that we get the information on funcional water sources then we put them out to donors and also potential organisations, if they need to operate in that area it should be able to support that particular component, then it is fine. So that is how we like-

I: Help coordinate?

HE: Yes, yeah, but it depends on the level. So based on the circumstance and the level we are able to help.

I: Okay, and obviously the extremity of the weather and the situation.

HE: Exactly, so that communities vulnerable are moving from one place to another, it is not okay- and again, if you look at, for example, in terms of rainfalls and preparedness it is much cheaper to immediately assist the communities in their current location before they leave the location, because the moment a their current location their need is water, but if they move location now their need will be water, shelter, health, so it will be a lot, so in terms of response we try as much as possible to assist the communities at their current locations, also its strategic.

I: To avoid migration and displacement?

HE: Yes, the moment you have migration displacement, then a response is going to be very expensive. You have to have multiple actors, that is why we try to monitor the situation, allocate funds and look at the situation the way it is and be able to respond at the earliest. If there is a migration it means either we never have funds and it was very very difficult for us to be able to respond at the time.

I: So has- have you outlined these initiatives have, or interventions, have sort of stopped migration and displacement, but how has it encouraged migration to these water projects as a result of- have people congregated and gone to the water source from nearby villages if you have constructed it?

HE: yes I will tell you how it has affected, and this one actually talks about the example of what we are doing, when I say what we are doing I want to talk about the programming, if you look at the season, the situation in somalia, there has been the current drought and water scarcity and this is one of the, actually, the most affected

year and we have alot of failed rainfalls and problems. So the main issue here is- what we try to do is, for example, we have programmed to do an underground water tank, this is the bucket, we call it a bucket //

I: Like in Shirwac?

HE: Yes- which actually gets water from surface runoff, which is water from the rain, yeah?

I: Yes, rainfed projects yeah.

HE: Yes, so if we don't have rain it means you can have this facility and more water. So we look at the situation like- we can not be able to- it will not happen actively unless we construct it, so we say now when it impacts the normal period- this is the situation and I would like to have a borehole installed, now coming to my point to what we are talking about, you may find that for example, an underground water tank was sighted in a specific location, yeah? But when it comes now to the borehole, it is determined by hydro geophysical survey, which is land and the best location is identified. That probably it may be within the community or a few km from the community, because what we look at is the topography and soil and land formations and all these things, so if for example it is going to be in a different location, and that that is where- now for more study we see that is the place where it is going to be hiding and yielding, then we will have to be putting their water source. What happens? If the topography doesn't allow water from that particular source to that community based on the elevation and other things, then the only option is to have water facilities in and around that area, have a storage have a distribution points, then the communities will start, like, coming first of all to get their animals bring back, then with time you will find some start putting their shelter and that goes on and on. There is one particular example which you had time we could go visit, which is called IDRISS borehole,

I: How's that spelled?

HE: I.D.R.I.S.S borehole, yes, so what happened there- I remember like, we did it under the approach, it started in april, so it was in 2006, 2007, 2017 sorry. So what happened? When we cited the community there, that borehole, there was no community within 40km radius, no single community. But why did we pick that particular location? Probably you'd ask that. We studied the communities and the migration routes, it was a long migration, animal migration route, so you will find that communities are staying in the west but they normally, like, when it starts drying up on the east you'll find that it is a mountainous area so you'll find that when ground starts- the grass on the lowlands will start drying up and now this communities will start migrating towards the mountain which is a little bit greener. And by the time they have reached this mountainous areas you'll find very few water sources, and by the time now they survived on those ones, it starts raining, now they go back to their original place. So we identified that location as an animal migration route, so we drilled a borehole there and its now a community.

I: No way, that's amazing! That was exactly what I had hoped to identify because it is interesting how can reduce displacement by building facilities but-

HE: It is a pull factor also-

I: Yes exactly, and that is really, you know, revolutionary I think. You can now relocate people on more climate resilient areas and more yes, stable areas, instead of them placed out on the less, more vulnerable areas by topography. That is really good, sorry we have gone through so many of the questions already. Thank you so much.

I: Yeah so that actually answers that whole sections actually, I have got now- So we are sort of moving on to the water catchment- or the unintended consequences of the water catchment facilities, so just to give you some context, although you are probably already aware of this: albeit a minor consequence, the polythene sheets for general water catchment, usually meant for irrigation but also used in human consumption, has caused a notable rise in mosquito populations at field-sites, risking the spread of malaria and other airborne diseases. The water supply is also not suitable for human consumption. How cost-effective are the polythene sheets for access to water?

HE: How effective?

I: How effective, because they use it for-

HE: For lining actually-

I: On top of the roof or on..?

HE: No, it is basically for lining.

I: For lining the..?

HE: I'll mention this, and ah- it also touches a lot of rami, we view whatever is existing, so if you go through these communities where they do not have managed water sources, what they do is- they have like small localised, sort of, buckets, and just giving them the name bucket, but they dig a pit and then inside the pit they line it, they lien the pit with compost polythene. Once they line it, and now they make sure that they are- do like w/very small trenches which will be abel to collect the water, and the water will come. And on top they will put stones, so locally how- thats how the communities adapt. So when there is rain, the water is collected there, and during the dry season they will slowly use that water until the next season or before the next displacement.

I: Ah okay, I misunderstood that, thank you for clarifying. I thought it somehow attracted rain water, or stored rain water but it is actually the sheeting which protects it from the soil within the tank.

HE: It is actually, it protects the seepage into the soil, because if you just leave it- if it is just a simple pit, the water will soaked away

I: But it is not suitable for drinking- consumption because it still allows sediment?

HE: Yes it does, it does, it works so well by the way.

I: It does work well?

HE: That one in itself is a sedimentation kind of trap, because if you leave the water for maybe a week, all those particles will slowly settle.

I: I see, so you will have the murky water on the bottom and the clear water on the top.

HE: Yes, however, we don't regard bucket water, and all that, as safe water. Thats not safe water for community to drink, but it is good for survival. And what we do to ensure that they are free from diseases and other things is we produce water treatment tablets, the aquatabs, and if the water is a bit murky, we use a pool with a tablet which has disinfection and relation effects. So that one you can get water from the river, running water, you put that one in a bucket-

I: Ya\eah, all the particles meshed together-

HE: Yeah then they settle and we get the clean water.

I: Okay wow, thank you for clarifying that.

HE: And just to talk about that again, there is a- I want to talk about now the mega-catchment

I: The mega-catchment?

HE: Mega-catchment, this is a water pan, a big water pan, which can carry over 250 000 litres.

I: Is it the one built in Shirwac?

HE: No no, I'll just tell you briefly so you get the context, like this one [participant shows picture of the megacatchment]

I: Wow, is this the polythene sheets?

HE: Yes, this is called a dam line, HTP line, this one is used basically on lining the dams- like this is a seal trap and this the thing itself.

I: And how do you prevent evaporation?

HE: Now in operation it is strain, but what we do is make sure that- just to let you know, the water comes through the tank here, then it goes through- this is sand filter, slow sand filter, and this is a small tank for

distribution. So this is a tank for distribution and this is a slow sand filter, and now all this water will come here and is distributed by gravity.

I: Okay wow so there is no solar panels needed, no power.

HE: But water from the pan itself to the tank, water from the pan to the tank we use soil compartments.

I: And those would need expert, or PPP involvement to repair and maintain.

HE: Yeah we train on that, so this is one of the projects. It is a bigger scale of the bucket. You know the bucket is limited to less than one season, but this one if it rains the community will never have problems with water.

I: Wow, so how many of these have been built so far?

HE: No this our first one, when you were coming I was in the field to see the project

I: Wow no way, that's amazing. Where is that built?

HE: It is built in Oodweyne.

I: Okay wow, that will be really good to have in the dissertation. That will be really helpful.

HE: So then we factor in the issues of operation and other things so that whatever that is remaining is what we are looking at something the community. And it is very good, by the way, because we are also looking at each actually like been planting trees there which will also have effect on other things.

I: I was going to ask Mubarak and Mohamad Ahmed about this too but I guess you know about it too, reforestation; how has that helped with the buckets and, i mean obviously it helps with soil erosion with the gullies and the gabions and soil banks, do these interact with the buckets as well to collect water, or are they two separate interactions?

HE: I would say like, for the buckets it is a minimal scale, however for this one, I wish you could have visited. The cachtent is massive, that is number one, it will look at the catchment area where the water is now- there are plenty of trees, plenty of trees.

I: How has that affected the water catchment rates?

HE: Now that one will be able to- now when it is raining it is going to now, when it reaches down it is going to have no soil erosion, I would say, when the water is close, because its speed is reduce and the water will just flow slowly, so there will be no kind of soil erosion and again it will be maintaining, you know once the rain-when we have rain, rain maintains hydrological cycle because now the trees will be now replacing water and will have rain, all that cycle and when it rains it will go in there.

