

Water Market System in Wajir - Kenya

August - September 2012



EMMA Final Report Sections

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Section 1. Executive summary

Background

Drought cycles in the Horn of Africa are now progressively shorter, with droughts occurring every 5 years or less. This has had a devastating effect on the local population. In a context where 80% of the population are poor or very poor, and have experienced both high food prices and restrictions on traditional livelihood strategies, the frequency of these droughts has seriously undermined the ability of the local population to recover from these shocks. This combination of factors threatens the way of life for the largely pastoralist population of the Arid and Semi Arid Lands in Northern Kenya.

Despite the increasing occurrence of droughts, contingency planning and community preparedness are not yet effective. Early warning systems are not yet successfully transmitting information to the communities that need it. As shown in the drought of 2011, weak organisational capacity and systems for preparedness and response mean that responses are delayed - and costly.

In this context, the La Nina Consortium, (composed of Oxfam GB, ACTED, VSF-Belgium, VSF-Germany, and VSF-Switzerland, and Concern Worldwide) was formed in consultation with DG ECHO. This Consortium aims to contribute to resilience and preparedness strategies. As a key component, the Consortium wanted to look at early warning systems and contingency plans for the emergency provision of water to those sections of the population that have some means of livelihood, but who, in the face of increasingly frequent and severe droughts, may fall into chronic poverty.

Rationale and Methodology for EMMA¹

Lessons learned from previous assessments and responses indicated that to improve the Consortium's understanding of effective preparedness, they would need to better understand what water is available and what is people's access to this water. In light of water transportation services in use in the area, the Consortium wanted to understand, also, what services were available and how the market and private sector actors operated within this market.

The EMMA was planned and designed as part of contingency planning and preparedness, analyzing water access and water markets based on the comparison of a 'normal' year (selected as 2008), and one selected as an 'emergency year' (2011).

The rationale for undertaking the EMMA was to:

- To inform response analysis and design of future WASH Drought response scale ups in Wajir County;
- To inform the Consortium contingency plans to identify appropriate activities and how to best target on responses to shocks (i.e. drought)
- Strengthen Oxfam GB's national capacity in market analysis and in its use in response analysis and design as well as DRR, preparedness and contingency planning;
- To build Oxfam's understanding of existing coping mechanisms and anthropological practices around water access and rationing in areas of chronic water scarcity, and to inform programming on ways of reinforcing these mechanisms.

¹ The EMMA toolkit has been developed by Oxfam and IRC since 2007 and published in 2010, with the aim of supporting non- market specialists in analyzing market systems in emergencies. Since its launch 17 market assessments have been carried out around the world in rapid and slow onset. Reports can be found on the EMMA website: www.emma-toolkit.org.

Based solely on the existing water market, the EMMA set the following key analytical questions:

- How is the water market system affected by a severe drought?
- Has the market the capacity to cover the population needs? ie how far can it expand?
- What makes water transport competitive / lucrative?
- How can we do emergency water provision more efficiently, responding to people's preferences?
- What limits people's access to water?

Main findings

The assessment found in the hydrologic catchment area of Wajir, there was enough water available to meet the needs of the population. Access to water is restricted, primarily, by purchasing power, asset ownership and by the type of water sources available in different communities.

The market can cover the unmet water needs of the population as water can be available in sufficient quantities and transportation capacity is sufficient to bring the water from water points to users. Therefore, the response can rely on the market and its actors. However, NGOs have been dominating the contracting of water trucks, which has effectively reduced the negotiation power of communities.

Response Recommendations

a) Support access to water for vulnerable populations

Since the market functions, cash transfer programming and involvement of the private sector at different stages should be considered as an alternative to in-kind distribution.

b) Transportation of water from permanent water points to localities that do not have permanent water points

The response can use the market actors' capacity and does not need the building of a parallel system for water delivery. This will require the facilitation of linkages between water transporters and community members in limited cases where those links could be weak

c) Delivery of water within the communities that do not have boreholes

Actors within the community have the capacity to procure water, transport it to their locality, store it in underground tanks and sell it to the rest of the community. They have proven to have the liquidity and necessary linkages to make water available for sale in the communities. How to build on these linkages should be explored.

d) Provision of water in communities that have boreholes

In communities that have boreholes, access to water should be facilitated through the boreholes and WUA that manage them. Mechanisms should be put in place to ensure that WUA are made accountable for support received and that they ensure free water delivery for the population.

Section 2. Emergency context

Background

Recurrent droughts and weak community preparedness resulting in the erosion people's resilience and livelihoods in Northern Kenya

In eight out of the past ten years, there has been drought somewhere in the Horn of Africa affecting 67 million people (ECB/ECAPS, 2011). Drought cycles have been occurring progressively more often, from every 10 years to every 5 years or less. This has served to undermine the resilience of the population and makes it increasingly difficult for communities to fully recover from shocks. Moreover, these droughts often occur in contexts where conflict, high food prices, and restrictions on traditional livelihood strategies have already impoverished large sections of the population².

This is the case in the Arid and Semi Arid Lands (ASALs) of Northern Kenya: there the largely pastoralist communities are particularly vulnerable to recurrent climate-induced crises, and the frequency and severity of droughts in the area is threatening the pastoralist way of life, forcing many people to drop out of the pastoralist system, moving to urban centres or becoming dependent on food aid or support from relatives.



Community preparedness to droughts and other disasters is still weak. Where contingency plans exist, they rarely include those components that would help an effective response and they are not linked to County and national level plans or funding opportunities. Early warning information too often does not reach the affected communities and the capacity to analyse data is still low. Weak systems and capacities for preparedness result in delayed responses which are costly for people affected – who lose their livelihoods and potentially their lives – and for governments and humanitarian agencies that have to mobilize more resources than if they had anticipated and mitigated the crisis.

The La Nina Consortium: Preparedness and Contingency planning

In this context, and building on the lessons learnt from analysing the harmful impact of previous delayed responses³; the La Nina Consortium was formed in February 2011 in

² ALNAP *Humanitarian Action in Drought Related Emergencies*, October 2011

³ from recent studies and reports, among which 'A Dangerous Delay' Report, January 2012, which detailed that that late emergency response is costly, both in terms of human suffering and resources

consultation with DG ECHO to create a network of partners⁴ prepared and ready to respond quickly and effectively to emergencies in the Arid and Semi Arid Lands of northern Kenya⁵.

In the longer-term the Consortium aims to contribute to resilience and emergency preparedness strategies, through strengthening the target communities' preparedness and resilience to stresses and shocks. It targets primarily those sections of the community who currently have some means of livelihood (mainly pastoralists) but - who faced with stress or shocks (such as the increasing frequency of severity of droughts in the area) - are at a risk of falling into chronic poverty.

Following a period of focus on building partnerships in the drought response, the Consortium has now entered in its 3rd programmatic phase⁶. This phase takes a longer-term approach, and encompasses the development of a 5-year resilience strategy. One of the immediate aims of this third phase is to support enhancing organisational capacities among partners so they can effectively anticipate and respond to emergencies.

Access to Water as Part of Resilience

As a part of this process, the Consortium Agencies aim to develop a contingency plan for effective and timely emergency water responses in the context of severe droughts. This contingency plan seeks to improve the preparedness of organisations to respond to severe drought, through both the establishment of a vulnerability surveillance system ready and able to identify early warnings of severe droughts on time and through effective planning for the emergency provision of water to affected target populations in their areas of operation.

Historically, Consortium Members have acquired significant experience in implementing emergency water provision in response to crises caused by severe droughts. Lessons learnt from past assessments and responses have highlighted the need to further understand:

- people's access to water,
- the types of water sources available
- and the water transportation services available, (in particular in particular an understanding of private sector actors in the transport and marketing of water).

Having established the need to understand these different components, it became clear that undertaking a market analysis – narrowly linked to the needs assessments – would significantly bolster and shape the development of the contingency plan and the identification of effective early warning triggers.

The EMMA, market analysis to inform the design of the contingency plan

The EMMA methodology is based on the value chain development logic, and is adapted to the speed and information needs of humanitarian response design. It provides the analytical framework to determine if a market system can support in delivering the response, and therefore if cash transfer programming is feasible and appropriate in the specific context. It is based on the principles of 'Do No Harm' and sustainability, as it looks to use and reinforce market systems, rather than building parallel systems that could create dependency. It thus identifies the relevance and feasibility of market support responses.

⁴ The Consortium is composed by Oxfam GB (lead agency), ACTED, VSF-Belgium, VSF-Germany, and VSF-Switzerland, and Concern Worldwide (since the 3rd Phase).

⁵ Isiolo, Mandera, Turkana – north, north-east, central-north and south, Garissa, Marsabit including Moyale, Baringo, Pokot and Wajir

⁶ The focus of the first two phases was to strengthen the relationship between partners whilst responding to the drought in Arid and Semi-Arid lands of Kenya in 2011 and 2012.

To date, EMMAs have primarily been used in emergency situations to assess the state of the market in the emergency affected zone and compare this with how the market functions in a 'normal year'. This analysis then leads to the development of a series of immediate response recommendations.

In **this** case, the EMMA has been conducted to **inform preparedness and contingency planning**, that is to say, analysing the market using a crisis scenario and comparing it with a normal – non-crisis - situation. It was felt that an EMMA assessment of the water market in Consortium operational areas would be an appropriate way of answering the questions posed by the Consortium and help develop the La Nina Contingency Plan by specifically providing detailed information on:

- people's access to water and water sources, and main constraints faced by people in relation to access. In particular, it was important to ascertain whether the most limiting factor was availability of water, people's ability to access it, or their purchasing power.
- the water sources on which the population depends during the dry season and their capacity to produce the quantity of water needed by the entire population;
- the water trucking market and its capacity to deliver quantities of water sufficient to meet the population's needs.

The Consortium Partners have planned to carry out EMMA assessment in 2 of their operational areas to inform the Contingency Plans: in Wajir North where Oxfam GB is operational and in Marsabit where VSF-G is operational.

As part of the Consortium's commitment to building organisational capacity among partners, the EMMA in Wajir aimed to build the capacity of partners through training and practice during the implementation of a real time markets assessment. The EMMA was also built as a training of trainers, preparing the assessment leads of the Marsabit assessment.

The EMMA assessment in Wajir North in Oxfam GB operational area

This report presents the results and recommendations of the EMMA which was carried out in Wajir from the 30th of August to the 7th of September 2012. The assessment was carried out by a team of 17 staff from La Nina Consortium Agencies (Oxfam GB and VSF), Local Partners (WASDA, ALDEF, DPA) as well as the District Water Officer. It comprised one trainer / facilitator and 3 team leaders. The majority of staff were either based in or familiar with Wajir and had extensive experience of the area and its issues.

While Oxfam worked in all areas of Wajir in the drought emergency response, the assessment focused on Wajir North and partly Wajir West: the extent of the area was selected according to the team size and time, determining feasibility, as well according to implementation areas of the La Nina Consortium partner (here Oxfam GB). Moreover, security considerations helped to set the focus on the North and the West. The selection of areas covered was carefully done to ensure that the different types of access to water were represented within the selected area.

The EMMA analysis has therefore focused on Wajir North and parts of Wajir West and extrapolates to the rest of the Country where possible.

Section 3. The target population and gap analysis

Contingency plan Emergency scenario: severe drought

In order to inform the La Nina Contingency plan for the humanitarian response to a drought, the EMMA focused its analysis on two main scenarios:

- The emergency scenario: a dry season during a year hit by a severe drought (called here a 'severe dry season' or 'severe drought');
- and a baseline scenario: dry season during a normal year (called here a 'normal dry season').

The analysis aims to inform the design of the emergency water provision contingency plan through the comparison of the emergency and baseline scenario.

In this part of Kenya and the Horn of Africa, there are two distinct rainy seasons: namely *Gu* which lasts from March to May, and *Deyr* that extends from October to December. There are two distinct dry seasons: the *Hagaa* extending from July to September, and the *Jilaa* extending from December to April. The timing of these seasons can range considerably from year to year and from region to region. See Annex 6.

According to secondary data and conversations with community members, there was a consensus to define 2011 as the most recent year with the most severe drought. The dry season of 2011 was therefore selected as the worst case scenario or 'bad year'. A 'bad year' was described as the one resulting from two consecutive failed rains. We will also call that a 'year of severe drought'.

2008 was selected by community members as a 'normal year'. A normal year was described by community members as a year with average or slightly below average rains during both the short and long rains.

Situation analysis and needs during the severe drought

As detailed above, the needs assessment for the severe drought scenario in this report is based on 2011.

In 2011, Kenya experienced what was described as the most severe food crisis in the world at that time, with over 3.5 million food insecure people. The failure of the rains to arrive in 2010 and the late arrival and poor performance of the 2011 rains combined with rising food and fuel prices, and the weakening Kenyan Shilling to create a devastating, life-threatening food security crisis in the Wajir District of Northern Kenya. This combination meant that the affected population's access to the most basic levels of food and water was threatened, the prevailing nutrition status was precarious, and household assets were being rapidly depleted.

Within Wajir's population of 478,523 people at least 80 % are pastoralist or agro-pastoralist ⁷. The prolonged drought conditions resulted in extreme pressures on pastoral livelihoods. Assessments in the area by Oxfam GB and Partners indicated that households in Wajir District faced acute water stress. Water scarcity in the district reached precarious levels – all surface water reservoirs (pans, dams and ponds) were dry - leading to comparatively unseasonably lengthy distances to travel to water sources (up to 15 kilometres, compared to 'normal' seasonal averages of less than 3 kilometres). The average per capita access to water in the affected areas was approximately 3 litres per day, less than 20% of the minimum volume of water to meet basic daily needs. While water was available from boreholes and water trucks, this needed to be paid for and certain sectors of the population were unable to pay for this water.