I: That's amazing, a very natural solution.

HE: Yeah, a very natural solution.

I: And not only that but the trees would also, you know, spread sapling and you wouldn't need to- it would be minimal interaction with planting trees after you've planted them- It is very sustainable, and amazing actually.

HE: Exactly, it is.

I: Yeah so that completes that section as well, we only have two sections left and I know we are over time so I hope that's fine. So, we might have already touched upon this already, actually no we haven't; the SPHERES programme suffers from a lack of coherence and homogeneity, as mentioned in the report, and as such is not perceived by staff, on occasion, working on it or by external observers as one programme. What issues have the WASH initiatives experienced as a result of the lack of programme coherence?

HE: What you say, programme coherence, which other programmes?

I: It's in relation to, I think what was mentioned was self help groups and farmers but also between sphere programmes, so from self help groups to project field work along with wash and various things .

HE: A certain type of cognition is missing.

I: Yes yeah, and the solution provided, or proposed, in the report a overall spheres programme manager. Has this been implemented yet?

HE: I think we have grantholders, and those grantholders and programme managers. I would tell you how work here- I am a technical specialist, I am an engineer and I deal with all sorts of constructions across- so we have like a grant hold managers who are overall managers, who will be able to manage that specific grant and they dont just manage the grant but they also ensure they have some kind of integration among others- so that we dont operate unilaterally as a single pillar because it has to start within, so if we are not working together as an organisation how will be be able to achieve integration with other organisations? So it starts within, and I would say this type of situation is something which it is being encouraged, and in some locations youll find that probably the challenges would be there. You may find that a cluster when they are marking out the most at risk populations, or people in need, they map this particular geographical area and probably we are having natural resource management issues and other issues so they may not be at the same spot-

I: But they do coordinate?

HE: Yes we do coordinate, yeah, but not necessarily we are the same spot, because this thing is also determined on an international level because if we receive confirmation from the ministry and the cluster, that this are the areas of need, as much as you know that the geographical area is here then you'll want to divest the needs and may need to seem to be like not being parent, and not supporting each other, but I would say it is strongly overstated.

I: I thought so, I mean, I was just putting it in there to hear your take on it. And obviously it wasn't a criticism of the programme, I think the SPHERES programme is really groundbreaking, but I thought I'd ask to see what the situation really was. Yeah so now we are getting to the end, my project is looking at gender and environment, thats the two sections really because I want to make sure- I think women obviously women are key to overcoming vulnerability and fostering resilience, but the environment and natural solutions are key to sustainability. So my question is really regarding gender dynamics, Women in Somali society are often responsible for gathering water and taking care of the household. The community sanitation committees participatory clean up campaigns have increased community sanitary activities and has increased awareness of unhygienic conditions. How has the proximity of water supply and sanitation facilities impacted women's livelihoods?

HE: Now, this one it is actually a cross cutting issue in our programming and we essentially look at it in kinds of not only environment but also protection, because- and I'll give you a small background here- if you go to the community and you want to build a water source, for example, borehole. That one- the people engaging they are men, because own land from the government. However, when you want to now do the siting of the water point, where the tap is, you get when I say water point? That one will purely consult women

I: Oh really?

HE: Yes, we as them where would you like this water point to be so they will tell us where it will needed to be and build it here, or this specific place. So it depends, so this one you have to be able to separate the two groups because if you ask a man he will just tell you the other place, but for women they say- no the other thing for women, we not only ask them where they desire to have the latrines however, what we do to help protection issues that we had, we separate them physically.

I: To men and women?

HE: Yes, the community will say, like that is the current instruction: this one is for men and there are those that are specifically for women. So that however is going there is just from different gender, because we respect that. The other thing in terms of access, we do- we encourage, although that one is also subject to funding, we do on the current projects ensure the issue of lighting, providing like- what we have done in other project, the recent project we ensure that women have solar light, yeah? But we have not done it in the SPHERE, although like I am just saying in general, what we do, standard practice in the programm, is to ensure that we are doing right now is having solar street light lamp at strategic locations near the latrines so that it can light up the nearby areas and make sure that women and girls that are using this facility at night, that they feel comfortable and they feel like they are not able to be attacked. So these are the things we do in terms of gender and access

I: Thats a very gender attentive approach to that, is there- are there also provided menstrual sanitation with WASH or is that seperate?

HE: Yeah a standard kit has menstrual hygiene kit.

I: Okay and thats in the standard WASH kit?

HE: Yes yeah, standard WASH kit it has part of the package. So it is part of the package.

I: Okay perfect, and what are the general- so this is going on tangent and back on the masonry skills but, what's the proportions for that? Because I know regarding I believe the WASH checkpoints, the majority of those you consulted with women, the 100 or 160 participants, so yeah how many of the women on the masonry side where-

HE: They were all men, if I can remember... yeah.

I: Obviously it is probably a male dominated role.

HE: Yes, however something interesting which have been observed across Somaliland, there are signs that women who are actually very active working as casuals and we encourage contractors actually, to do that. So they've been doing that amazing job, but you know it helps them to earn their own money.

I: Yeah, and it goes into the economy of the communities

HE: Yes, yes

I: Okay so just to end off, I want to discuss a bit just the future of projects and perhaps what I have omitted from the interview. So what are your thoughts on the future of Water, Sanitation and Hygiene initiatives in the context of climate change?

HE: Now the future- WASH projects in the context of climate change- number one is using solar energy as a primary source of energy, then green power as a secondary source, so if we do that we can be able to encourage to reduce greenhouse emissions and of course the problems of global warming will be reduced in a small and steady way. That's number one, number two, I am looking at the issue of having more water catchments projects, like water pans and probably dams, which will actually be able to recharge the ground water and when we plant the trees there it is going to\, through the hydrological cycle, it is going to reduce the effects of climate that we are experiencing.

I: So the dams would actually act as water reservoirs for the buckets? And for the water catchments?

HE: yes and it is going to stabilise the hydrological cycle, because if you look at the water pans, for example, if they sift the water through the ground, the trees around are going to get the water, and when there is water, the water is shining in the trees and the evaporation will increase and come back, and when it comes back again it is going to be sifted into the ground. So we are going to have a micro climate, kind of, and here I am looking at specific- focusing on specific basins within Somalia. And when I say basins, you will find that in each region there is a flow of water in a specific direction which collects-

I: Yeah like the Shabelle or Jubba basins?

HE: Yes yes, and we have like several basins along- within Somalia so if you are able to concentrate on the specific basins then I think it should be able to- help a lot with the recharge of the ground water.

I: But in the context with what is happening with the GERD renaissance dam and Egypt and Sudan, obviously the Shabelle and the Jubba basins are in Somalia, obviously separate from Somaliland, but what would the issue be with Ethiopia. Because obviously the water towers are all in the mountains are in Ethiopia, would there have to be a water cooperation approach there?

HE: Yeah it is very important, you know when we talk about these water sharing plans cutting across international borders it needs to happen.

I: Okay so this interview has lasted more than long enough for what I need.thank you for all your help and the information you've provided, thank you very much.

Issue context:	Project:	Question(s):			
Community-based disaster management (CBDM) Natural resource management (NRM) techniques has enhanced community-based disaster management (CBDM) in targeted villages. Yet, issues surrounding lack of expertise, material maintenance and upkeep costs may influence the longevity and efficiency of implementing projects.	Cash for Work (CfW)	 In what ways has the Cash for Work approach led to IGA and capacity-building behaviours? I. How does concern plan to overcome beneficiary expertise gap? Will beneficiaries require retraining? II. Have these practices spread beyond Concern project implementation? III. Will beneficiaries be able to maintain and repair NRM projects? 			
Incentivisation and dependency regarding NRM projects The SHG beneficiaries were trained to diversify their income sources, reducing their risk of vulnerability in case of disaster.	Natural Resource Management projects	 To what extent have the Natural Resource Management measures lessened ecological pressures on livestock? I. How has this influenced local migration patterns? II. Have eco-protective measures lessened local dependency on humanitarian aid? III. Has NRM implementation increased migration to beneficiary communities? 			
Eco-protection additional benefits Concern has been planting grass and sisal trees into gully-affected areas to reduce effects of erosion. Environmental security is key to community resilience and well being, and can potentially yield additional benefits in addition to those targeted by NRM interventions.	Reforestation initiatives	 In what ways has reforestation efforts contributed to local climate-resilience? I. How has this strengthened local resistance to natural disasters, such as flooding and drought? II. What synergies or effects have the planting of trees had on other NRM projects? I.e. have soil bunds provided water for trees to grow, thereby reinforcing the climate resilience? III. Do trees spread along the water sources provided by soil bunds and stone check dams? IV. What has been the ecological impact of these interventions? 			
Additional information at the discretion of the participant:	Future of the project and interview omissions	What are your thoughts on the future of NRM initiatives in the context of climate change? Is there anything else that I might have omitted in the interview, that you would like to add?			

Transcript	3:	Mohamed	A.	Ibrahim.	Concern	Worldwide
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(MI = Mohamed Ibrahim ; I = interviewer)

(// = overlap ; - = discussion transition or interruption)

I: Welcome, thank you for joining me here for the interview. So I already spoken to Abdi a bit on the issues I've had some context for what you are doing, but I would really- with this interview I'd like to specifically at risk reduction measures and the NRM, natural resource management, specifically looking at the- diversifying beneficiaries livelihood sources, and that's more cash for crop practices. And then perhaps looking at, you know, the soil conservation and protection projects that you mentioned, and then perhaps also discuss the cash for

work, and how that has helped capacity build the beneficiaries, and then there is also some problematics that id like to bring up and clarify. But yeah, let's just get right into it- so yeah, semi structured interview, very flexible, and we'll just state a question and discuss from there so, the natural resource management techniques has enhanced community-based disaster management in targeted villages. Yet, issues surrounding lack of expertise, material maintenance and upkeep costs may influence the longevity, so the duration of- and efficiency of the projects. In what ways- this is touching on the cash for work practices and approach- in what ways has the Cash for Work approach led to IGA and capacity-building behaviours?

MI: Before I answer this question, I have to start to give some information about this project. So in Concern we have a agriculture component, the other agriculture component we have divided and started two main ways for intertwining sectors, the first one is agricultural approach the second one is NRM approach, natural resource management, then agricultural production which is go to start from 2011, since our Somaliland farmer is a more monoculture, so its sorghum and maize only,

I: Really? Sorghum and maize?

MI: Yes sorghum and maize, so in order to change their mono problem Concern has been started for cultivation of, you know, cash crops like, you know, we introduce our farmers in order to change their life with mono crops for mixed crops also we have to learn them, you know, growing different sorts of crops and crop diversification. So then we provide them- our farmers- target farmers in order to give them for example, tomato, garlic, cabbage, you know also, cash crop way also provide for them- or larn them for fruit trees like papaya, citrus, guava so then we also provide for them legumes, in order to increase their nutrition values for the children- for the household families then we provided them ground nuts, legumes, even that period we learnt-we give our farmers a source of income plus value for legume for nutrition purpose for the household also for economic purpose, so they have been shifting from monoculture to crop diversification then lead farmers- our farmers are for that way, we used to get different approach to reach them, like FFS approach like lead farmers approach-

I: FFS approach?

MI: Farmer Field Schools

I: Farmer Field Schools approach ahaa

MI: Yeah, this approach is facilitating us to reach our farmers, yeah way of changing for them we need an approach to submit our input because of the farmer already knows how to plant sorghum and maize, so you want to change them in different way you need an approach- agriculture approach to change it for them

I: Do you rely on the existing practices and just adapt it to as you- yeah-

MI: Yes absolutely

I: Does the farmer field schools-

MI: Yes farmer field school and lead farmer approach, farmer field school and lead farmer approach, so we provided them with seeds, tools, we provided them training you know capacity building for them, so this component of agricultural production so we changed our farmers from monoculture to crop diversification. Now when you go to the fields- I'll show you some pictures, farmers knows how to plant for sorghum and maize only, then concern come to them, we meet them- we show them- we also practise with them. We do not want to say 'just plant plant plant, it will be good', we go with them and show them, going back come back come back and then they change. Some lead farmers have become very very successful, although there is climate change-climate change has has effects in the last five years in somaliland-

I: The prolonged drought?

MI: Yes prolonged drought, but now we don't thinking about if drought come- if he misses sorghum and maize he may have other source of income from resource.

I: Aha so whats the market like for tomato, garlic, mango- is it better than sorghum and-?

MI: Because you know when it comes to that or cities- if you want to drink juice you dont want to drink sorghum and maize.

I: Ahaa I see, so there is more of a demand

MI: Demand is high so that's the fairest one which is in agricultural production, the second one is an NRM-NRM we use natural resource management- we divide them into three sectors, the first one we use soil and water conservation by making soil bunds- construction of soil bunds- then the second one is use gabion check dams- which I will show you know- and the third one we use one is sisal tree plantation, we use afforestationafforestation means inside the gully, we want to improve the soil structure then we want to recover the land to become ordinary land, we started gabion construction so we had to plant an environmentally nomadic, you know, floral trees in our country such as sisal, you know sisal?

I: Yes yes I know Sisal; a really nice tree

MI: Yeah we use this sisal, so this will help it soil compact it then the soil accumulates, it will increase rapid integrated land to become rehabilitated so we can have agriculture. So soil bunds we construct through cash for work, gabion construction is through cash for work- sisal plantations too cash for work. So-

I: All of this is cash for work?

MI: Yes all of this but also this component is very sensitive as well so Concern is- it is cash for work it has been a lot of effort that has been good for them, a lot of money for construction.

I: And that's capacity building by letting farmers do it for themselves, its income generating as well-

MI: Yes yes, because of the- wehn we provide for them the cash for work this cash- this cash has helped for them to survive in serious areas so we have begun on that one in Somaliland. The village where we are doing cash for work is very totally different from the other village where we do construct because of cash. This cash helps for them to buy fodder for their animal, to buy- to pay school fee, to know hot to use house maintenance like food for the household, they also use it to-

I: Sell as well?

MI: Yes sell, that one as well, cash is helping for them income generation, we provide them- they could not start this until recently, very early in implementation but it helps for critical needs also. It doing the some of infanties, we prefer the cash- this cash will help with- this will help, you know, help the families and, you know, animal so somaliland, most of them would fodder to walk to eastern areas, it is pastoral area, but when you go western area its agro-pastoral, you know-

I: Pastoral is, you know, relying on livestock- animals- and agro-pastoral-

MI: And agro-pastoral is agriculture and livestock

I: Ah okay yeah

MI: It is agriculture terminology

I: Yes, agronomics!

MI: Yes yeah yeah

I: Wow yeah okay, well just to go back to the questions, you have actually already gone through a lot of my questions already actually, I was going to touch on the reforestation and Ive got a few- because I've read the project reports so I know somewhat what it is about, but yeah, so regarding the cash for work approach that you've mentioned already, it has had really good direct effects, but what i am concerned with is; whats the maintenance and upkeep of these- what's it like? And is it sustainable? Are farmers able to repair and maintain and sustain their projects after concern has left?

MI: Absolutely yeah, when we go and start this project we have to have gear in mind, what is the time concern when we left this place? So it should be a exit system for us

I: Exit strategy yeah-

MI: Because of- we have to learn the lead farmers- our farmers or we have to give them escaping us, that without concern they can start. So I will give you very good sample of agriculture- previously, as I have already

explained, we have established the shift from monoculture to crop diversification and process, this farmers- we have established FFS for lead farmer, you remember, we established the FFS

I: Farmer field schools, yeah.

MI: Farmer field schools are a group constructed of twenty to twenty five members of the family- members of the community, so then

I: Twentyfive members of the community?

MI: Twenty to twenty five members of the community-

I: And thats per village

MI: Yeah per village, so these villages- that's a group way, FFS, if you had the FFS it is a group- if you had a lead farmer, that's a specific person. That's the difference between them. Lead farmer is teaching individual but, you know, FFS it a a group way.

I: And does the implementation of soil banks, gabions and reforestation- does the FFSs rely on the soil banks? No?

MI: Yes- the soil banks they will pant they're farm, they have a communal farm- then there should be a soil bank structure in that farm for conserving the soil plus water it will increase filtration rate for long time and reduce, you know-

I: Yeah yeah soil erosion and loss of water-

MI: Bunds will help them, in order to increase their productivity because of- you have a soil, fertile soil, because of soil banks will help- I will generally explain the effects of soil banks: it will increase the filtration rate, it will increase their moisture rate, it will also use for the general storage of surface runoff because of the main activity of soil banks, the main role for soil banks are to collect and store soil runoffs when the rains come the water will start to run off, then in order to stop this water- to increase in a beneficial way we have to construct bank lines so we plant some soil banks to store water, I will show you this- then if the filtration rate increase the moisture will go long, because rain fed farmers because of rain filter means farmers prepared for the rain-

I: Yeah and most farmers are dependent on rain, if not all?

MI: Yes, if you have water- irrigation water, that has an impact, so we provide water then the other challenge is for farmers to repair, for example last month rain was very less, those who have the banks- the moisture rate was more than 300mm, because of surface run off water has been stored. Thats farmers moisture, you can plant some, you know-

I: Wow so you want to keep that 300mm average rainfall water in the water yeah, in the farm-

MI: Yes and if the rain continues- if the farmers are not saturated, the rain or the flood is going easy, without- it will keep all the water.