The drought *severely* affected about 66% of households in the area, and led both to crop failure and to losses in animals. Indeed 93% of households suffered *some* degree of livestock losses – critical in an area where the livestock sector accounts for over 60% of

⁷ Drought Assessment Northern Eastern Kenya, (Wajir East, South and Mandera), April 2011, Save the Children

income earned under the pastoral livelihood zone in the district. In pastoralist communities, 40% of livestock died through disease, wasting, malnutrition and starvation. The livestock market became increasingly inefficient and in general traders suffered losses of income of up to 60 or 70% due to unpaid credit⁸.

Wealth Grouping in Wajir

For the purpose of the assessment, a wealth ranking carried out by Save the Children in 2011⁹ was used and further adapted by the assessment team based on information gathered from community Focus Group discussions and interviews. The ranking classifies the different wealth groups found in Wajir County based on their livelihood, animals owned and mobility which has important relevance when analysing water access of these groups. See table 1 below.

Table 1 Wealth Ranking:

Wealth group	Very Poor	Poor	Middle	Better off
% of total population	40%	40%	15%	5%
Livelihood strategy (sources of income)	- Casual labour; - charity; - firewood & charcoal sale; - wild fruit collection	- Casual labour; - livestock; - firewood & charcoal sale; - collection of wild fruits; - selling of milk & animal products	- Livestock; - running of small shops; - salary from employment; - remittances; - selling of livestock	- Business ownership; - salary from employment; - remittances; - livestock
Animals owned	0-5 shoats ¹⁰	5 camels, 20-30 shoats, 1-2 donkeys	15-40 camels, 10-20 cows, 30-40 shoats	>70 camels, >100 cattle, >70 shoats
Mobility	Sedentary	- Migration of camel owners; - shoat owners migrate within close proximity of their settlements	- Sedentary (business owners); - migration or employs others for to migrate with livestock	Pastoralist settled and employs others for to migrate with livestock
Volume (L/p/d) - shared w animals?	Normal Dry Season- 8 L/p/d, Drought - 2.8 L/p/d	Normal Dry Season- 10 L/p/d, Drought - 3 L/p/d	Normal Dry Season- 10 L/p/d, Drought - 10 L/p/d	Normal Dry Season- 41 L/p/d, Drought - 40 L/p/d

The target group in an emergency response to a severe drought

While the very poor and poor socio-economic groups are considered as the more affected groups in terms of access to water, WASH responses in 2011 have been implemented on a

⁸ Drought Assessment Northern Eastern Kenya, (Wajir East, South and Mandera), April 2011, Save the Children

⁹ Drought Assessment Northern Eastern Kenya, (Wajir East, South and Mandera), April 2011, Save the Children.

¹⁰ Shoats: sheep and / or goats.

blanket targeting basis. This was done in recognition of the fact that the vast majority of the population are represented by the poor and very poor wealth groups. Moreover, it was considered that selective targeting would have induced a higher increase of costs than the increased impact and that providing water to better off would in all cases lower the pressure on the community and favour redistribution processes if they exist.

For the initial calculation of the gap (people's unmet needs), the team decided to keep the plan of blanket targeting within the targeted communities, and to leave it open to discussion during the EMMA analysis if the assessment brought further elements.

In Wajir North (and West), Oxfam aimed to cover 30% of all communities, based on those communities who were receiving food aid through the Hunger Safety Nets Programme (HSNP). Therefore, the target groups for the EMMA analysis was the entire population of those targeted communities within Wajir North.

Gap analysis

The market analysis requires the calculation of the gap between what the population needs and what it has access to: ie the unmet needs of the target group. Indeed the EMMA approach compares the unmet needs and the total needs of the population with the market capacity to discuss if the market can cover the needs.

Households collect water indistinctively for human, domestic and animal consumption. Water collected is used for small and weak animals and the households do not make a distinction on that use. As a consequence, water received from NGOs in case of severe drought is used both for human and animal consumption. In other circumstances, such as in Somalia and in Ethiopia, needs have been set at 5 litres per person, per day. Indeed, bodies such as Kenya WESCOORD (the Kenya WASH coordination body, co-led by UNICEF and the Ministry of Water & Irrigation (MoWI)) recommended this level. However, as a result of observed water usage, for this assessment, needs were set at 7 litres per day. The rationale for this was to provide 5 litres per person per day for people, with an additional two litres for animals, given at the household level.

Table 2: Gap analysis

Target group	HH in need	HH shortfall	Other aid	Total gap	Likely Gap duration	Preference for help
Total Wajir 670,000 people						
Wajir North Areas affected by drought 135,505 households						
Areas targeted in 2011	76,560 100% targeting	535,920 X 5 litres / p / day	No other aid	34,452,00 2,679.60 T / week	3 months = 90 days	
Blanket targeting	In 30 % of communities			134 truck trips		

		535,920 X 7 litres / p /day	No other aid	48,232,800 3,751.44 T / week 188 truck trips	3 months = 90 days	

Section 4. Critical market systems

To address the central rationale for the design of the EMMA, namely, to better understand the water market system to inform the contingency plan and to support the design of emergency water provision response, the single critical market system selected for analysis was the water market system. This was selected on the understanding that this includes people's access to water as well as the water trucking component. Moreover, in terms of the size of the team and the time available, it was necessary to focus on only one market system. This aimed also at providing sufficient space to the capacity building objective.

During the design of the assessment other market systems were considered (food – maize/ rice, fodder / hay, animals / shoats, veterinary drugs, skilled mechanics, spare parts, fuel, chlorine). It was agreed that those should be recommended for future assessments, and in particular for future joint EFSL – WASH situation analysis.

Key analytical questions were designed to guide the analysis, in line with the information needs identified.

Key analytical questions:

- How is the water market system affected by a severe drought?
- Has the market the capacity to cover the population needs? ie how far can it expand?
- What makes water transport competitive / lucrative?
- How can we do emergency water provision more efficiently, responding to people's preferences?
- What limits people's access to water?

The following section highlights the findings from the assessment. Section 6 extracts the main conclusions and section 7 focuses on the resulting response recommendations.

Section 5. Water market system - Key Findings

Data analysed from the assessment led to a number of key findings. These are summarised very briefly here. The market maps which demonstrate these key findings can be found on page 19 and 20.

A critical finding of the assessment was that: within the hydrologic catchment area on which Wajir depends for water, there is sufficient water to cover Wajir water needs as well as the needs of the other areas that depend on this same hydrologic catchment area. This is proven by the fact that during the worst year (severe drought of 2010 - 2011), needs of the

catchment area were covered, while water points still had scale up capacity in their production. The assessment found that existing water points can expand their production of 25% in Wajir North and West (Annex 9).

In Wajir County, in North Eastern Kenya, there is a range of water sources or methods of accessing water. These range from existing water sources such as open water pans (reservoirs), shallow wells and boreholes to water supplies that have been organised by individuals or communities and which ebb and flow depending on the need. In Wajir, these water supplies come in the form of water trucking and transportation as well as with the emergence of opportunistic water vendors (carrying and selling water in a number of forms) when the need dictates.

The critical issue is that, while water pans and shallow wells are free (or may carry a small, annual payment¹¹), boreholes, water trucking and water vendors require payment. This payment is beyond the means of the very poor and poor wealth groups, which each make up 40% of the population. Thus, access to water is partly determined by purchasing power.

Furthermore, not all communities have equal access to these water sources. This necessarily limits access for those communities that do not have permanent water sources. Indeed, communities with less permanent sources of water had to pay more to access water in a severe drought. This reflects the fact that there is a higher price for water that requires transportation.

The central findings of the assessment were that, while water is available to meet the needs of the targeted population, during the dry seasons, people's access to water depends on the permanent water sources available in their vicinity and on their purchasing power.

This following section presents the market assessment findings, looking at detail at:

- Permanent Water Points,
- Water Trucking,
- Water Traders,
- End Users

1. Permanent Water points

The access to water for the population in Wajir North and West depends on 3 main water sources (in addition to direct rain water):

- Water pans
- Shallow wells
- And boreholes.

During both rainy seasons (*Gu* and *Deyr*), the population covers its water needs mainly with rain water and run-off water, collected in diverse surface collection points, in particular in water pans, combined with permanent water sources (boreholes and shallow wells).

During both dry seasons (*Jilal* and *Hagaa*), the population relies on water pans, shallow wells and boreholes, especially once water pans have dried. Although in normal years – the water available in water pans can last throughout the dry season, in years of severe drought, pans are no longer able to act as a water source, as of 1 to 3 months after the last rains.

¹¹ Such as the establishment and payment of 'watchmen' to control access to water pans.

Water Pans



Water pans are an essential source of water for all communities that have access to them – especially for the poor and very poor. Water pans in Wajir are rain-fed twice per year, during the months of April and October. Several pans are filled by flood waters from the Ethiopian highlands, so that even if there is no rain in Wajir, they may still fill.¹²

Towns that have multiple pans typically separate the pans by use – certain pans are for livestock only, while others are reserved for human use.

The water pans require minimum maintenance and the village chief has direct management over most water pans. Access to the water is typically free. Some communities have set up a monthly “membership” fee of 20 KES/month/HH to pay a ‘watchman’, to control access to the water pans.

Normal Dry Season - Most water pans in Wajir are small and dry out completely for 2 to 3 months of the normal dry season (between July and September) although there are a few bigger pans (notably in Bute, Korondile, Qudama, Adidijole) that hold water the entire year during a normal year. In some of the communities with larger pans, water starts to be rationed in July/Aug/Sept when the water level reaches a critical stage; each household is allowed 4 – 5 jerry cans per day, and livestock access is reduced or restricted completely.

Severe Drought - During a severe drought, every pan in Wajir dries, with the last going dry in July/August. During the severe drought of 2011, when there were two consecutive failed rainy seasons (October 2010 and March 2011), the majority of the pans were dry by January 2011. As water levels decrease, water is rationed and human consumption is prioritized above animal consumption. As the water level in the pans decrease, water quality also decreases, as sediment becomes more concentrated within the pan's water.

Shallow Wells



All shallow wells in Wajir are privately owned, yet use and access to the wells are communal. They require little maintenance, although some do become silted during the rainy season. Shallow wells tend to be grouped together in clusters, ranging from 12 – 400 wells in one geographical area. The shallow wells are located along seasonal rivers, and access shallow groundwater stored in the sandy beds of seasonal rivers.

¹² The capacity of these pans ranges from 2,000 to 6,000 m³. The length of time that a pan holds water depends not only upon total capacity but also upon water depth, seepage losses through the soil, and evaporation rates.

The water from these is free, and hence they are very important to the poor and very poor who do not possess the purchasing power to buy water from boreholes.

Normal Dry Season – During a normal dry season, the shallow wells are in use both by their owners as well as other people who travel to use them. The wells do not experience a measurable decrease in yield, and are able to meet the needs of all users who come to fetch water from them.

Severe Drought - While access to these points is normally open to all, the water yield reduces significantly (over 50% decrease) during a severe drought, and during this time the owners of the well have priority usage; others have access only if water remains after owners needs are met. The number of people and animals travelling to access these water points increases significantly, with reports of people queuing up to 20 hours to access water.

Boreholes

There are approximately 80 boreholes in communities in the targeted areas of Wajir County. Boreholes are typically located on the outskirts of a village / town (1 -3 kilometres from the village centre). In most cases they have storage tanks, water troughs for animals, and pipeline distribution systems which deliver water to water kiosks in the village centre. In some places, village dwellers fetch water from the water kiosks in the town (connected via pipeline); in others, there is a kiosk with taps at the borehole. Pastoralists and their livestock fetch water from the borehole itself.



Boreholes fall into two categories: low-yielding ($0.5 - 3 \text{ m}^3/\text{hr}$) and high-yielding ($>4 \text{ m}^3/\text{hr}$).

Low-yielding boreholes can be categorized as follows:

- Mainly used for domestic use and not animals (except young & sick animals at the HH);
- Water is rationed per HH;

- Typically not used for water trucking except in extreme cases
- Typically have storage tanks, water troughs for animals, and pipeline systems into the town center (connected to kiosks).

High-yielding boreholes can be categorized as follows:

- Serve domestic households, animals, town centers, institutions , and water trucking;
- Not rationed;
- Some of these boreholes are frequented by large numbers of donkey carts which purchase water for re-sale in village centers.

All boreholes are managed by a Water User Association (WUA) who sets tariffs, controls access and is in charge of operation and maintenance¹³. People are charged for water either per jerry can, per animal, or per water truck. Some WUAs give free water to extremely vulnerable community members, though this is not always the case; and credit is rarely given.

The operation of a borehole entails a number of running costs, including: fuel for the generator (typically diesel), personnel (borehole operator, watchmen, water user association members), spare parts, mechanics (for repairs), transport costs (spare parts/mechanics/fuel). The cost of a major breakdown can be very expensive (20,000 – 400,000 KES). Cost recovery mechanisms are in place at every borehole, in which users are charged either by volume (jerry can or water truck) or per animal (different animals incur different charges).

The ministry of Water & Irrigation (MoWI) has 1 mechanic and 1 electrician available for more complex repairs. The local NGO District Pastoral Association (DPA) also employs electro-mechanical technicians to perform repair work.

Normal Dry Season – the majority of boreholes with pumping systems in Wajir operate between 6 – 15 hours per day during a normal dry season, with a small number of them report operating 20 hours per day due to high number of livestock. The boreholes typically serve people in nearby villages (who are served by the pipeline distribution system from the borehole) and middle and better-off livestock owners.