I: But you do keep it in water catchment, you know, bucket projects-

MI: Yeah in some water interventions, yes, WASH will do-

I: Yeah I spoke to Harun about this- so yeah, soil banks and FFS, the gabion checks is that more individual or is that also FFS?

MI: In gabion?

I: Yes

MI: In gabion we use- its communal and is for many farms so we come together to have an agreement, we want to build this one, we want to improve this one- the community itself are doing and in Concern we encourage to do like this, to do like this- for example last week I was in the field for seven days, i showed them how to construct the gabion check dams- to do like this, and without concern, they can do it themselves.
I: Wow so now they are self sustaining-

MI: yeah so they have already constructed, they know they have to maintain those areas, then thats why we approach concern, if we do this project the community has to have some, we call community contribution. For example, we are going to construction of the soil banks they have to construct 15%, community construction. We also, we are going to learn them, without concern they have construct.

I: So its setting a standard of 15% so that they are incentivise to-

MI: Yes exactly-

I: Ahh okay

MI: Thats the reason, which we can say it makes them sustainable. Some for example- when we construct the gabions dams the soil bank farmers will start to [build it] from the catchments to the bottom. Some of them have already constructed their soil bunds without any contribution- without any contribution from concern, they have the experience they continue, but some- and also to afford to maintenance we will maintain the bunds if it gives a deficit-

I: Wow so that also, you know, avoids dependency on-

MI: If some- the first times we come this is another option-

I: And now also that the knowledge is snowballing, so it allows, you know, the knowledge to spread to village to village, and people are constructing, you know-

MI: Experience, you know, changes some of our approaches, somaliland society are an oral society. We go to somali society, especially the rural area, we have to show them what we are going to do- if you show do, do do, but if you show and sit with them, they will apply.

I: So villagers are self-reliant, and avoid dependency yeah, what was the last thing you mentioned? Either way, I have it on script. So yeah, they are able to maintain and- the more simple ones, I guess dam checks and boreholes, for example, thats not-

MI: A single person can not build a borehole, its communal- because the boreholes they require equipment, communal, the community has to come together sand say that a bore hole would be maintained by community contribution, but in soil banks it is easy; just putting- and you know, conserving soil banks it is trying to maintain this one- and the reason we select soil banks- what the reason we do soil banks, and why soil banks are important in agriculture- it is an easy- thats one of the second, one of the forces that, you know-

I: yeah the cost and benefits is yeah-

MI: Yeah, one of the- we select this farm it is easily maintained, so if you construct through cash for work, concern pays, we have a vision at that time- then after we go- we left it from that side, if the soil bank can make it for the animal then the rain by the other, you know, natural disaster risk? It should be there, if it is not become like- sorghum and corn crop, the whole process will start from zero.

I: Really? Because the extreme weather just-

MI: yeah sometimes it happens like that- three years back or two years before, there was a cyclone called SAGAR,

I: Yes I've heard about that one-

MI: Yeah, it has destroyed many farms- you know just we were thinking of the soil banks, they were destroyed from the whole farm, to zero

I: It destroyed soil banks as well when-

- MI: Yeah even the whole farms and forest
- I: Wow all the trees got pulled up?

MI: yes, but anyway, it is arid area so soil ain't reaching much. But when cyclone and natural disasters like this comes, it is an exception

I: Is it a big thing that concern- is there anything that can avoid or mitigate it?

MI: Yeah, for mitigating climate change or something?

I: Like cyclones like SAGAR-

MI: Ah yeah when we starting- when we are talking about providing the training for the community, we select from the community- elders, community leaders, committee- you know, names like development committee, community committee, you know sher?

I: Sher? Share, oh yes share. They share with each other?

MI: I mean sher- sher means religious leaders .

I: Religious leaders oohh yes, like Imams?

MI: yes, from the imam, from the jobs, from the women, from community leaders, those members of the community we putting them and we calling a community basic system committee

I: And that is part of community disaster risk reduction?

MI: Yes, some of the beneficiaries use like this one but as concern we use the community system committee so this committee they put together. They come together, they have their community action plans, they know which kinds of disasters is in their region, in their village- [they have] mitigation plan, preparedness plan, contingency plan they have also, you know, a provisions plan- all disasters management processes.

I: Wow thats amazing-

MI: So in concern we-

I: So thats part of- whats the abbreviation for that community..?

MI: Community basic system management committee, CBDMC.

I: Yeah, I've read about them a bit-

MI: You know project thing- inside project, you know, outcome- one of the outcomes talking about that- we established proposal to established 25 CBDMs

I: Twenty Five of them? That was the goal for 2021? The whole year plan?

MI: For Somaliland, the whole year plan

I: Yeah okay, twenty five of them?

MI: We reached the goal of twenty five, yes. Then we established that twenty five- twenty five management committees in twenty five different villages.

I: Wow in twenty five different villages? Borama and Gabiley?

MI: Borama and Gabiley, yes, so we gather the communities, they come together and make something called action plans. This year we are going to do- for example, I remember two years ago some of the committee they are aware- they told the standing commission about desert locusts they come together, they have preparedness plan, contingency plan and mitigation plan then they start- after desert locusts come they harvest as much as they can- they do a lot of awareness with awareness systems, so they will come to you- they have something information about that and they will give you information about the desert locusts and at that time, they have to do this, they have to do this, and it is a big challenge and as Concern we cannot provide every single activities in the proposal because the proposal this year we want to build five buckets of soil- you know, of water- and sometimes if the proposal was for them- this year we need borehole as a concern we can not afford- how many boreholes, that is the challenge. It's a risk, you know, the disasters are very serious and

how the mitigation plan, preparedness plan to, you know, protect them even after the drought come- how can water storage after the rain come help food for animal fodder, something like that- the whole experience of that. But you know, basically, to have experienced these disasters, they can effectively hold them on that one.

I: That's really good and that sort of, allows the community itself to combat climate change and without concern-

MI: Yes exactly, after concern go- then with the training, we show them- we change them, its not just concern though, it must depend- they should not depend on us. Because of concern, we left once a time because- five years we staying in that village, five years- and after Concern leave them what do they have? There should be something you have, thats why we learn them and we tel them we are not going to be here long time to remove from them being dependant on us, so they should be independent- they should have some information about-according the other way we focus like that one- we always establish a community basis and prefer the training with two times, I mean with three times. One for free to learn from, and we prefer this training- it is the second one is district level, different people then come to teach each other-

I: Ah okay so is that the tripartite agreement..?

MI: Yeah, so this year we lead the last year for Concern we established come together in a regional way- with NADFO, NADFOis a organisation in somaliland dealing for disasters. So Concern plus NADFOplus community come together- so then this community just- if concern left they know NADFO. Concern plus NADFOplus community come together-

I: How do you spell nadford? N-A...?

MI: NADFO, national disaster risk force, I can give you a book talking about like this one.

I: NADFO, okay yeah. I think I've seen it mentioned in the report, yeah so I think- yeah I mean we have really covered most of the questions without even having to raise them up. I would like to touch on one last thing that I found quite interesting, and you mentioned this earlier on in the interview- the reforestation initiatives and how eco-protection how it has additional benefits- that you know planting trees- yeah and Concern has been planting grass and sisal trees into gully-affected areas to reduce effects of erosion. Environmental security is key to community resilience and well being, and can potentially yield additional benefits in addition to those targeted by NRM interventions. In what ways has reforestation efforts contributed to local climate-resilience? In what different ways?

MI: Yeah, for example when I am talking about, you know- climate change main factors is global warming, global warming from carbon dioxide- then, as we know, if we plant more carbon dioxide will be less

I: Aha yeah creating more oxygen, so thats one?

MI: Yes that's one, for new one- when I was doing a master, it was climate change and environmental systems, so- for make an extreme is a process of deforestation, because forestation helps more carbon dioxide absorbed from the environment but in our project it is a different way, we established, we plant the sisal trees for recovering the area-

I: For recovering degraded land?

MI: Yes and I will show you some pictures about that one- so if more plants come there more land will recover and the climate change will do less, which depends more on the rain will come- in rural area, or project area, if we plant more we receive more rains, but farmers- I mean very many- agriculture and environment they look different time each month- environmentalists want to plant more trees but the farmers want the land- so Somali society if you go to rural area, you are divided into cultivated area and farmland areas- there are not much trees, they have already cleared away trees to create something, you know- pastoral communities, livestock communities, the animals feed on those plants-

I: Can you still have pastured land if its forested?

MI: Yeah

I: Okay, so you can still have goats and-

MI: Yeah yeah in some of our country, separate from drought- there are reserve areas, also there is \, you know, natural areas so but, in, you know, the western part of the country, which I have already told you is agro pastoral community-

I: They don't have forests?

MI: Yes, most are farmers so they want the tree- they want cleared land for cultivation so they will cut the trees.