Severe Drought - During a severe drought, boreholes operate from 12 – 24 hours per day, with the majority of them operating more than 20 hours per day. However, many boreholes reported operating 24 hours per day. This heavy use of the pumping systems (along with low levels of regular maintenance) results in frequent breakdowns of the generators and submersible pumps. The allowances of the mechanics are paid by NGOs. WUAs tend to call on NGOs and MoWI first for support and repairs – sometimes they get mechanics and spare parts this way. Only if this fails do they use their own resources to pay for these services. They either call MoWI mechanics or District Pastoral Association (DPA), a national NGO which employs 2 mechanics. Most spare parts can be delivered on-site within 1-2 days, but a few times they have had to wait up to 11 days for the repair to be completed (due to spares not being in stock). Minor spare parts can be found in hardware stores in Wajir and Moyale towns; however, major spare parts are kept in stock in Wajir town by the DPA, though they sometimes need to be purchased from Nairobi. DPA has a good link with major suppliers in Nairobi in terms of spare parts (even complex/expensive ones); they can be delivered from Nairobi quickly (within 1-2 days) and are obtained by DPA at a discounted rate¹⁴.

In severe droughts, and especially in the severe drought of 2011, most boreholes received fuel subsidies from NGOs, in the form of donated barrels of fuel. While this sometimes

¹³ The only exception is Buna Borehole, which is a Water Service Provider (WSP) registered with the government – it is essentially a private company.

¹⁴ Discount rates are given to the DPA, as they are regular customers.

resulted in prices being reduced by 50%, in many cases the WUAs reported that they did not reduce the price of water even when receiving subsidies¹⁵.

2. Water transporters

The water transportation market in Wajir has a high capacity, and involves a variety of actors. Commercial water trucking in the area started after 2005, initiated by individuals in the communities who owned trucks, and was then taken up by NGOs contracting water transporters. The number of water trucks has increased substantially since 2008-2009 after the severe drought and the extensive use of emergency water trucking by NGOs, that encouraged local truck owners to increase their transportation capacity through buying more trucks.

The three main types of water transporters that make up the market are as follows:

- **Transporters owning trucks:**
 - Transporters owning flat-bed trucks and / or water bowzers (trucks with a permanently installed water reservoir – only used to transport liquids). These are mainly based in Wajir town.
 - Transporters owning only water bowzers. It is rare for transporters to only own bowzers, but those that do are mainly based in Wajir town.
- **NGOs as Market Actors**
- **Government trucking.**
- **Middlemen with no trucks**, renting trucks from other areas during periods of high demand (from Nairobi, Mombasa, Ethiopia).



Figure 1 Water bowser.

a) Transporters who own trucks.

Normal Dry Season - Water bowzers truck water throughout the year, and both water bowzers and flat beds that can be easily converted are available as and when the need arises. Of the approximately 200 trucks which are locally owned and based in Wajir,

¹⁵ In 2011 prices seemed to stay the same – though some have since increased. The fuel subsidies did result in some boreholes reducing the price of water by 50% but it was unclear if prices would have increased if there had been no fuel subsidies.

approximately 20% are water bowsters while the remainder are flat-bed trucks fitted with tanks. The majority of truck owners own a combination of bowsters and flat bed trucks, which enables them to adapt the flat bed trucks according to demand and its seasonality.

During a normal dry season, trucks are mainly contracted by better-off pastoralists who wish to deliver water in the areas where their animals are in search of pasture. NGOs also ensure emergency water provision through water trucking in normal dry seasons. In these circumstances, the price is fixed through negotiation between the hiring individual and the truck owner.

Severe Drought - The market is relatively elastic and has the capacity to respond to increase demand of water transportation services. In the 2011 emergency up to 200 trucks were used by the various actors (pastoralists better off, water retailers in communities, government, NGOs). Not all of these trucks were those based in Wajir, as some of these were either out of action or were already engaged in other uses. Additional trucks were sourced from outside of the area. Indeed, the assessment shows that the market has the capacity to expand to over 500 trucks.



Figure 2 Flat bed truck with tank installed.



Figure 3: Tanks to be fitted on flat bed truck (left next to borehole when water trucking not operational).

b) NGOs as a Market Actor

During severe droughts, NGOs (INGOs and local partners) emergency water trucking absorbs most of the transport capacity in operation in the County. In 2008, the customer base was split quite evenly between private individuals and NGOs, but during the severe drought of 2011 the truck fleet was used almost exclusively by NGOs, although some better-off individuals were able to hire water trucks as well. The volumes afforded as well as the comparative advantages that the Wajir water demand presents translates into a reduced attraction and negotiation power from the Wajir population in front of NGOs.

Given the attractive contracting conditions and the size of contracts, transporters prefer concentrating on NGO water trucking rather than in single contracts with community members. The entry of NGOs in the market system increases competition for community members to access water transportation services.

To compound this, the water market system at this level overlaps with food aid delivery mechanisms: the majority of transporters with flat-bed trucks (and/or bowzers) also ensure transport of food aid (WFP relief food), and private commercial transport of goods from Nairobi and Mombasa. However, delivery of water for NGO emergency operations is more lucrative than any other commercial or aid-related transportation activities due to the frequency of trips and quick turn-around time. As a result, truck owners dominate two major components of international aid that competes with community demand.

During severe droughts NGOs absorb the biggest share of the water transportation market – through contracting - and therefore have a strong influence on how price is fixed. Through different procurement standards, NGOs and transporters have mainly agreed transportation costs per metric ton (MT) per kilometre, following the cost set for food aid¹⁶. Price is negotiated between truck owners and NGOs on the basis of MT and km. This is aligned with the price fixing of food aid transportation (ie 27 KES per ton per km.). Prices fixed per MT / per km are higher than the one fixed 'per piece of work;' between trucks and community members.

In the contract between truck owners and NGOs, the cost of water is not included in the contract amount: either the NGO reimburses the water truck owner for the cost of the water (and this is separate to the contract invoice) and in some cases, the water truck owner does not advance the cost of water and the WUAs invoice the NGO directly for the cost of water.

The water price at the source is fixed by the WUA or water point owner (if privately owned). Some WUAs stated that they charged NGO trucks higher rates than private trucks i.e. private truckers benefitted from fuel subsidies, while NGOs (who were funding the subsidies) did not.

c) Government trucking: –The MoWI owns and operates 16 water bowzers within Wajir County.

Normal Dry Season - These water bowzers deliver water to communities whose representatives make a request to the MoWI; when this happens, the community is responsible for payment of the water, the driver's daily payment allowance, and fuel for the bowser (this payment varies based upon distance traveled by the water bowser, but the minimum price reported by communities was 8,000 KES). These bowzers are typically utilized by settled communities and rarely by pastoralists.

Severe Drought - The government has a limited number of trucks and hence cannot meet the total demand in Wajir County. However, during times of drought, the MoWI prioritizes communities based upon water scarcity (the top priority are communities with no permanent water point, e.g. communities which rely exclusively on earth pans); however, from this list, they are then sub-prioritized based upon their ability to pay the reimbursement of fuel, water and the driver's allowance. During the 2011 drought, the government trucked water on a regular basis to 11 communities.

d) Middle Men:

¹⁶ Only one NGO seemed to have set contract conditions through bidding and subsequent negotiation, leading to higher unit transportation costs.

During severe drought, as demand for water trucking services increases (mostly due to an increase in NGO-financed water trucking), “middle men” will appear to negotiate the provision of water trucking contracts. While not owning any trucks themselves, they hire trucks (either locally or from other places such as Mombasa, Nairobi or even Ethiopia). They will obtain a contract to provide water trucking services, and use their hired vehicles to provide said services.

3. Water traders and retailers

During a **normal dry season**, retail of water is ad hoc and only concerns surpluses of water. Medium and better-off pastoralists who procure water and contract the transportation of water truck loads - for their animals and own consumption - sell the limited surpluses of those loads to neighbouring pastoralists (medium and poor groups) and community members.

During **severe droughts**, after the drying of pans and while pressure increases on shallow wells, different forms of water retail start intervening and new actors appear in the market chain. These can be seen on the market map on page 20.

a) Vehicle owners shifting from transport service providers to water retailers:

In severe droughts, vehicle owners may move away from their normal activities and enter the water market system. This often happens at the point where vehicle owners become aware of community members asking transporters to carry jerrycans to get them filled in villages / towns with boreholes. In this case, vehicle owners (truck owners, matatu owners, lorry owners) purchase water and transport it to sell it within communities with no boreholes and in communities along the roads. These vehicle owners sell pro-actively, procuring water to sell without having received prior requests.

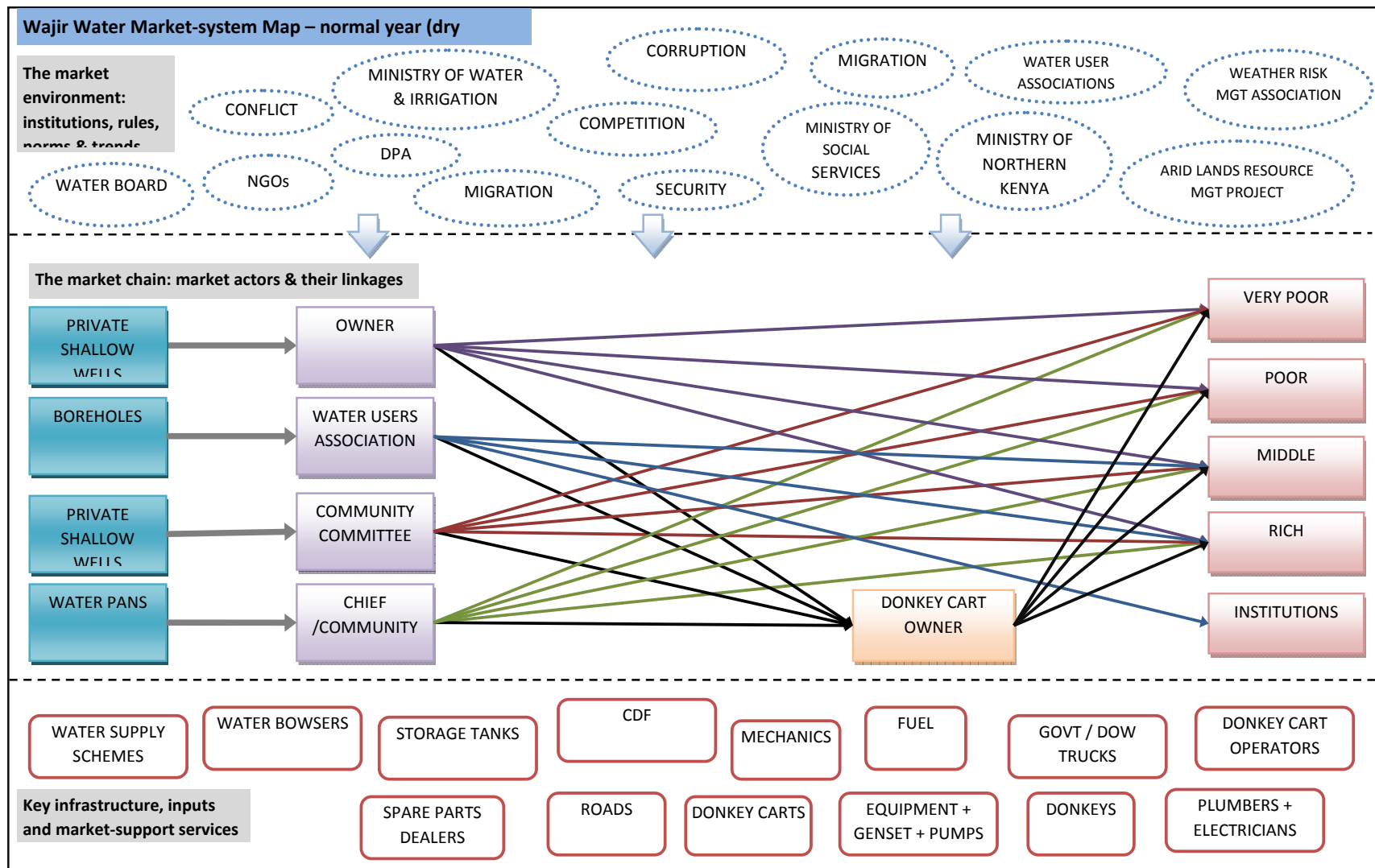
The prime difference between these activities, which see vehicle owners acting as water retailers, is that in this system, they are selling a good, rather than a transportation service. This is also the case for donkey cart owners and motorbike owners who will start pro-active water trading. In particular, in communities that have no permanent water sources, those poor and (predominantly) medium households who own a donkey cart and can access shallow wells from nearby localities, will start selling part of their water when they return to their homes.

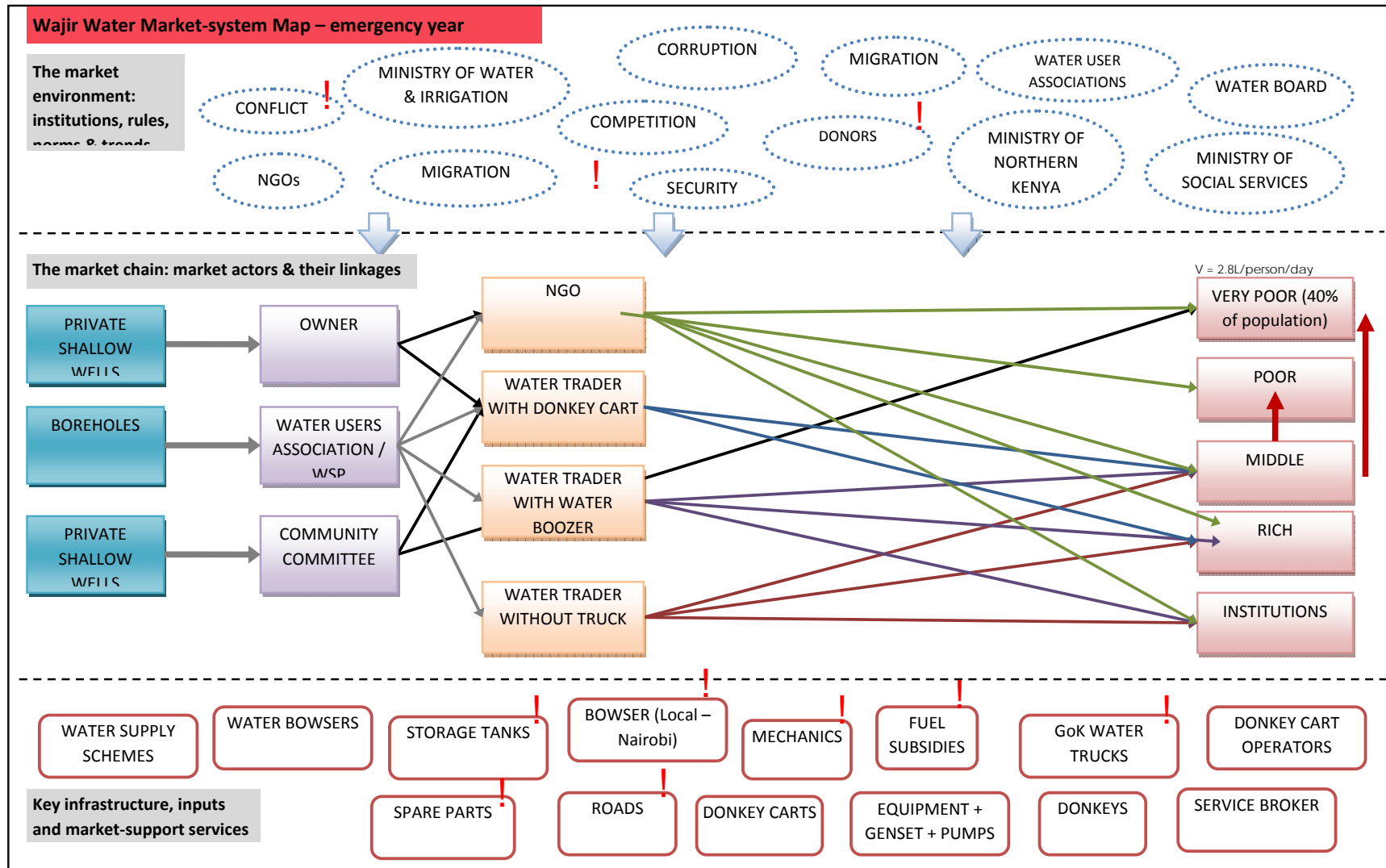
b) Surpluses from medium and better-off water consumption

Medium and better-off families, who procure water and contract trucks for its transport, continue retailing a limited part of their water to other households within the community. This behaviour is observed both in normal (as highlighted above) and severe droughts.

c) Water traders.

When it becomes clear that water is scarce in certain localities, better-off traders and community members – who own underground water tanks – operate as water retailers. They procure the water and contract trucks to ensure its transport from water sources. They store the water in underground water tanks (family owned or community) and sell it by jerry cans. This appears as a relatively new practice, triggered by the very severe droughts faced in the areas. However this is a pro-active practice observed in communities without boreholes that suggests that family and community free redistribution of water is not as strong as it might have been. In particular in communities without boreholes, the existence of a clear and widely known price of water suggests that water is considered as a marketed good.





4. End Users

The assessment showed that the determining factors for water access for Wajir population were:

- Type and combination of water points available in the vicinity of their village / settlement area;
- purchasing power and wealth ranking;
- donkey ownership, also related to wealth ranking
- whether family members have to migrate with their animals for pasture.

Water points available in the vicinity and village typology

As a result of the assessment, a typology of communities was established based on the type and combination of water sources available in that locality (water pans, shallow wells, boreholes) as this appeared as a determinant of people's access to water.

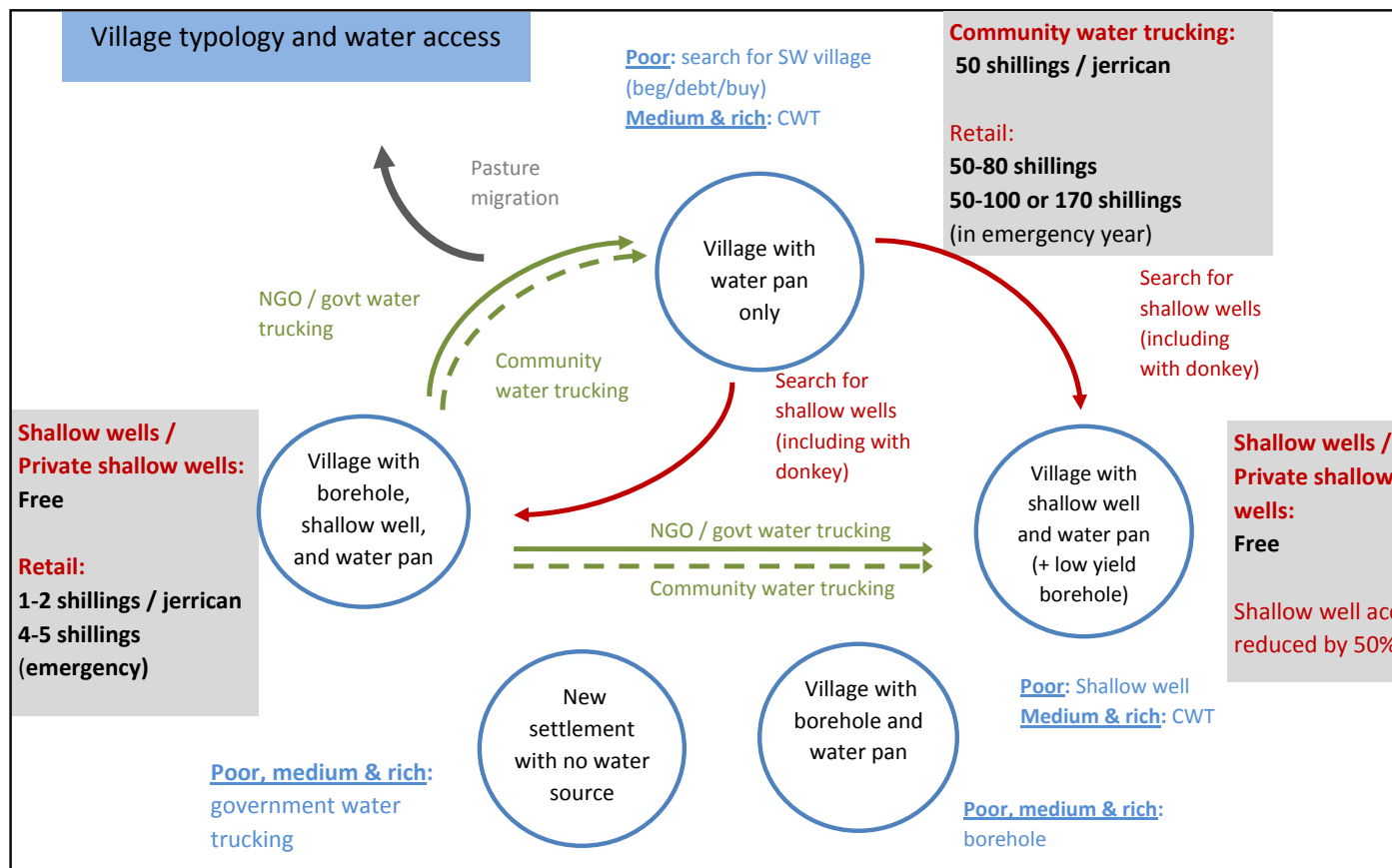
5 different types of communities were defined

- water pan as the sole water source,
- water pans and shallow wells;
- communities that had a combination of all types of water sources – borehole, shallow wells, and water pans;
- communities with boreholes only
- settlements with no water sources (and permanently supplied with water by Government water trucking).

The Consortium agreed to not visit new settlements in areas with no permanent sources of water. This is to deter the establishment of new community, where trucking is the only option of accessing water. With the exception of communities with no water sources, all types of communities were visited. See Annex 8 for more details on water access per community typology.

When comparing community types, the assessment demonstrated that, independent of wealth groups, communities with fewer permanent sources or water pay more for the water that they receive. This is due to the fact that during the dry season water needs to be transported and the cost of the service is factored into the price of water. Water sold by water vendors is ten to thirty times more expensive than at the boreholes (at non subsidized cost), therefore – when they can access it - shallow wells remain a preference for very poor and poor families as their water remains free.

This can be seen in diagram 1: Typology of Communities and Water Access.



Access to Water by Wealth Group (purchasing Power)



Overall, the quantity of water consumed decreases across all wealth groups during the drought, however much more significant decreases are experienced by the poor and very poor. For example, the assessment found that a very poor family during a severe drought will consume 35% of the total volume of water consumed during a normal year. Whereas, a rich family will still consume 98% of the total volume consumed during a normal year. See Annex 7.

a. Very Poor & Poor

Normal Dry Season - These groups rely primarily on water pans all year, assuming that they are holding water. The very poor and poor will use the pans as much as possible as it is free or involves a small, once-per-year membership cost. When the pan dries during a normal year (most smaller pans dry in August/September), they will travel to the nearest shallow wells in search of water (on foot or with a donkey). Shallow wells are chosen because the water is free, whereas borehole water is paid for. In addition, shallow wells contain water over the entire year (though sometimes with reduced yields in August/September).

The poor who own donkeys are at an advantage as they can transport water from the wells more easily, allowing them to meet their own needs and also to sell to others in their community.

The very poor who live in new settlements where no water source is accessible rely on water trucking from the government throughout the year, and search for free water in nearby locations with shallow wells or water pans.

Severe Drought - When the pan dries during an emergency year (in 2011 this occurred in December/January), the first alternative is to search for water in shallow wells in their own localities or in nearby villages. Overall, **very poor** (40% of total population) and **poor** families (40% of total population) prefer shallow wells as their water is free and their access is not restricted, or is only partially restricted during the dry seasons. Though accessing water from shallow wells during the dry seasons represents additional fetching time due to decreasing yield and increased demand (due to the increase in the population relying on them), borehole water remains the last resort for very poor and poor households as this water is to be paid for. If shallow well use is restricted, they will search for water in other locations with shallow wells, travelling long distances to do so.



Again, the poor who own a donkey are able to transport water from further afield for their own use or to sell.

For those who are unable to access free water from shallow wells, those with some purchasing power may receive water from government-run water trucking (for a fee) or buy water in small quantities from commercial water truckers, opportunistic retailers, donkey carts, or from those in better-off wealth groups. As the necessity to purchase water increases, the very poor and poor may borrow money or become indebted.

During a severe drought, when the majority of NGOs begin blanket emergency water trucking interventions, the poor and very poor are able to access this water for free.

b. Middle and better-off Wealth Group

Normal Dry Season - middle and better off will use the borehole as their priority source, though they will still use shallow wells and water pans (when they contain water) for some of their water needs. As water level in the pans drops, and water quality correspondingly drops (the water becomes more turbid and the pollution more concentrated), they will stop fetching water from these points.



Those who do not live near a borehole will receive government-run water trucking for a fee. These communities have a structured system with schedules and quantities allowed per household. They had to pay a fee to cover the cost of the fuel, the driver's allowance, the water itself. The government gives tanks to locations with no storage capacity.

Others will purchase water from local water retailers.

The better-off are also able to hire water trucks to transport water to their animals in distant grazing areas with

good pasture but no water to support their animals. When hiring water trucks, they will do that either individually or in groups. They also purchase water in smaller quantities from water vendors, commercial water trucks and donkey carts.

Severe Drought – Water is purchased most frequently from boreholes. This group will also continue to buy water in small quantities from commercial water truckers, water vendors, and donkey carts; they will also pay a fee to receive government-run water trucking. As water needs become greater (particularly needs of livestock) they may also hire a water truck (collectively or individually) to transport water to livestock in areas of good pasture. Part of this water is sometimes sold at an inflated price to the poor in order to recover the costs of hiring the water truck.

Underground tanks and buried tanks are present in many villages and mainly privately owned by well-off families.

They also benefit from NGO-financed water trucking, which typically employs blanket targeting.

In summary, very poor and poor families mainly rely on the water pans (as long as they still have water) and shallow wells – that are free water sources - as they are unable or have limited capacity to purchase water from the boreholes and retailers, even when the price of water at the borehole is discounted when fuel subsidies are given.

During the dry season, while the poor will prioritize free water sources – and even move in search for them – families with higher purchasing power will procure their water if they do not have free water sources at their proximity.

The richer the individuals, the more access they have to various sources of water - as both, paid water and free water sources are accessible. The better off and middle groups can pay for borehole water and/or buy water from commercial trucks (alone or in groups) and from water retailers, as well as benefit from government and NGO trucking.

In other words, during a drought year, the rich will have greater access to water. However, another determining factors to water access is the owning a donkey. Purchasing power (related to asset possession) and pack animals possession (to travel and carry water) hence become stronger determinants of people's access to water during severe droughts - either for their own household needs or to sell to others in the community. This has significant impact both on crises coping strategies and on livelihoods protection. Livelihoods and food security correlation with water access increases in such cases where purchasing power and asset possession is a determining factor to access water. And in turn, access to water is a determining factor of keeping and maintaining herds, and therefore asset protection.

Section 6. Comparing the gap in water needs with the market capacity

According to the results of the assessment, the market **can** cover the unmet water needs of the population as water can be available in sufficient quantities and transportation capacity is sufficient to bring the water from water points to users. (Annex 9). As a consequence we can conclude that **the response can rely on the market and its actors.**

The analysis has shown that the most limiting factor for people to access water is the purchasing power. While the market system is able to provide water and transportation services to cover needs, the population is not able to afford sufficient amounts of water to reach water security. **It is then a demand side problem. This is particularly the case for poor and very poor socio-economic groups.**

- ⇒ Cash transfer programming should therefore be considered as a means to transfer purchasing power to groups in need. It should be considered rather than in-kind to make use of the private sector capabilities, transfer risks where relevant and mitigate the risk of distorting the market;
- ⇒ Direct cash grants delivered to the beneficiaries would not translate fully into equivalent water access due to the diversity of needs for the very poor and poor, especially during severe droughts. Other cash transfer modalities shall therefore be considered. Also designing the humanitarian response on an integrated way (combining at least WASH and EFSL components) would allow considering all essential needs of vulnerable groups .