I: Wow okay, so that's actually a bit of an issue there, because obviously you need trees to stop soil erosion and increase the water level.

MI: Yes- the tree, the specific tree we use to store in the areas should be something which is beneficial for them. The sisal they use it to- it can be used in the rainy season to feed the goat, it will produce new saplings, something like that- they will use for home construction, and also make rope, they make from the rope, it is very useful for their animal, for housing purposes. So tree of sisal has benefit fo them- so that is why thats another angle for them, it has benefit for them- if you for example, this year we have planted 10,000 sisal trees.

I: Wow, in 2022?

MI: In 2022, 10,000 sisal trees, if these 10,000 sisal trees- if each of them become a mature five years from now, wow it will be amazing.

I: And is, self regenerating- that is really the coolest thing with trees, you dont have to do anything it will spread themselves. What about- are forest fires a problem for Somaliland?

MI: Nowadays, the Ministry of environment has just emphasised there are more regulations from parliament and so there is plan to put it in force, to kill the forest fires. Because one of the climate change factors is deforestation, so if you cut a tree you absolutely force very hard climate change, so now-

I: So it is also a legal-

MI: Yes, and also it is punishable if do chop wood you use for coke or charcoal, big punishments, you will be arrested and put in jail and also- plus money is taken from your household. It is total punishment- now if you are charcoal producer, they will hide from the government.

I: Interesting

MI: yes, so if you are charcoal producer you will be able to be punished one a time- then we will stop our deforestation- deforestation means cut off trees, if the forestation more trees will increase and climate change will ease- if you plant more trees and climate change adaptation will- is forestation and planting more trees, climate cannot hit you and not have effect-

I: and it makes them more climate resilient-

MI: Yes absolutely

I: And it is very much a climate smart strategy- I mean all of them are climate smart strategies! Well I think that is all we can do for today- thank you very much for your time and expertise.

Issue context:	Project(s):	Question(s):	
Decision-making capabilities and gender dynamics While there were successes registered and progress made with the SHG initiatives, there have been challenges implementing programme interventions effectively addressing gender norms and risks identified in the contextual analysis.	Gender Awareness training sessions in SHGs	 How have SHG sessions targeting gender-related attitudes both at household and at community levels, changed local gender dynamics and perceptions? How does women empowerment shift from the confines of the household to the communal level? How effective has the designation of Gender Champions been to changing gender dynamics? Are they provided an incentive or reward? How significant has the Engaging Men Approach been to this? In what ways have SHG initiatives heightened women's participation in local decision making processes? What risks are incurred as a result of women empowerment? Which synergies with other aspects of the SHGs and WfC have strengthened the empowerment effect? (NRM and CfW) 	
<i>Entrepreneurial and</i> <i>agricultural capacity building</i> The SPHERE program has been successful at contributing to social and economic development of women through their support and awareness raising for women in SHGs.There are, however, still deeply-rooted factors that affect attitudes on gender roles in Somaliland	Youth Enterprise Development Entrepreneurial and agricultural training sessions	 How has Concern sought to tackle inequalities along gender lines incurred by social marginalisation and unequal access to market information? I. How significant has SONKE workshops with staff members been to address transformational gender dynamics? II. How has the NRM Cash for Work approach empowered women? III. How does Concern intend on challenging the deeply-rooted factors that still affect attitudes on gender roles? 	
Strengthen SHGs and CLAs The Irish Aid Programme Fund (IAPF) and HPP extension document has states that there is a need to deepen the stability of the SHGs and Cluster Level Associations in target villages in Somaliland.	Self-Help Groups (SHGs) and Cluster Level Associations (CLAs)	 How does Concern intend to consolidate and strengthen these existing SHGs? I. Has Concern found new ways to strengthen the linkages of the SHGs to financial service providers and join up with the third phase of SHG federation? II. If so, has this decreased local dependance on Concern? 	
Water access and gender Dynamics Women in Somali society are often responsible for gathering water, consuming a lot of time	Borama and Gabiley provinces	How is the reliability and adjacency of the water source affecting women's social and economic opportunities? I. Has time liberation as a result of access to water directly contributed to increased IGA or productivity?	

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which could have otherwise been spent generating income, pursuing an education or participating in local politics.		I. Have girls been able to attend school more as a result?II. Have water sources provided a reliable source of income for local communities? To what degree are women involved in this process?	
Additional information at the discretion of the participant:	Future of the project and interview omissions	What are your thoughts on the future of SHG initiatives in the context of climate change? Will Exit Strategies become more difficult or prolonged as a result? Is there anything else that I might have omitted in the interview, that you would like to add?	

(AF = Ayanle Farah ; I = interviewer)

(// = overlap ; - = discussion transition or interruption)

I: -record, there we go- ves so welcome Avanle and thank you for making the time to participate. I am really grateful for your expertise and insights, it will be very useful for my research. So I was hoping to touch upon two projects you've been involved with- I mean obviously twenty five communities have had the self-help groups, total- I am also would like to cluster level associations and how the shg feed into that and, you know, how dependency works, well not how it works- not dependency, sustainability and participatory and community-led interventions and how important that is. And I would just like to touch upon four topics, the first being the changing gender dynamics and increasing women's decision making capacitors through the gender awareness sessions, so you know looking at the gender champions, engaging men approach, that sort of thing. I am not sure- obviously they apply to several aspects right? And you've got- hopefully you can clarify that. And then providing entrepreneurial and agricultural skills which help with capacity building, and then I'd also like to briefly touch on the cash for work initiative and SONKE training sessions, and then just ending off with how you plan on consolidating and strengthening the existing self help groups and then discussing water access and gender dynamics- I am looking particularly at Borama and Gabiley- In particular with my research, so yeah lets just begin: so while there were successes registered and progress made with the self help group initiatives, there have been challenges implementing programme interventions effectively to address gender norms and risks identified in the contextual analysis. How have self help group sessions targeted gender-related attitudes both at the household level and at the community levels, changed local gender dynamics and perceptions? How exactly have self help groups helped with that?

AF: Thank you [candidate name] and welcome to Somaliland- the somaliland programme. My name is Ayanle Farah and I am the project officer- to answer the question, self help groups are community based approach- it is a community based approach which supports women in a rural context, and the Somaliland programme focuses on gender through the self help groups. This approach supports gender- it 100% support women, we are lacking many crucial- but the approach has been developing supporting girl and women. Concern provides support, self help groups, that provide business start up- by the time Concern does not provide self help group business start up, first concern maybe establish the self hel groups at community level since there is no formal- just formal, the shgs in the rural areas but concern established formally shgs in community level. This support that the women in rural areas have a basic literacy and numeracy skills since we provide a course that takes about six months, also by that time if they can do that and if have the interest then they can both read and write.

I: So already they- you encourage reading and writing-

AF: Yes we provide them class, it takes six months. They take five classes per day, five classes!

I: Wow thats a lot

AF: Yeah yeah

I: And that's literacy and numerics?

AF: Yes yes, they learn basic somali and maths- so that they can read and write, this supported them [so] they can make that account and establish assistance training so they can make calculations for the small businessesand at the end now they are able to take back positions on community level and also take part in decision- in community level. S but this is support provided by concern since you are approaching at the close of the project, now around 70% on community level, women approach the decision making level. They are making decisions on a community level and they are also part of the leadership role of the community.

I: How much does the leadership- is that easy to quantify? How many leaders have become members..?

AF: They are part of community development committee-

I: Oh I see.

AF: Now- they are part of decision making, women should be part of the institution because they have small business and they feed the family.

I: And they go right to the household, because traditionally women take care of the household, is that correct or?

AF: In a culture- thats what Concern has been transforming, only women have been involved with the communities, also taking care of children, so after training this- provided by Concern, that alone has changedand now they are able to go out and to establish small business, and the women appreciate that because of the harsh time, hard time, the rules of the government during covid-19, many lost their incomes-

I: Because of covid-19?

AF: Yes! Yes- on a district level like borama and gabiley, because women go work in urban areas like the communities in borama and gabiley, and most of them are uneducated and not that much skills before- like they have staff, and because of covid-19 they have stopped.

I: Has things changed now? Have-

AF: Yes things are good now, but there are still women who are- now the women are the breadwinners-

I: Wow really? That's great!

AF: Women are breadwinners, they are breadwinner, because we have the small businesses, they are part of the VDCs they are part of the cluster level association, which provides a bigger umbrella for funds and costs from government. They improve their small business so they can feed family, and the state- now the women have the capacity to do these benefits- to do a lot, so they are impacted by the institution.

I: Aha so now the men are thinking that the women can actually take care of me now, thats a good thing.

AF: yeah yeah, the logic- very logic, they say how can start a project- by the time some start the project, men will say why the organisation only supporting women, they should be men. And also women cannot do a lot, they have the mentality- the kitchen mentality they have had this for all of their lives, they say they will constant-

I: Wow and changing their perceptions will encourage them..?