The crisis **is not a water crisis but a livelihood crisis** as what limits people's access to water is **purchasing power and livelihoods** rather than availability of water:

- ⇒ The water emergency response should be integrated with an emergency food security and livelihoods response.

In addressing the main requirements of the Consortium, the analysis highlighted the following opportunities:

e) Support access to water for vulnerable populations

Coverage of water needs is not limited by water availability or water transportation capacity but by purchasing power, especially for the poor socio-economic categories. As a consequence, since the market functions, cash transfer programming and involvement of the private sector at different stages should be considered as an alternative to in-kind distribution.

f) Transportation of water from permanent water points to localities that do not have permanent water points

The water transportation market system functions, market actors exist and have the capacity to transport the required amounts of water to cover the population needs. At least part of the community members are already connected to the commercial water trucking market. The response can therefore use the market actors' capacity and does not need the building of a parallel system for water delivery. This will require the facilitation of linkages between water transporters and community members in limited cases where those links could be weak

g) Delivery of water within the communities that do not have boreholes

Actors within the community have the capacity to procure water, transport it to their locality, store it in underground tanks and sell it to the rest of the community. They have proven to have the liquidity and necessary linkages to make water available for sale in the communities.

Building on these linkages and empowering community groups (women groups, youth groups...) should be explored to avoid placing traders in power positions.

h) Provision of water in communities that have boreholes

In communities that have boreholes, access to water should be facilitated through the boreholes and WUA that manage them. Mechanisms should be put in place to ensure that WUA are made accountable for support received and that they ensure free water delivery for the population.

The analysis also highlighted learning from past response that was integrated in response analysis:

a) Power in the market system:

From past emergency water provision responses, it has been noticed that by contracting external trucks and providing favorable conditions, NGOs do distort the market, and cause reduction of competitive power of communities towards trucks.

The response shall use the private sector capacity – as appropriate - and avoid creating too specific conditions that distort the market. This shall be done in coordination with all actors involved in emergency water provision to avoid incoherence in contracting conditions and transportation actors taking advantage of them.

b) Fuel subsidies:

During the last drought response, while fuel subsidies were provided to Water Users Associations (WUA) to deliver water for free to users; in actual fact, water was sold at a reduced price or the same price. Accountability of WUAs is therefore an element to keep taking into consideration in future responses.

In future responses, reinforced community sensitization should be pursued to empower communities to make WUA and distributing committees / entities accountable.

c) Water trucking:

In certain communities, families reported that water delivered by NGOs through water trucking was sold by the committees in charge of redistribution, showing the need of reinforced community sensitization and accountability mechanisms.

d) Operation and maintenance:

For Operation and Maintenance (O&M), during the past response, Oxfam has been acting as a middleman between DPA / WUA and the spare parts companies. There is then an opportunity to facilitate and reinforce a direct link between WUAs and service providers (private sector or DPA).

Section 7. Main response recommendations

In the context of understanding the water market in Wajir, the aim of this EMMA assessment is to inform the design of the response that would be carried out by Consortium members in the case of a severe drought. This response would aim at contributing to saving lives and minimizing the negative consequences of the drought on the livelihoods of affected communities in Wajir County.

While the response analysis carried out here has focused on the water component, on the basis of the results of the water market system analysis, programmatic integration with other technical areas of expertise and intervention of consortium members (in particular food security) has remained a critical driver in the process.

During the response analysis a wide range of options were considered (on the basis of WASH assessment results for past responses and EMMA results. Advantages, disadvantages, feasibility, timing and risks for each option were analysed leading to the response recommendations below.

The Annex 10 details the response recommendations. The main components are highlighted here:

Targeting:

Since water access is mainly determined by households' purchasing power – especially during a severe drought - targeting should focus at least on very poor and poor categories. However blanket targeting should be considered for the following reasons:

- Intra-community coping mechanisms: the response shall not disrupt existing communities' redistribution mechanism;
- 80% are poor and very poor, specific targeting might represent an over cost that might not make substantial difference.

1.1 Support to water access through water vouchers in villages with no borehole

In villages with no borehole, the response will aim at ensuring that the water is brought from localities with boreholes to the affected groups in the communities with no boreholes. To do no harm and make use of market dynamics, this will be ensured by linking affected groups with local market actors (local traders and / or community groups) and by maintaining or reinforcing – where needed - the links between those market actors with water transporters and existing water points (mainly boreholes).

- The Agency (Consortium Member / Partner Agency) contracts pre-identified local traders and / or community groups (like women's and Youth groups) that have trading capacity and experience (identified through capacity analysis and community consultation).
- Through contract with the Agency, the local traders / community groups are in charge of water procurement, transportation, and redistribution to beneficiaries against water vouchers. P

- Water vouchers (commodity vouchers) distributed to beneficiaries, are to be redeemed from contracted local traders / community groups.
- The community should be given a central role in the choice of water trucks, in the negotiation of the water price, as well as in making sure that the distributions are fair.
- Traders and transporters selection process shall also ensure market competition.
- Payment is ensured by the Agency to contracted local traders / community groups upon reception of beneficiaries' vouchers, including a transaction cost.
- Delivery of water by trucks would be ensured in existing and newly established tanks to ensure Hygiene chain, before redistribution to beneficiaries.
- According to the local trader / community groups' capacity, Oxfam / Partners can facilitate the link with the water transporter if needed as well as support capacity. In particular, Oxfam / Partners can provide a "stock" advance or stock grant (depending on analysis of their capacity) to the local trader and / or community group.

1.2 Support to water access through water vouchers for water provision at boreholes

- In villages with boreholes, water distribution will be ensured to the local population through WUA by reimbursing the cost of the water delivered to the population by the WUA.
- Water vouchers - distributed to beneficiaries- could be delivered a means to ensure that water is provided for free; however this could be avoided if effective accountability and complaints mechanisms are put in place to empower the community in enforcing the rule. In this case, reimbursement to WUA for the water distributed would be done by the Agency against vouchers gathered by the WUA.
- Reimbursement from the Agency to WUA could be done in cash or in a combination of cash, fuel and / or spare parts vouchers linked to inputs and services providers pre-identified.

Cash grants or vouchers?

- Both are cash transfer programming, so both make use of the market system to deliver the emergency response;
- The present paper is proposing vouchers rather than cash grants for the simple reason that needs from vulnerable groups are multiple, leading them most probably to cover their food and other basic needs as well, and therefore not reaching the minimum water access (in ASALs the WASH cluster recommends that a person accesses at least around 7.5 Liters per day).
- And this of course does not mean that water needs should be covered in preference to food and other basic needs, it clearly means that all needs should be taken into consideration in the design of the response;
- So, if the water emergency support is clearly provided complementarily to an EFSL support to food and basic needs, then water could be counted as one of those basic needs and be included in a cash grant for example. Further understanding on people's decision making for the spending of a cash grant is required to make sure that people would then access their water requirement in addition to their food and other basic needs. In all cases, this requires a careful and appropriate calculation of the cash grant. This could be the purpose of a pilot comparing (Cash grant for food and other basic needs + voucher for water) and (cash grant for all basic needs = food, water and others).
- At the borehole, vouchers would not be necessary if sufficient accountability is reached and water is effectively distributed for free. This can indeed be ensured through active sensitization and by setting up effective accountability systems;
- Following the same logic, vouchers would be necessary at community level (in community with no borehole) if there is unfair redistribution of free water brought by agencies. The advantage of the vouchers is to mitigate risks of power abuse and ensuring an accountability system where the community monitors the delivery of water by traders, truckers and community groups. They represent substantial work (to prepare and deliver vouchers) but ensure transferring the monitoring and accountability check from Oxfam to the community, increasing cost-efficiency and more importantly appropriateness. During previous interventions, Oxfam and Partners have posted a monitor at each delivery point for 3 months.

Questions and answers (extract from Annex 6)

Total subsidy of water at the borehole vs Partial subsidy of water at the borehole

- Water transportation is not required in communities where water is available at the boreholes; the issue then is to support people's purchasing power to access water at the borehole;
- Partial subsidies at the borehole can be a means of reducing the selling price of water and allow people's increased access to water;
- The situation analysis in 2011 considered that vulnerable groups (ie the majority of the population) did not have the means to access sufficient quantities of water: they were indeed migrating for farther water sources and/or selling assets to buy water. The decision was to provide free water (through complete subsidy of water at the boreholes) in order to reduce pressure on the stretched resources of vulnerable groups. Also, with a goal of fairness, the response aimed at providing free water through water trucking – in communities without borehole – and free water at the boreholes in the communities that had them.
- If water is only partially subsidized at boreholes (ie providing support to WUA so that the price is reduced), then it would make sense to do the same for water trucking.
- Partially subsidizing water (at boreholes and through water trucking) could be considered if the analysis shows that the vulnerable have the means to cover part of the water cost in the case of severe emergency or if they are already targeted for basic needs support (through basic needs grants for example).

Paying or not for water?

- The present report does not discuss the need for cost recovery at water points so that their operation is sustainable. This is a given;
- The paper proposes a temporary free provision of water in the times of emergency when the majority of the population (80% of the population is very poor to poor) does not have the financial and economic means to cover the entirety of their basic needs;
- The paper proposes to offer free water for all, given that the vulnerable ones represent a substantial majority of the population: this proposition looks at the cost-effectiveness of the responses proposed: how much more appropriateness would be achieved by delivering to the most vulnerable? That would imply extra costs of targeting;
- But it is clear that in the case of integration with EFSL responses where there is already a system set up (EFSL responses using HSNP targeting for example) then that targeting approach could be used, saving time and resources;
- It is clear that such response is not sustainable and that the present recommendations aim at progressively setting a system where communities and local authorities can be in charge themselves: community contingency plans, building people's resilience, integrating water to HSNP grant calculation.

A comparison of response options has been developed in Annex 10 to further support the recommendations presented here.

1.3 Integrated response combining WASH and EFSL

- Integration with the EFSL support to the very poor and poor households will be critical to allow them covering their survival needs (food + water) during the months of deficit in covering their basic needs. This shall also be integrated to protection and recovery interventions to support those households in covering their livelihoods deficit and protecting their assets and livelihood strategies.
- Given the points above, joint EFSL – WASH targeting, beneficiaries' selection and verification and vouchers distribution could be done at least where there is overlap in targeting. This is highly recommended, also to increase response efficiency and cost-effectiveness.
- In an EFSL response addressing basic needs through cash grants, the possibility of increasing the cash amount to ensure the coverage of water needs should be considered. In this case there should be a careful analysis of prioritization and decision making on expenses at household level to make sure that extra cash will translate into sufficient water accessed. This could also be tested through a pilot comparing the increase of a cash grant for basic needs and the combination of a water voucher with a basic needs grant.
- In particular, synergies with the HSNP programme should be examined.

1.4 Improve capacity of water points

The capacity of water provision by water sources can be increased in various ways:

- Increase storage capacity at Boreholes (tanks);
- Establish stand pipes for truck filling in order to ensure that multiple users can access water at the borehole;
- Maximize harvesting of rainwater in seasonal rivers through sub-surface dams and/or sand dams;
- Rehabilitate and/or improve capacity of existing shallow wells and surface water harvesting structures, particularly as these are the preferred water sources of the poor and very poor;
- Further development of high yielding boreholes only where shallow wells and surface water harvesting structures cannot be established;
- Establish large capacity earth pans appropriately designed and placed (greater than 10,000 cubic meters).

1.5 Support to Operation and maintenance of boreholes

Operation and maintenance of boreholes shall be supported making use of existing expertise, service providers and other market actors. This can be done by:

- Establishing a service agreement for boreholes between the Agency and a service provider. The service agreement would include minor maintenance, breakdown fixing, and major repairs up to a fixed value; for major repairs, during severe drought, Oxfam can act as guarantor for specific repairs in case of need, where relevant.
- Including training of mechanics within the service agreement, and linking that training service to vocational training centers if those exist.

2 Public health Promotion (PHP)

Drought appropriate PHP (safe water chain) should be ensured.

3 Sensitization and set-up of an accountability system

From the results of the assessment and analysis this appears as a critical component to ensure the effectiveness of any modality proposed.

- Broad sensitization of the community should be ensured so that the community can hold different actors involved accountable.
- An accountability system should be put in place where beneficiaries and community members can share comments and complaints with Oxfam. The complaint mechanism should be managed by Oxfam as the actor ultimately accountable to the donor.

4 Preparedness & DRR

- Community DRR and Community Water Management: the present project of the La Nina consortium includes the support of communities to develop community water management plans and community contingency plans. In discussing with communities about how they can address periods of drought, the options proposed here could be discussed. In particular, it could be discussed if contingency funds could be formed to ensure water trucking in cases of drought. And modalities could be considered involving local community groups and / or traders.
- Options for insurance schemes should be explored (communities pulling funds to be used to address basic needs – including water needs).
- Preparedness and preparation for future responses: Agency teams shall focus now on ensuring preparedness for drought response. The analysis suggests at least the following actions:
 - Design of vouchers and analysis of different delivery mechanisms.
 - Identification of community groups and local traders and capacity analysis; linkage with water transporters where needed.
 - Support storage capacity (provide and establish underground tanks) in villages where they are not yet present.
 - Support storage maintenance, cleaning and protection.
 - Identification of service provider for O&M following capacity analysis.
 - Preparation to set-up an accountability system when the response is implemented. Options of mobile phone systems should be explored.
 - Pre-identification of beneficiaries and identification opportunities to link with or use learning from HSNP targeting criteria and systems.

5 Advocacy and coordination with other actors

- With ALRMP / Drought secretariat and WESCOORD: advocate for establishment of standards for water provision.
- Advocacy towards other NGOs to avoid market distortion and for use of market actors.
- Advocacy to donors for coherent responses between different actors.
- Lead on piloting of alternatives to water trucking at national level: piloting, sharing and promotion of learning.

6 Governance & Integration with longer term programming

- Empowerment of communities to hold WUA accountable.
- Hold Ministry of Water accountable through WESCOORD.

- Reinforcement of community market actors to undertake water transportation and delivery as a business (this will focus on the reinforcement of trading capacity, not only for water trucking).
- Integration with long term programming.

7 Definition of triggers for emergency water provision

- Early warning indicators:
 - Rain in Ethiopian highlands;
 - 1 failed rain season (in particular the *Deyr* rain) is an early indicator of a drought if the consecutive rain is failed;
 - Rain forecast.
- Trigger for response:
 - 2 consecutive failed rains;
 - Restriction of shallow well use by owners;
 - People sending jerry cans to be filled with lorries and vehicles;
 - Selling of water by water trucks and local traders.

8 Further analysis

- Update of livelihood zoning and profiles (especially with evolution of pastoralism) and HEA outcome analysis to measure gap in households capacity to cover their basic and livelihood needs.
- Clan aspect of access to water to be further explored.
- User survey planned within the Consortium work plan will be the opportunity to explore further those aspects.
- Other market assessment for Livelihood needs.

Glossary of terms

DPPB	Disaster Prevention and Preparedness Bureau
DRR	Disaster Risk Reduction
DPA	
EFSL	Emergency Food Security and Livelihoods
EMMA	Emergency Markets Mapping and Analysis
ETB	Ethiopian Birr
FEWSNET	Famine Early Warning Systems Network
Intermon Oxfam	Oxfam in Spain
OA	Oxfam America
OC	Oxfam Canada
OCHA	Office for Coordination of Humanitarian Affairs
OGB	Oxfam GB
PHE	Public health engineer
WASH	Water, Sanitation and Hygiene
WUA	Water Users Association

ANNEXES

Annex 1: EMMA Terms of reference

Annex 2: List of locations and respondents for the EMMA

Annex 3: Oxfam Response 2011

Annex 4: EMMA survey tools

Annex 5: Wajir Map

Annex 6: Seasonal calendar

Annex 7: Water access for the different wealth groups

Annex 8: Typology of Communities

Annex 9: Water balance

Annex 10: Response recommendations

Annex 1: EMMA Terms of reference

Wajir, Kenya EMMA Terms of Reference

Assessment dates: 30th August – 7th of September 2012

Assessment Write-Up Dates: September 10 – 14

Oxfam GB

Budget: to be updated at the end of the assessment

EMMA Objectives:

- To inform response analysis and design of future WASH Drought response scale ups in Wajir County: identify, through a rapid market system analysis, appropriate water provision modalities (cash / in kind, market support, advocacy) – alternative to yearly NGO trucking where possible and relevant- in order to meet the household water needs of affected populations in the context of chronic drought prevailing in Wajir North and West Districts, Wajir, Kenya; Replication by trainees are due to happen for other districts of Wajir (South and East) later as well as Marsabit
- To inform the consortium contingency plans to identify appropriate activities and how to best target on responses to shocks (i.e. drought)
- Strengthen Oxfam GB's national capacity in market analysis and in its use in response analysis and design as well as DRR, preparedness and contingency planning;
- To build Oxfam's understanding of existing coping mechanisms and anthropological practices around water access and rationing in areas of chronic water scarcity, and to inform programming on ways of reinforcing these mechanisms.

In the context of the Somali communities (host, semi nomadic, nomadic), humanitarian agencies are planning or engaged in a number of activities including: food security, agriculture, and WASH programmes (fuel subsidies, repair of boreholes / generators, water trucking, deepening of wells etc). The implementation of an Emergency Market Mapping and Analysis (EMMA) assessment will help identify the most appropriate responses for the immediate and medium-term interventions.

WASH, EFSL, and support staff will take part in the response analysis and recommendations formulation, in order to ensure integration where possible.

Outcomes

- Recognise the importance of market analysis as an essential input to response analysis and be able to apply the analysis to preparedness, contingency planning and project design (CTP and /or in-kind), including DRR
- Design and carry out baseline and emergency market analysis to inform an appropriate response design to the Drought in Wajir as well as preparedness, contingency planning and DRR (where possible)
- Propose innovative programming combining different types of direct and indirect interventions as appropriate depending on the specific preparedness, emergency and recovery contexts, throughout the project cycle
- Identify relevant parameters to be monitored to update baseline market systems information and analysis in case of emergency to inform response design

Outputs of the training and EMMA assessment:

- EMMA report: for the commercial water trucking market, analysis of the market system (baseline and emergency maps, seasonal calendars) and response recommendations for WASH activities in Wajir (including recommendations for response, preparedness and DRR)

Key findings and recommendations will be presented in Wajir, and later in Nairobi by one of the EMMA trainees (dates, locations to be confirmed). This report will be disseminated to the wider NGO network, local Government and other interested stakeholders.

The final report (with complete analysis and recommendations) shall be completed by Emily Henderson upon return to Oxford. Support on the write-up of any technical sections of the report shall be provided by members of the EMMA assessment team during Emily Henderson's time in Wajir, Kenya.

Geographical Area

2 main geographical areas – Wajir North and West Districts, Wajir County, Kenya

Critical Market for Analysis (to be confirmed)

- commercial water trucking

Team (refer to list in Annex)

All participants should speak English, and the local staff speak Kiswahili and Somali.

There will be 17 participants for the initial three days training, and 12 for the entire training and data collection process in Wajir from August 30th until September 7th, 2012.

Duration of the assessment and working hours

- From 30th August to 7th of September 2012. Please see schedule below.
- Participants should be prepared for working long hours and week-ends
- All participants should agree to work the length of the assessment, and without a break if necessary to ensure the work is completed on time, and to the required detail and quality. Please inform us if this is likely to be difficult or if there are any outstanding issues that need addressing
- Two participants will be responsible for the replication of the full EMMA in Marsabit (Hassanur Sheik and Simeon) from September 10th to September 22nd

Methodology

The assessment will use the methodology in the EMMA tool kit, comprising ten steps.

1. <i>Essential Preparation</i>	Background research; arrival; consultation with colleagues; agency mandate, target population needs & profiles
2. <i>Select Markets</i>	Selection of critical market-systems; and identification of key analytical questions for each system
3. <i>Preliminary Analysis</i>	Production of initial profiles, seasonal calendars, maps of the market-system; identification of key informants or leads.
4. <i>Fieldwork Preparation</i>	Setting the fieldwork agenda; devising interview structures & questionnaires; data-sheets and recording formats
5. <i>Fieldwork Activities</i>	Conducting the fieldwork activities – who, where, when. Section includes guidance on interview methods and tips.
6. <i>Mapping the Market</i>	Finalising baseline & emergency maps, seasonal calendars; description of key features, bottlenecks, constraints
7. <i>Gap Analysis</i>	Comparison of household economic profiles,

	analysis of priority needs, access and gaps
8. <i>Market Analysis</i>	Analysing impact on availability, conduct, performance, supply and demand, capacity of market-system to react
9. <i>Response Analysis</i>	Exploration of response options, cash and other intervention feasibility; response recommendations and their logic
10. <i>Communicate Results</i>	Consultation with colleagues; presenting conclusions to wider audiences (donors, agencies)

Communications

- Most staff has local mobile phones and these shall be used. The international staff visiting for the purpose of the EMMA, will seek the necessary local SIM cards.
- At the start of the field work, participant mobile numbers shall be collected and shared.
- A Communications Officer (Polycarp Otieno) from the Kenya programme will document the EMMA process and develop case studies

Administration and resources required

The following will be required, and the Nairobi/Wajir offices will need to provide us the necessary logistics support for the likes of renting vehicles and drivers, stationery etc.

- Office space and access to printers and photocopier
- Flip charts and stationery
- Data projector and laptop for presentation
- Refreshments during analysis and feedback sessions
- Vehicle rental, with drivers (who are equipped with per diem and float for accommodation expenses, food, fuel, and any ad hoc repairs to the vehicle).
- Accommodation in Nairobi, and in the field locations, namely Wajir (and possibly Marsabit)

EMMA Report

After data collection and presentations on the final day, Emily Henderson will write the report on the EMMA conducted in Wajir from Oxford and share by September 14th in order for the Consortium to utilise the results for consortium contingency planning on September 19th.

Assessment Schedule / Workshop Agenda

August 30th	August 31st	September 1st	September 3rd	September 4th	September 5th
Introduction and expectations	Results of assessments and potential project objectives	Gap analysis Market analysis	Data collection	Data collection	Data collection
Different options in humanitarian preparedness and response (CTP / in-kind)	Selecting target population and critical markets	Response analysis and response options Field work	Data collection	Data collection	Data collection

and pre-requisites	Key analytical questions	preparation			
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
Market analysis in humanitarian response	Baseline mapping	Field work preparation	Data collection	Data collection	Data collection
EMMA purpose and processes	Emergency mapping	Field work preparation	Analysis of data collected during the day	Data collection	Data collection
Reading documents	Presentation EMMA Liberia	Finalizing field work preparation	Analysis of data collected during the day	Analysis of data collected during the day	Analysis of data collected during the day

September 6th	September 7 th	September 10th	September 11th	September 12th	September 13th	September 14th
Data collection	Presentation in Wajir	Report Writing by Emily Henderson	Report Writing by Emily Henderson	Report Writing by Emily Henderson	Report Writing by Emily Henderson	Draft of Final Report by Emily Henderson
Data collection	Response options					
LUNCH	LUNCH					
Data collection	Response recommendations					
Data collection	Next steps					
	Wrap up					
Finalization of maps	End of workshop					

List of EMMA members

1	Emily Henderson	OGB	Market specialist
	Water points	Organisation	
2	Thomas Wildman	OGB	WASH HECA Regional Advisor
3	Noordin Abdi	DPA	Project Officer
4	Elyas Mohamed	ALDEF	Project Officer
5	Simeon Ogamba	OGB	WASH Coordinator La Nina
6	Joshua Maina	OGB	MEAL Officer
	Water sources		
7	Hassanur Sheikh	OGB	HECA Regional PHP Advisor

8	Abdirahman Khalif	WASDA	Programme Officer
9	Lucas Chacha	OGB	Livelihoods and Markets
10	Zulfiquar Ali Haider	OGB	PHCo - HSP
11	Jackson		
	Community and HH		
12	Sunny Pereira	OGB	Consortium
13	M. Mursal	OGB	PM Wajir
14	Halima Abdille	ALDEF - K	Field staff
15	Faith Mullumba	OGB	EFSL PO
16	Adirizak M. Burale	WASDA	
17	Umuro Dalacha Roba	VSF - G	Field officer
	Training only		
	Caroline Muchai	OGB	Project Coordinator

Annex 2: List of locations and respondents for the EMMA

Water points and operators

1. Eldas Borehole – interview with WUA;
2. Kilkille Borehole – interview with WUA;
3. Masalale Borehole – interview with WUA;
4. Mulka Gulfu Borehole – interview with borehole operator;
5. Batalu Borehole – interview with WUA and community members present at water point;
6. Ajawa spring – interview with water management committee;
7. Qudama borehole – interview with village Chief;
8. Gurar Shallow Wells – interview with water management committee & elders;
9. Gurar Hand Pump – interview with users at the well;
10. Bute Earth Pan – interview with watchman & users;
11. Korondile Borehole – interview with WUA;
12. Korondile Earth Pan – interview with member of WUA, watchman, and donkey cart users;
13. Beramu Shallow Wells – interview with users fetching water, and individual well owners;
14. Buna Borehole – interview with WSP;
15. Buna Earth Pan – visual observation and interview with WSP members;

Water trucks and water trucking actors

Name	Organisation
Elvis Othiambo	Islamic Relief
Abdirizak Adawa	ALDEF
Abdifatah yare	WASDA
Styvers	SC
	KRCS
Noordin	DPA
	Mercy Corps
Mohamed farah	DWO
Ali Gedi	Water Truck Owner – Wajir
Adow Yussuf (Qalbi Safi)	
Nura Alio	Water Truck owner – Moyale
Abdullahi Yussuf	Water Truck owner- Wajir
Ahmed Mohamed Hassan	Water truck owner – Wajir

Communities visited

Name of Location	Date Visited	N. Of FGD	N. Of HH
Eldas	03/09/2012	1	2
Malkagufu**	03/09/2012	1	4
Eresteno	04/09/2012	1	2
Pastoralist by Qudama	04/09/2012	1	1
Pastoralist by Adadijole	04/09/2012	x	2
Ajawa	04/09/2012	x	2
Bute	05/09/2012	1	1
Gurar	05/09/2012	1	1
Ogorji	05/09/2012	2	1
Qarsa Bulla	06/09/2012	1	1
Buna	07/09/2012	1	2

Annex 3: Oxfam's response to the 2011 drought

The response priority was to maintain and expand water trucking activities until the rainy season in November, as this was the sole means of access to water for the communities in 24 settlements in the Wajir area.

Oxfam's emergency response to the drought, which ran over 4 months, focused on water provision through water trucking and fuel subsidies at boreholes, targeting mobile pastoralists and established settlements as a priority, and supplying at least 5-7.5 litres of water per person per day for a minimum of 3 months. The response was designed to avoid temporary and new settlements. Other activities included support on operation and maintenance of strategic boreholes, providing spare parts and mechanical services for strategic boreholes, and rehabilitating non-operational boreholes. The response targeted 30% of the population in Wajir county, or 200,000 beneficiaries, with blanket coverage within selected villages across the entire county.