AF: Yes now they have said- we will not say women can't do this, now they encourage- now in the field visit they say 'wow we really have to thank concern' because now because of the covid I lose my job so now the household gets taken care of by the women- yeah, my wife. So they like it and realise it-

I: So that is in addition- well, helping empower women has actually helped make households more resilient to shocks, both economic and..?

AF: Yeah yeah, so what women- what women at household level- it is contributed to household level, and support it- school, educate kids at school because by the time we provide them with small business, they have profited from the misses- they give so much household.

I: Yeah so all those are helping, keep the family afloat during hard times, either drought or covid-19? Or as you said the breadwinners, keeping the households being good in hard times. Women are helping as well as men? Or is this more, yeah I don't know- I was just trying to build a point on what you were saying but- anyway. I think,

yeah so you've already answered my next question but how is the real- really the transition? Having read the reports, the IAPF report, how does a household move from the household level to the communal level? So from the SHG to the CLA? What's the criteria for- or do you just clump them together?

AF: The criteria- there are a lot of it on the surface- the SPHERES programme have achieved over fifty at the SHG level so by the time you are- by the time COncern established in the area, the criteria is that they need to cooperate- like 5 km desert area but in 7km settled distance so that they come together in the meeting and talk about- they should have the economic area, the same understanding- those are the same locality, always they have a cooperation and remind each other.

I: Ah okay so the sense of community-

AF: Yeah, so by the time we established cluster level association, we expect that the SHGs be in the same location- like, anything up to 200 SHGs in local level institutions- so we cannot make cluster level association in Gabiley- five in gabiley and five in borama, seven kilometres in distance, it takes time and it will need a lot of future support to bring them in a meeting because they have to trust support up to seven km and that is-

I: That is a long time-

AF: Yeah it is a long time so there should also be the same income level, SHGs-

I: Oh okay, and the- how do you, sort of, assess the economic level? Is it based on cash or also farmland and livestock? Because obviously in rural contexts- goats and camels contribute to the households, sort of, economy. Do you factor in all those assets?

AF: Yeah mainly the- you see, by the time concern support, we provide cash support and then maybe since it is rural area, mainly small business- livestock trade, sheep, camel and goat. And then they buy from the community, they have a lot- they fighting it and then they take it to market. Then we see for the change of market, we count them and we see whats the difference, like first- by the time we provided the start-up, if they have twenty carrot, but coming two months they make like- they sell and then they take cash, yeah.

I: And then they have the assets?

AF: Yeah yeah

I: Okay okay

AF: And then we see what is the increase, if it has increase- so far though there has been setback due to covid, market has been closed. For the livestock and small businesses this has not been an issue but like, some- most of them sell vegetables-

I: And cash for crop?

AF: Yeah! Cash for crop yeah, cash crops thats it, yeah-

I: That was helpful, thanks for that, so what effects has the designation of gender champions had on changing sort of gender roles and perceptions?

AF: Mainly though that has not been on a district level, only in Hargeisa and with the staff-

I: Ohh it is for the staff not the beneficiaries? I thought it'd be for the men of the society or women- ohh I see

AF: But still we have good things-

I: How significant has it been- has it given them something to be proud of to incentivise good behaviour?

AF: Yes yes it has has a opportunity on a community level- by the time we have conducted training- we put them the training- it has a effect on communal level, we fight in the committee- they feel they are betrayed, they say ah gender champion- 'as long as women contribute household income, i'll support them'. Women has proved it that they can provide currency-

I: And thats within the CLA's?

AF: Yeah

I: So yeah also, whats been the impact, this might not be relevant to the SHGs but, what impact has the engaging men approach- engaging the men who are, you know, the ones who often control land, own land, how has that been in the approach in changing perceptions and dynamics?

AF: That has been a rigid perception, it was one of the things that could not go through-

I: Oh really? It had to change-?

AF: Because land in pastoral communities, a lot have it- they do not have as much as that, houses, but still they are cooperating, men are cooperating, woman as long as they are contributing they can use a portion of the land and yeah-

I: Ah okay, so it is conditional?

AF: Yeah exactly

I: So conditional that they can use the land, because it is favourable to them, I see I see interesting. Well yeah so, I mean we have touched on this already, but touching on what you said just now. What consequences has there been in empowering women, has there been issues, conflicts or tension-?

AF: Yeah in the household level there are some cases that the women goes through- because of this, it is tough

I: Hmm yeah masculinity

AF: Yeah yeah, and that is something we cannot interfere with because some person say this is not the waywhat if they come to your wife and yeah, but it is still on a community level there has not been much happening. But drought has been a big challenge for the business of the women, because most of them depend on pastoral and vegetables, and also land price goes up- if land is dried up, there has been no rainy season this year across somalia and this has impacted small business, and that depends the quality of vegetables and groceries.

I: And that has a lot to do with- we will get to that later but the access to water has had an impact on- obviously water access has impacted womens empowerment, but yeah that sort of covers that first section, although actually, which synergies, synergies meaning effects on other things- what synergies have the SHGs and the work for cash- or which synergies of the other aspects of the self groups and the work for cash has strengthened and empowered women? So has there been any other, sort of, effects of the cash for crop? I remember reading the natural resource management-

AF: There is some cash for work that contributes, yeah- some of the women are involved in cash for work, in the area they are part of the cash for work. Some are members in self help groups, this integrated approach supports the household level to increase their income for the programme because the cash for work, the income contributes to household income because if the women struggles in other areas she can use cash for work.

I: Okay so you get the double- into the household

AF: Yes so it is the condition of the cash for work and SHG for the household, but it is physical work, the cash for work, but it is income

I: Ah manual labour, so it's mostly men?

AF: Certain impact, it is heavy work many women can not take that- some of them do work.

I: But do women often control the money from the cash for work? Men are obviously out there working-

AF: Women have control if they are not working, then they have control of that one. But small business for the SHG, its controlled by women.

I: And they are on that?

AF: But they can propose things for the men.

I: Ah okay fascinating

AF: Women are completely in control of income from small business, ver control, because they are the one running and the ones establishing, they have cash flow

I: Wow that's really good, that's really amazing that they can own that themselves. Okay so that sort of covers the first section of that I wanted to cover, now we are moving into something thats very similar- more into the entrepreneur training and agricultural training- more into the specific. The SPHERE program has been successful at contributing to social and economic development of women through their support and awareness raising for women in self help groups, but there are still deeply-rooted factors that affect attitudes on gender roles in Somaliland. So looking at youth enterprise development, in particular, how ahs concern sought to tackle the inequalities along gendered lines incurred by social marginalisation and legal access to market integration through the youth link program

AF: The youth link program does not operate in somaliland, only in somalia

I: Is it all in somalia?

AF: Some of the programmes but in Somaliland it is rural areas, rural areas whereby we mainly focus on women to have- to reduce inequality and to support woman, providing all the support by the time we have searched the community- concern supports start-ups and we provide them cash

I: Wow, for start-ups?

AF: Yeah for start-ups, because a person can not start a small business-

I: Yeah it would be hard

AF: Yeah but it is six months- provide all, like training and also provide all the material, cost material, and also we train them in- it is high quality, three hours per day. By the end of it they are able to read and write, read somali and they can write, also they can do basic numerics. How to do conversion-

I: And that feeds directly into the business-

AF: Yeah yeah, she can most of the moneys, it is electronic- yes cash for work, they can now- they have the ability to know how much- they can read and write, this provides the support it has been used to increase equality.

I: The programme- as you mentioned, it focuses on the poor and vulnerable?

AF: Yes the programme, it is called strengthening the poorest households, the ones who are needing

I: Yes the most vulnerable, okay.

AF: So the operation and all those efforts, together, that contributes to clan and now the women contributes to the household income and now she can go to school, and now they are able to visit health centres because now there is some income

I: Wow so the time liberation aspect has really impacted health and education?

AF: Yeah yeah, because of that generation- the gender, now they are able to make decision for- to make income for households, from small business, changes to school, and household to health centres.

I: And also, you know, a lot of somaliland- and any refugees send money back. Is there a lot of diaspora cash coming from outside into somaliland?

AF: Thats not really, no.

I: So yeah, so I think we have really covered most of section one- but you did say changing gender perceptions are still a bit of an issue

AF: Yes it is still a bit of a challenge...

I: Will it just take time or whats the solution?

AF: we approach on a community level, we try- because there is a conflict management committee, there's a conflict management committee- we report cases because there has been some area, they can call online and they say 'oh that is not how you should behave'- and as concern we cannot interfere but still community canmake that solution, but still we push the community conflict committee to solve that case.

I: So there is a legal aspect to it-

AF: Yeah yeah, [candidate name] the call it is- so why? Whats the issue you have? What is the issue of the wife being part of the community, starting small business what is the issue?