Oxfam teams supplied nearly 7 litres per person per day, which was significantly higher than any other actor involved in water trucking. Water trucking seemed to ensure an equitable distribution of water to most beneficiaries, and monitoring showed that water deliveries happened in a timely and organised way.

However, the response was also a challenging one. Initial delays meant that teams were under intense pressure to respond very quickly, which didn't leave sufficient time to assess, plan, and prepare as well as teams would have wanted. As a result, various technical issues arose. One key issue was related to storage tanks for water at the trucking sites. Some sites did not have proper storage tanks, and it took time to procure and deliver them. At the sites that did have tanks, they were partly buried in the ground (most water trucks did not have water pumps required to fill an elevated tank, so low tanks were necessary for offloading). This meant that tapstands could not be connected to the tank, and people had to use a rope and bucket to collect the water. Ultimately, hygiene was compromised, and the water collection process was significantly slower.

Another challenge was that not all water infrastructures were designed efficiently enough to support emergency water operations; in many cases there were no outlet pipes for the filling of water trucks, and there were inadequate water storage tanks at boreholes.

As part of the planning for the response, Oxfam teams had discussed the possibility of a voucher system, but again due to the lateness of the response, there was insufficient time for a proper assessment of the feasibility of this type of system. There was also strong resistance from the partners.

These issues all highlighted the need for better preparedness and planning in future responses, and would be taken into account during the assessment.

Annex 4: EMMA survey tools

Questionnaire for water points

Name of Water Point:

GPS of water point:

Location of Water Point:

Questions

Who owns this water point?

What's the maximum number of hours per day that the water pump operates?

Normal dry Season (September):

Severe drought (September 2011):

What is the storage capacity at the water source (type & capacity):

What is the yield of the water system (quantity pumped in 1 hour; amount of time required to fill the storage container; etc.)?

Normal Dry Season:

Severe Drought:

Who manages the distribution of the water (committee? other?):

How were the WUA officials selected? How long have they been there? Do you have a working constitution?

Who are your customers? How many per day? (Permanent users, pastoralists, water trucks, what type of livestock):

Normal dry (Sept):

Severe Drought (Sept 2011):

People with pack animals - from how far have they come to collect the water?

Normal dry (Sept):

Severe Drought (Sept 2011):

Commercial water trucks - from how far have they come to collect the water? Where are they delivering it to? What kind of trucks are they? Capacity?

Normal dry (Sept):

Severe Drought (Sept 2011):

Livestock who come to drink water from - how far have they come to collect the water?

Normal Dry Season (Sept):

Severe drought (Sept 2011):

When during the year do trucks come to collect water? (every month, only certain months? What season) What type of truck? Certain types of trucks at certain time?

During years when there is a normal dry season, when do the numbers of trucks start to increase? When do the type of trucks start to change?

In a year of severe drought (2011), when did the number of water trucks arriving start to increase? At some point, do the type of trucks begin to change? When did this happen?

What does a normal dry season look like to you? How do you know when a drought is becoming very severe?

Is there a schedule for accessing the water? How does this work? Always a schedule, or does something trigger this?

Is anyone prioritised above others (local people, trucks, pack animals? Is there always prioritization, or does something trigger this?

Normal dry season

Severe drought

How often does the borehole break down?

Normal dry season:

Severe Drought:

What kind of breakdowns:

Normal Dry Season:

Severe Drought Season?

Who fixes the borehole when it breaks down? How do you contact them?

Normal Dry Season:

Severe Drought:

How quickly do you respond to a breakdown:

Normal Dry Season:

Severe Drought (2011):

Who pays for the repairs?

Where do the spare parts come from?

What is the price of the water?

Normal dry season (Sept):

Severe drought (Sept 2011):

Who receives the money and manages it? What is this money used for? How is the money kept?

How do you calculate the price of the water?

Normal dry season:

Severe drought season:

Does the price of water change throughout the year?

Is the price the same for all customers?

Normal dry:

Severe drought:

Do you give credit to any of your customers? Or do you subsidize or give a discount to any customers? Do you give it to free to any customers? If yes, to whom? (trucks, individuals)

Normal dry:

Severe drought:

How is the distribution of water from the source organised? (how do humans, livestock and trucks access water – kiosk, trough, pipe with stand for trucks, etc):

Are there any factors which affect the running of the borehole e.g insecurity?

Normal dry:

Severe drought:

What prevents you from operating at full capacity?

Normal dry:

Severe drought:

What would you need to expand your capacity?

What could be done to resolve these problems?

Normal dry:

Severe drought:

Where do you get your fuel?

Normal dry:

Severe drought:

How many litres of fuel do you use per 24hours?

Normal dry:

Severe drought

Would you be open to a service agreement with a private service provider to do O&M?

How much money do you have in your account?

What are your expenditures?

How much water have you sold?

Questionnaire for DWO and ALRMP Officials

Where do people in Wajir get water:

In the normal dry season (Sept)?

In severe drought (Sept 2011)?

When water becomes scarce in Wajir, how do people cope?

At what point do their coping strategies become unsustainable?

What is the role of the DWO in the provision of water to Wajir communities?

What regulations do you have that impact on the sale of water?

Where are the strategic boreholes which supply Wajir? What are their yields?

Does the yield of the boreholes change:

In the normal dry times?

In severe drought?

What are the constraints to the smooth operation of the boreholes?

How can these be overcome?

Who is responsible for their operation and maintenance?

How are the WUAs established?

Who manages them?

What is the “trigger” for water trucking in Wajir?

How many water trucks are there which supply water to Wajir (from in Wajir and elsewhere?)

In the normal dry season?

In severe drought?

How much water is delivered by truck every day:

In the normal dry season?

In severe drought?

Who receives the water from the trucks?

In normal dry season:?

In severe drought?

How is the price of water determined throughout the year?

If people were able to purchase more water, how would the delivery system cope? Would it be possible to scale up?

What would be the possible constraints to scaling up?

Do you think that emergency water provision could operate in different ways, e.g:

- Water trucking through the provision of water vouchers to consumers?
- Building the capacity of community water vendors to buy & sell water?

Do you think that O&M of boreholes could be done in a more efficient way, e.g. forming service agreement between WUAs and private sector service companies?

Questions for other actors who truck water

Name of the agency:

Name of the person interviewed:

1 What did you did?

2 Did you have any water provision activities in the County as a whole?

- a) What were your activities in the year 2008 (baseline)
- b) What were your activities in the year 2011 (last drought)
- c) If there is going to be a drought this year what are your plans? Will you be able to did more than the previous?
- d) What would be the likely constraints affecting your capacity to scale up?

2. Did you did water trucking before?

a) If you did trucking in 2008 who were your target groups?

- How did you target those groups?
- How many people did you reach?
- How much did you deliver /per person?
- Where did you deliver water to? (Geographic)

b) If you did trucking in 2011 who were your target groups?

- How many people did you reach?
- How did you target those groups?
- How much did you deliver /per person?
- Where did you deliver water to? (Geographic)

3. What was the trigger you used for trucking water?

- In the normal dry season of 2008?
- In severe drought of 2011?
- And when did you stop?

4 a) How many trucks did you use during the 2008 normal dry period?

- Where did you get the trucks from?
- Where did the trucks get their water from?

b) How many trucks did you use during the 2011 drought emergency?

- Where did you get the trucks from?
- Where did the trucks get their water from?

c) How did you come to an agreement on pricing with the water truckers?

d) Did you have any problems negotiating this?

- In 2008 normal dry season
- Severe drought of 2011

e) Were the beneficiaries paying for the water?

f) If they are paying, how much per 20l jerry can?

5 Have you considered supporting people's coping mechanisms to buy water, rather than contracting the truckers directly? (Eg vouchers)

- Could you see any advantages or disadvantages in doing this?

6. Are you aware of guidelines or regulations controlling water trucking?

7. Are there any other activities relating to water supply that you are involved in (fuel subsidies, pump repairs etc)

- How did you implement these alternatives?

Questions for the water truckers

1. How long have you been in the water trucking business?
 - How many trucks did you own?
 - What is the capacity of your truck(s)?
 - What did you use them for throughout the year?
 - Did you use them for water trucking outside Wajir?
 -
2. Who were your water customers during the:
 - a. Normal dry season of 2008, and how many?
 - b. Severe drought period of 2011 and how many?
3. How much water did you deliver per day?
 - Normal Dry Season 2008
 - Severe Drought 2011
4. Where did you get this water from?
 - Normal Dry Season 2008
 - Severe Drought 2011
5.
 - a) What is the maximum capacity that you could scale up to?
 - b) What factors limited your capacity to scale up if the extra demand exists?
 - Normal Dry Season 2008
 - Severe Drought 2011
6.
 - a) How much did you charge for water and on what basis?
 - Normal Dry Season of 2008
 - Severe Drought of 2011
 - b) What affects that price? (road, fuel, NGOs)
7. Who are the customers that buy big volumes and how much did you charge?
 - a. Normal Dry Season 2008
 - b. Severe Drought 2011
8.
 - a) Are you aware of other ways of organizing payment for water e.g through the provision of water vouchers to consumers? (May need to explain the concept of voucher system). Do you think you could work with this kind of system?
 - c) What do you see as the advantages and disadvantages of this type of a system (for yourself and the community)?
9.
 - a) What's the furthest distance that you go to deliver water?
 - Normal Dry Season 2008
 - Severe Drought 2011
 - b) Are there any areas that you can't or won't go to?
 - Normal Dry Season 2008
 - Severe Drought 2011
10. How does severe drought affect your business (price, costs, volumes etc)?
11.
 - a) Who are your other competitors in the water trucking market (individuals, groups or NGOs or Govt)?
 - Normal Dry Season
 - Severe Drought
 - b) How did you compete or collaborate with them?
 - Normal Dry Season
 - Severe Drought
12. What are the main problems you faced in your business?

- a. Normal Dry Season
 - b. Severe Drought
13. What motivates you to stay in water trucking business.
14. Are there any laws or regulations that affect your business, if yes how did they affect you?
- a. Normal Dry Season
 - b. Severe Drought

Questionnaire for Focus Group Discussion and Household Interview

North District, Wajir, Ethiopia

Location Name: _____ **Sub Location Name:** _____ **Village Name:** _____

No at FGD (male & female) _____ **Recorder's Name:** _____

Date: _____

Demographics: Population _____ Male _____, Female _____ No of HHs _____

GPS Coordinates: _____

NOTE: IN OUR DISCUSSIONS ALWAYS, CONFIRM IF THE ANSWER IS FOR THE MAJORITY OF THE POPULATION OR A COMBINATION

Community Map

- 1) Open with focus group discussion by facilitating a COMMUNITY MAP – highlighting where the location, sub locations and communities. Within this map, you will build up the detail when answering the FGD questions e.g. the location of water sources, the migration patterns etc.

Rainfall Demographics for a normal year (2008) and for the drought year (2011)

- 2) In terms of rain, what is a normal year (2008) like? In terms of rain, what is a bad year like?

Please note on pasture or other characteristics that may be raised

Please mark which months rained below:

Rainfall Year	J	F	M	A	M	J	J	A	S	O	N	D
Normal Year (2008) – Rainfall (mark X for rain)												
Drought 2011 – Rainfall (mark X for rain)												

Water sources

3) What are your different water sources per season during a normal year (2008)?

4) From when to when do you use each of the water sources mentioned during a normal year?
(FILL TABLE BELOW)

Normal Year (208	J	F	M	A	M	J	J	A	S	O	N	D
Source of water 1: _____												
Source of water 2: _____												
Source of water 3: _____												
Source of water 4: _____												

5) What are the different sources of water per season used during the drought year of 2011?
(FLL TABLE BELOW)

Drought Year (2011)	J	F	M	A	M	J	J	A	S	O	N	D
Source 1: _____												
Source 2: _____												
Source 3: _____												
Source 4: _____												

6) How far are these water sources (walking time, km, miles)?

Normal Year	Normal Year	Drought Year (2011)	Drought Year (2011)
Source 1: _____	Distance _____	Source 1: _____	Distance _____
Source 2: _____	Distance _____	Source 2: _____	Distance _____
Source 3: _____	Distance _____	Source 3: _____	Distance _____

Normal Year	Normal Year	Drought Year (2011)	Drought Year (2011)
Source 4: _____	Distance _____	Source 4: _____	Distance _____

7) How do you get there (i.e. by foot, donkey, etc)

8) Can you go to any of the sources around or are there restrictions to different water sources around/elsewhere? What are the limitations?

Normal Year:

Drought Year:

9) Which one do you prefer to go to? And why? (i.e. distance, price, etc)

Normal year:

Drought year:

Migration & Population Info

10) How does the route of migration change between a normal and dry year? How do you make the decision of your route? When do you migrate? Are there any challenges? (Goal: understand the decision making factors for migration)

11) What is the total population of the community?

12) What is the proportion of the population who stays behind (compared to the ones who migrate)?

Cost of Water

13) Do you get it for free or do you pay for each of the water sources mentioned? (Please note below the unit cost per water source)

Normal year:

- People: price per jerry can (Confirm jerry can volume, 5, 10, or 20 litres)

Source 1 _____ Source 2 _____ Source 3 _____ Source 4 _____

- Animals

Source 1 _____ Source 2 _____ Source 3 _____ Source 4 _____

Drought Year:

- People: price per jerry can (Confirm jerry can volume, 5, 10, or 20 litres)

Source 1 _____ Source 2 _____ Source 3 _____ Source 4 _____

- Animals

Source 1 _____ Source 2 _____ Source 3 _____ Source 4 _____

14) If you pay, how much do you pay in total every time you fetch water during the dry season and raining season? And how many times per week do you fetch water in a normal year? What about in the drought year?