I: And it might be religious or cultural that-

AF: Yes and that we must respect, but as long as the women help the community- she can be part of that community- some are against that but women cannot go alone in rural area, but still if she is in the same community she should be part.

I: yeah and still doing small business, there is nothing wrong with that. And I read in the report that there is a snowballing effect with knowledge, and practice, where men are seeing the benefits of their wives working so they are obviously more acceptable of that.

AF: Yeah yeah, also sometimes they see the example of the child of the household- they see support of the family is taken the leadership role to the woman.

I: Really? In what context? In the context of the business or the household?

AF: In the household because they have nothing, and now the man say if the women has nothing I can control her, but if she has different thing I cant control her-

I: Oh really, wow so theres the conflict management committee, maybe a small portion-

AF: Yes a very small percentage-

I: Yes very small.

AF: Because they see things the other way around- they say yeah concern supported my household, through my wife, but still my wife is taking me off

I: And then they also shift the gender roles and make women different in a different way, okay.

AF: Yeah, and there is a very large percentage that say women- my wife is the breadwinner of the household, so I really appreciate [it]. They just think at least one of the household member should do the breadwinner

I: Thats amazing, and thats a high percentage? That is very useful to have noted down. So yeah I think that covers that aspect, so there was also mention in the IAPF review, or the extension review of why- due to covid, when they were assembling the programme- they said there is still a need to deepen the stability of the self help groups and cluster level associations in Somaliland. How does Concern intend to consolidate and strengthen these existing SHGs and the CLAs?

AF: Some of the actions that has been an institution- providing capacity building training, skills training so that the challenge in time, so they can run the small business and afford the small business. In the hard time provide them capacity building training and cash induction, a top up-

I: Ah I see so cash support //

AF: Because inflation, price of commodities are increasing- a dramatic increase, and also there has been covid-19 affect, the combination of these factors have effected the SHGs- so to recover this negative high percentage, there have been- there should be cash support, cash injection

I: And thats from the cash consortium?

AF: It's just top-up, just top-up.

I: Its just top-up okay I see. Provided through the self help groups?

AF: Yes, yeah.

I: Okay, is that mobile cash transfers or is it..?

AF: We transfer- they have a bank account so we transfer into the bank account.

I: Okay that's really helpful- yeah so that probably covers it so has Concern found new ways of strengthening the linkages, so that sort of applies-

AF: And also, linking them to financial institutions through cluster level associations- cluster level associations to the market, micro-finance institutions- they provide them loans to sustain the members, so that they recover

I: Wow so thats really useful.

AF: And that is one of the ways that we have tried to strengthen the sustainability chains

I: Perfect, yeah this next bit- so all this combined \, how has this decreased dependency on concern, and how does this factor into the exit strategy of Concern?

AF: Agro-finance institutions are also cluster level associations, very good access- because they provide support to the self help groups and cluster level associations- and the micro-finance institutions provide a fund, now they are appreciative and they've already funded each other.

I: Wow so that is really locals interacting with local- it is no longer external foreign aid-

AF: Yes definitely, it is local, micro-finance institutions are in gabiley and borama. They are still supportingcluster level associations, and also self help groups, because it is localised.

I: Thats- I mean that is a huge factor in independence, because Concern is in Ireland technically, but is operating here so- yeah no thats a massive help for dependency- thats what i was looking for with the exit strategy, the end goal of Concern right? To let these people and beneficiaries go on their own and do- and be sustaining on their own. But yeah, so now we are on the last topic. So water access and gender dynamics, this is really where my topic and what I am writing about- because I am trying to link the gender and environment and how both can help each other, so women in Somali society are often responsible for gathering water, consuming a lot of time which could have otherwise been spent generating income, pursuing an education or participating in local politics.So how is the reliability and adjacency of the water source affecting women's social and economic opportunities?

AF: Yeah they have- there is real impact, because women are always usually the ones responsible to fetch water from the water points, so that has shifted the focus of the community. But now that has tried to improve- that the women is the only one to fetch water-

I: She isn't the only them anymore?

AF: Yes still there is a lot of- still they are- but now they are able to go out and- I think the community by establishing themselves- but also there is still affected their ability-

I: Because they don't have to walk fifty or even two hundred kilometres to the nearest water source.

AF: Concern has constructed very good buckets, boreholes, it takes less time because if- mainly it is set up near community, where concern construct bucket, it conserves a lot of time. It takes less time for women to take water from water point and it impacts the community, but it still takes time to take water in Gabiley, ten kilometre, for the water. But concern support water construction has saved a lot of time.

I: Yes so that feeds into the next question, you know- there's been a remarkable rise in IGA activities, has there been a correlation between that and the access to water?

AF: Yes since their taken very small amount of time to fetch water, yeah the proportion of time to work on the business- they have far more time for business, because fetching water is like a sickness. Because otherwise by the time you used to fetch water kilometres, the businesses closes, we cannot take back to the community-because we have to look after the children, our cooking duty, and also to fetch water ten kilometres. But by the time Concern has built berkhed for water consumption, yeah, the community contribution.

I: I heard Borama was a big success story because it no longer relies on concern for a lot outfits activities, because it is still the borehole- now there is a cash man or taxman on top-

AF: Yes there are also things like that, but still some areas still- it needs to have a person to collect.

I: Are there women who are in charge, or is it just men who take charge collecting taxes for the water?

AF: It is like a borehole, mainly men.

I: But yeah the small businesses, the cash for work, for women that's so important. Perfect, I think that covers everything for the interview. Thank you very much for your help Aynale.

AF: Thank you [candidate name] hope we will see you visit Somali programme again.

Transcript 5: Aidarius	Muse and	Abdi-Karim	Omar MoFRD
Transcript 5. Aldarius	white and	Abui-Kai iiii	Ollial, MOEKD

Issue context:	Project(s):	Question(s):	
Goal: SDG 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	The SDG goal aims to protect, restore and promote sustainable use of terrestrial ecosystems.	 How does the ministry plan to restore and protect biodiversity? I. What responsibilities do Range/Forest guards have to ensure conservation measures? II. How does community participation factor into conservation measures? Will the FMNR approach help increase economic status for families and communities? III. How will raising community awareness and mobilisation by engaging key stakeholder aid in this initiative? 	
Goal: SDG12: Sustainable consumption and production chains play an instrumental role in combating climate change.	The SDG12 goal aims to ensure sustainable consumption and production patterns.	 How does the ministry plan to ensure sustainable consumption and production patterns? I. How will a participatory process factor into the development of an environmental legal framework to address gaps related to point-source pollution? II. How effective will the addition of environmental protection to the school curriculum be for changing consumption habits? III. How has government support in the form of tax relief and subsidies been for ensuring the growth of sustainable industries, and decline of unsustainable industries? 	
Goal: SDG13: Accelerated climate change is the cause of extreme weather which is worsening existing insecurities of local peoples and environments.	The SDG13 aims to take urgent action to combat climate change and its impacts.	 How effective has the ministry been to address the implications of climate induced insecurites? I. How will developing a contingency plan help mitigate the effects of climate change induced hazards? II. In what ways will capacity development interventions strengthen MoERD's capacity on climate change adaptation and mitigation? 	
Coordination with the Ministry of Water (MoWRD) Funding and conflicting ministerial interests has the potential to interfere with the capabilities and efficiency of interventions.	Considering the overlap and similar goals of the ministry of water and the ministry of agriculture.	How has ministerial politics impacted the efficiency of MoWRD conservation and sustainability initiatives? I. In what ways has the availability of funds impacted the ministries capabilities to enforce its strategic plan?	
Additional information at the discretion of the participant:	Future of the project and interview omissions	What are your thoughts on the future of MoWRD initiatives in the context of climate change? Is there anything else that I might have omitted in the interview, that you would like to add?	

(AM = Aidarius Muse ; AKO = Abdi-Karim Omar ; I = interviewer) (// = overlap ; - = discussion transition or interruption)

I: Yeah so if we could just begin with your name and position within the ministry of environment

AM: Hello, and welcome to the ministry of environment. My name is Aidarius Muse and I am the director of planning and research at the ministry of environment for climate change in Somaliland

I: Perfect, yeah thank you for taking the time to participate in the interview. This is an interview for the university of sussex towards a dissertation on climate change and the gendered impacts and the ecosystems impacts and how climate smart interventions can solve- participatory interventions can help solve the challenges of climate change. So in this interview I was hoping to touch upon three sort of areas within your expertise, the first being looking at the sustainable development goals before- So the first being the sustainable development goals before- So the first being the sustainable development goals set out in the five year strategic plan from 2021 to 2025, touching really upon the goal fifteen, twelve and 13- so number 15: protecting, restoring and promoting sustainable use of terrestrial ecosystems, number 12: ensure sustainable consumption and production chains, and number 13 combating climate change- and then, those are the ones I will be looking at, but I would be interested in talking about reducing inequality among with other countries as well, but I will only touch a bit upon that because it is not that relevant to what I am looking at. And then I'd like to look at the coordination with other ministries and INGOs, and how efficient and how important that has been to the interventions, and then I'd just like to end of by talking a bit about the IDRISS project and how significant that has been as an example of how your interventions have worked so- lets just begin so yeah the sustainable development goal fifteen aims to protect and promote sustainable use of terrestrial ecosystems. How does the ministry plan to restore and protect biodiversity?

AM: Welcome again to the ministry of environment- the ministry of environment is responsible to protect and conserve somali environment and as well as to promote climate series, so to achieve this we prepared a strategic plan and also a national development plan, environment sector. We set objectives to achieve these goals, to have eleven outcomes with- aligned with the sustainable development goals. The ministry of environment has work plan here and that will plan treatment from the government, and this outcome and budget and- has strategic implementation so we set goals that to conserve and restore agricultural reserves we stop almost five rangeland reserves for climate change.

I: Five? Okay

AM: Yes five, we did a lot of water and soil conservation activities within these- to restore these areas, we also restore eight forest reserves to protect the area, for somaliland.

I: Yes because my next question involves, what responsibilities do Range/Forest guards who have to ensure the conservation of yeah- forests, how important has it been for them and how are they affecting them? What abilities do they have?

AM: You have government four hundred armed forest guards and those protect the area through community engagement, through awareness, they protect and restore systems-

[Abdi-Karim Omar enters the office for the interview]

AKO: Sorry I was not aware that you were in, I have been looking-

I: No worries, what is your position in the ministry?

AKO: Technical adviser

I: So yeah, we were just on the topic of the sustainable development goals in the strategic plan, and we were just talking about number fifteen, so the protection restoration and promotion of sustainable use of terrestrial ecosystems- and I was just yeah- Aidairius was just mentioning how important forest reserves are but also how you protect the rangelands and rangeland restorations, and that there are four hundred guards stationed at the forest reserves. What responsibilities and actions are they doing to ensure the forests are protected?

AM: These forest guards are responsible to protect the rangelands and also- the rainy season we protect fully, the rangelands specific areas, and in dry land- the winter, we open it up for the community to graze and settle.

I: In the dry season?

AM: In the dry season, and within a year to increase soil fully, we are now- in rangelands we have seasonal restoration force, in forests protected areas they are fully protected and there are some the local communities is to be used and cut down, and kill the animals so we protect fully these areas.

I: Thats perfect so that feeds into my next question, how does community participation factor into conservation measures? Will the FMNR approach help increase economic status for families and communities in that sense? How important has community participation been?

AKO: You mean the building help for the community?

I: Yeah

AKO: Really, multiple people help to create the livestock- so the conservation of the rangelands so is an important technique that they help us give them- and helps the amount of livestock and helps the rangelands. So the more we protect the rangelands the more the pastoralists will benefit from it. so effectively, this is something that they say- the ministry or government even, why do you not do something kind of rangelands protected, and also protecting the rainy season, so this is effectively in their interest. Because we are mandated to protect, and especially in the sustainable of natural resources, so the project benefits both sides, the people and animals and nature. Even the agro-pastoralist- the agro-pastoralist are also dependent on rain, sustainable creating- and they will use their livestock, although they are very small, they also use that grazing. So this kind of linkage and chain that come together, shows that there is capability of the government, environment and the local pastorialists.

I: That's perfect, and regarding the agro-pastoralist, is there ever any tension regarding because, you know, trees would take up farmlands. Is there ever any tensions when conservation techniques come into conflict with the interest of creating more farmlands?

AKO: No no no, there is no turf, agro pastoralists are healthy. I am sure you at one point, actually 2.2% area is better for grazing, for agro pastoralists- so there are small pockets of agro pastoralists, and maybe they depend on rainy season. They need to get the rainfall so they get rain then- so there is no conflict, not so much conflict that we can take everyday. Although there is a problem right now, that we have, it is private enclosures. Every-every, person whether they are pastoralists or agro pastoralists is using to fence and area which is 2km squared without even protection.

I: Which does not have protection?

AKO: Yes, which they protect! Because you know, the land is there and the population is going up, increasing day by day, so there is a tension of land. People are increasing and still they don't have a land, so they do some kind of illegal private enclosures which is not legal exactly. Our ministry, we know that all these enclosures are rangeland areas. So they close all their area, at that time there will be some conflict in the dry season or in the drought. You know, most of the nomad- those nomads who use the camp, and migrate- they giving no priority to country borders. They can move from here to kenya if they want to, if they private enclosure right there then they- they dont care about boundaries, they dont care- so this, they remove from ethiopia and they come back to somaliland and they see everywhere is closed so they come and they also carry guns

I: Really?

AKO: Yes sometimes, carry guns- from place to place to protect themselves. So when they cross the border and see everyone is closed, they say 'how are we coming back, it is february and you closing this area?!'. They demolish directly-

I: And the FMNR approach, what does the FMNR approach stand for?

AKO: Effectively the FMNR is an intervention-

AM: IT is a new concept introduced by the wealth nation, they have the thermal side- they restore one kilometre and they see how the land restored and come back. And basically when we are going to restore the rangelands-rainy season we engage the community, we establish committees and have each pay them to protect the area. It's kind of, education-

I: Yeah that sort of feeds into my next question: how will raising community awareness and mobilisation and engaging key stakeholders- how will this aid in this initiative? I mean, both in mobilisation and awareness of community, but also for stakeholders how- is there training involved for the community and stakeholders or?

AM: It goes only community, we train community- our connection is so weak and one of the weak points is to have strong stakeholders. Either private sector, INGOs and the like, this kind they give less priority to the environment. But the community we train them, how to protect the wildlife o to conserve rangelands, aslo soil and water conservation we train them- so we train them how to use sustainable- conserve and manage the reserves.

I: Thats amazing so-

AKO: So why are the stakeholders not coming in- the community are the stakeholders they are part of the stakeholders

I: Oh I see, no I was just interested in the weak point that you mentioned that stakeholders are not as willing as the community to conserve and protect. Anyway, now I'd just like to focus on the sustainable development goal number twelve which is more related to sustainable consumption and production chains and how important they have been to combating climate change- so raising awareness and training and ensuring sustainable production patterns- so the SDG goal twelve aims to ensure sustainable consumption and production patterns. How does the ministry plan to ensure sustainable consumption and production patterns? In particular with communities and industries as well, for example with plastic bags or with consumer habits.

AM: The ministry has developed climate change policy and also a waste management act. We actually- this, you know- in the last five years we go a little much- we ban plastic bags in Somaliland, totally.

I: Which act is that under or is that part of the climate change policy?

AM: Waste management act. And we are going to develop a waste management policy, and also we have also established new department for waste management. And also we, close to operations with waste managing, controlling waste and soil- and a strategy to develop new dams. How also we have developed new concept related to alternative energies, we borrowing from the private sector to develop solar system, some types we use in projects, that works with the communities to cheap energy.

I: And tax relief as well?

AM: Yes and tax relief as well.

I: So yeah touching on the participatory- you have already mentioned how you are engaging the community to making change, how will a participatory process factor into the development of an environmental legal framework to address gaps related to point-source pollution? Point-source being- because there was mention of a gap in the legal framework.

AKO: The implementation- who are going to implement? Who are the stakeholders we have to contact? How can the community be effected? So it means also for- there is also a problem of decentralisation, stemming from all levels- institutional levels to another level, so this kind of chain does not make strong implementation. The other chain is the coordination and cooperation between stakeholders and institutions in the government- only the implementation of this plan. Maybe they have some overlapping angles, and this makes some kind of problems for the government institutions. So this is the other problem, is that when we are developing this framework, the term of policies are not focusing on the future generation, sometimes they will just absolutely focusing on present implementation. So there must be respect for how things are going and how things are changing, so really- there are a lot of problems for the ministry, government and national committees- I think three different close- this is called wildlife conservation so theres a lot of management and-

I: And waste management?

AKO: Climate change- ah and a lot of different- but there is a lot- these government need implementation so straight into cooperation between the other stakeholders we do with the ministry on these policies, so-

I: Is there any need for stakeholder engagement or strengthening, but also better coordination and strengthening between government ministries like the agriculture and water?

AKO: We are still fresh to government, although we are ten years and above, but still there are problems of legal skills of the people who are intended to implement this legal- all those who are developing it. So this gap, this is an absolutely one of the- unless we get a strong coordination with the government institutions, and then coordinate with other stakeholders, whether they are private or community, at that time we- how we can focusing on population then we can go to the environment sector then the community- then that can be decent. This kind of approach is not so strong even though it is- it is still not so strong.

[Interview halted due to a meeting taking place]