- Normal Year:
 Raining Season_____ (cost) Dry Season_____ (cost)
 Raining Season_____ (frequency) Dry Season_____ (frequency)
- Drought Year:
 Raining Season_____ (cost) Dry Season_____ (cost)
 Raining Season_____ (frequency) Dry Season_____ (frequency)

15) **HH Questionnaire Only:** How much of your income do you spend on water during the normal season? What about during the drought year?

Management of Water Source

16) Who manages each mentioned water source? How operational are each of them? Who maintains them?

Source 1: _____
 Source 2: _____
 Source 3: _____
 Source 4: _____

17) If collective procurement (i.e. when people get together), how does it work? Who comes together? How do they identify the water truck? How is the payment done (i.e. advanced, prior to delivery, mpesa, etc)? Where do the trucks come from? Where do you put the water (big storage)? And what are the challenges?

Household Water Practice

18) **HH Questionnaire Only:** How many people live in the house per season? Among this water, how do you share with your livestock, or with other groups within the community?

Normal Year:
 Drought Year:

19) **HH Questionnaire Only:** Who from the household goes to fetch water? Where do you store it (household level storage)? (HH only)

Normal Year:
 Drought Year:

Wealth Profile

20) **FGD Questionnaire Only:** What are the wealth groups in this community? How is it for the rich, the middle, the poor? Refine seasonal calendars based on the wealth.

Seasonal Calendar per Wealth Group

For the tables below, please cross check if the information matches with responses to questions 2, 4, and 5.

- 21) **FGD Questionnaire Only:** Where do the different groups get water from and what storage do they own in a normal year? And during the drought? (FILL TABLE BELOW)

	Wealth	Year	J	F	M	A	M	J	J	A	S	O	N	D
Water Source (inclu operator)	Poor	Normal Year												
Water Source (inclu operator)	Middle	Normal Year												
Water Source (inclu operator)	Better off	Normal Year												
Water Source (inclu operator)	Poor	Drought Year												
Water Source (inclu operator)	Middle	Drought Year												
Water Source (inclu operator)	Better off	Drought Year												

- 22) **HH Questionnaire only:** What is the volume per unit of water different wealth groups access during a normal year (2008)? What about during the drought year 2011? (FILL TABLE BELOW)

Volume of water/HH/unit of time	Poor	Normal Year												
Volume of water/HH/unit of time	Middle	Normal Year												
Volume of water/HH/unit of time	Better off	Normal Year												
Volume of water/HH/unit	Poor	Drought												

of time		Year											
Volume of water/HH/unit of time	Middle	Drought Year											
Volume of water/HH/unit of time	Better off	Drought Year											

Coping Mechanism

23) In times of drought, how do you cope?

24) What limits you from getting more water? (conflict, rules, purchase power, storage capacity)

25) What can help you get water?

Donation – Government and NGO Water Trucking

If water trucking was not mentioned, please ask questions below:

26) Do you receive water from the gov't/ngo water trucking any time of the normal year? And drought year? If yes, when during the year? How often during a week?

27) If yes, was it free or paid? How much did you pay per jerry can?

28) What is your perception of water trucking?

29) Did they access enough water for your household needs?

30) If they don't come or when they don't come, how do they cope? What do you do?

31) Preference question: What if the government was giving you a voucher? A cash? A storage unit?

Any other comments:

If not space above, please use this for your community map, migration patterns, etc:

Annexe 5: Map Greater Wajir







































Annex 6: Seasonal Calendars

Normal year														
Type of village	J	F	M	A	M	J	J	A		S		O	N	D
Village with WP only	Pan							Search with donkey			Pan			
								Govt water trucking						
Villages with WP + SW	Shallow well													
	Pan							Search for water			Pan			
Village with WP + BH + SW	Shallow well + Borehole													
				Pan							Pan			
Village with BH + WP								Search for water			Pan			
	Community water trucking + opportunistic													
Village with no source	Search for water													
	Government water trucking													

Emergency year												
Type of village	J	F	M	A	M	J	J	A	S	O	N	D
Village with WP only	////////	Community water trucking + opportunistic										
		Search for water								Pan		
		Government water trucking										
Villages with WP + SW	Search for water											
	Shallow well									Pan		
	Community water trucking + opportunistic											
Village with WP + BH + SW	//////////			Community water trucking for livestock								
	Shallow well + borehole											
Village with BH + WP	Borehole											
										Pan		
Village with no source	Government water trucking											

water points

Water points	J	F	M	A	M	J	J	A	S	O	N	D	
Water pans													Big Small Big Small
Boreholes													High yield Low yield High yield Low yield
Shallow wells													Surface ru Seepage Surface ru Seepage

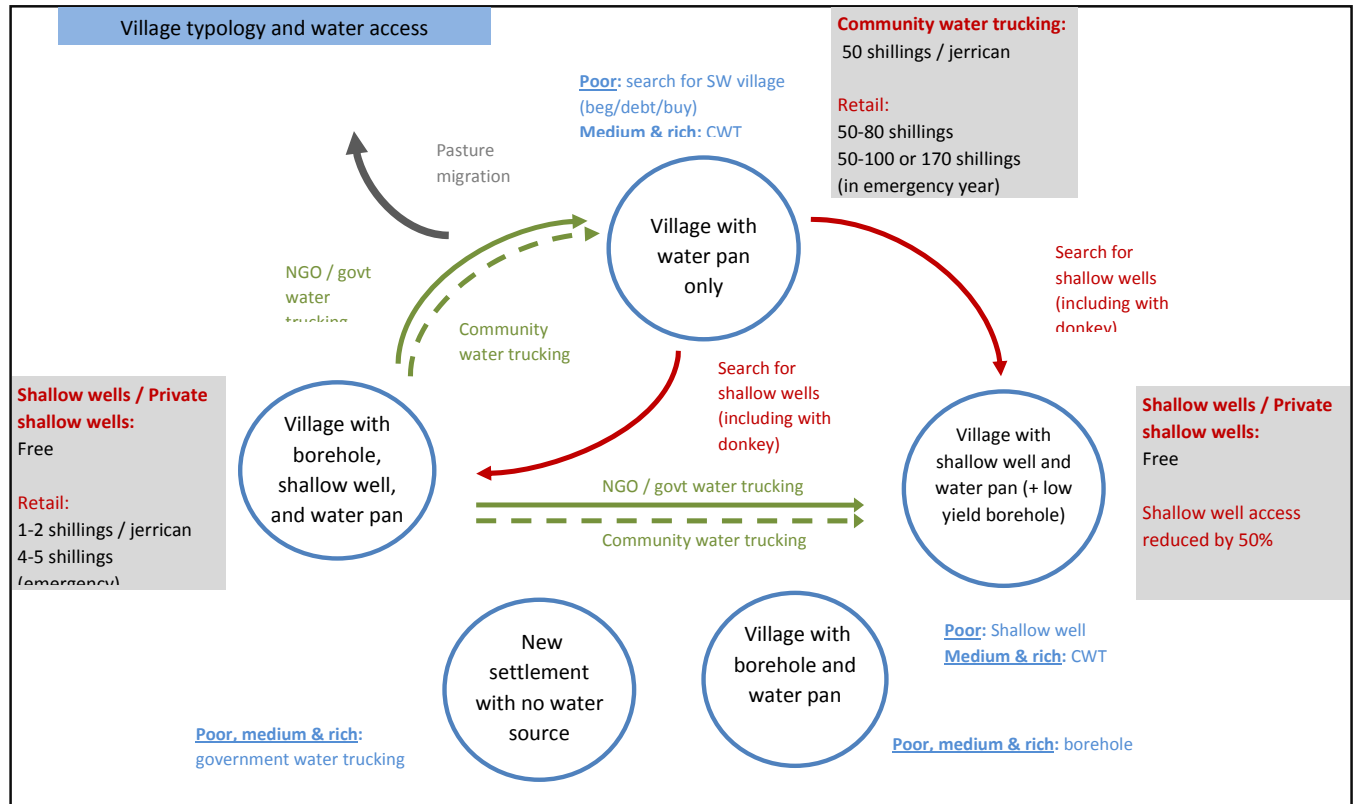
Annex 7: Water access for the different wealth groups

Table: Wealth Ranking

Wealth group		Very Poor (40%)	Poor (40%)	Middle (15%)	Better off (5%)
Livelihood		- Casual labour; - gifts; - firewood & charcoal sale; - wild fruit collection	- Casual labour; - livestock; - firewood & charcoal sale; - collection of wild fruits; - selling of milk & animal products	- Livestock; - running of small shops; - salary from employment; - remittances; - selling of livestock	- Business ownership; - salary from employment; - remittances; - livestock
Animals owned		0-5 shoats	5 camels, 20-30 shoats, 1-2 donkeys	15-40 camels, 10-20 cows, 30-40 shoats	>70 camels, >100 cattle, >70 shoats
Mobility		Sedentary	- Migration of camel owners; - shoat owners migrate within close proximity of their settlements (distance??)	- Sedentary (business owners); - migration, splitting of herds (pasture type)	Pastoralist settled and employs others for to migrate with livestock
Access to Water During Dry Season		- access free water sources as a priority; water pans & shallow wells; NGO water trucking beg/credit	Camels migrate to water points (water pans or shallow wells); people access shallow wells by foot or donkey carts; purchase small quantities of water from the better-off and water truck retailers; NGO water trucking	Purchase water from boreholes, water truck retailers, or donkey carts; Hire water truck to deliver water to animals in distant pastures; Government water trucking ;	Purchase water from boreholes, water truck retailers, or donkey carts; Hire water truck to deliver water to animals in distant pastures; Government water trucking
Volume (L/p/d) - shared w animals?		Normal Dry Season- 8 L/p/d, Drought - 2.8 L/p/d	Normal Dry Season- 10 L/p/d, Drought - 3 L/p/d	Normal Dry Season- 10 L/p/d, Drought - 10 L/p/d	Normal Dry Season- 41 L/p/d, Drought - 40 L/p/d
Types of Water Access vs Cost (Dry Season)	Community with water pan only (Ogorji, Ereteno, Bute, Qarsa bula)	Walk to the nearest shallow well, beg, indebted. Water trucking by GOK/NGOs (20KES/20 L)	Go to the nearest shallow well with donkey: sell part of the water. Buy from - the rich; from retailing truck; pastoralists' movement to other water pans; (50 KES/20L)	Buy water from truck (A or people), from donkey carts if available (50 KES/20L) - pastoralist*	Hire trucks alone, donkey carts if possible, water vendor, normal year-migrate, no WT

	Community with water pan and shallow well only (Gurar, Ajawa, pastoralist group close to Adadi Joli)	SW queue; free	SW local, go to better SW/BH (walk or donkey cart and sale), buy from retail (80-100 KES) or group (50-60 KES)	Buy water from truck (A or people), from donkey carts if available (50 KES/20L) - pastoralist* Retail (80-100 KES/20L) and Truck from 50-70 KES/20L	Hire trucks alone, donkey carts if possible, water vendor
	Community with borehole, shallow wells, and water pans / or borehole only (Buna, Eldas, pastoralist close to Qudana)	SW; free	SW, no sale, free	Buy water from truck (A or people), from donkey carts if available (50 KES/20L) - pastoralist* Retail (80-100 KES) and Truck from 50-70 KES. At the borehole, 3-5 KES/20L. Goes up to 10?	Hire trucks alone, donkey carts if possible, water vendor
	Community with borehole only and water pan (none visited, though example is Bosich)	all groups rely on both, and when pan dries out, the poor still needs to cope as these are found in the south and there are no shallow wells around the south of Wajir North			
	New Settlements (none visited)	Government WT			

Annex 8: Typology of communities



Typology of Communities

A clear typology of villages in Wajir was established by classifying communities according to water access. The villages fell into 5 distinct categories:

- water pan as the sole water source,
- water pans and shallow wells;
- communities that had a combination of all types of water sources – borehole, shallow wells, and water pans;
- communities with boreholes only
- settlements with no water sources (and permanently supplied with water by Government water trucking).

1. Community with water pan only

In a normal year, the community relies on the water pans year-round, except for the ones with smaller pans that dry up during August and September. When the pan dries during a normal year, the very poor and poor search for water (on foot or with a donkey when available), travelling to the nearest villages with shallow wells. Shallow wells are chosen because the water is free, whereas borehole water is paid for. The poor who own donkeys are at an advantage as they can transport water from the wells more easily, allowing them to meet their own needs and also to sell to others in their community. The very poor and poor may borrow money or become indebted. The poor with some purchasing power may buy

water directly from a 'retailer' (in this case meaning any vendor or opportunistic actor selling water), or from the middle/rich as the middle class and rich can afford to hire a water truck collectively or individually depending on their purchasing power. When the pan dries, another alternative used by some communities is government water trucking (as in a normal year, there is minimal sporadic NGO water trucking). Communities visited had a structured system with schedules and quantities allowed per household. They had to pay a fee to cover the cost of the fuel, the driver's allowance and for the water. The government gave tanks to locations with no storage capacity.

In an emergency year, the communities were only able to rely on the water pan when it rained. During the 2011 Drought, communities relied on the water pan only between October and December when the rains came. When the pan dries during an emergency year (in 2011 this was the case from July to Sept), the alternatives are to search for shallow well water in nearby villages, by foot or with a donkey, with long queuing hours (poor and very poor); to receive water from the government (for a fee) and from NGO water trucking (very poor, poor, middle, rich); or finally to buy water in small quantities from commercial water truckers, opportunistic retailers, and donkey carts (poor, middle, rich). The middle and rich may also hire a water truck in a group or individually, to transport water to livestock in areas of good pasture, as this is more important for pastoralists.

2. Community with water pan and shallow wells only

During a normal year, these communities rely on the water pans all year except for August and September, during which time they use their community's shallow well, where water is available all year with some lowered yields in August and September. If shallow well use is restricted, they will search for water in nearby locations with shallow wells. These can involve long queuing hours, but the water is free. The poor who own a donkey use it for water transportation or to sell water and may buy small quantities from different water retailers. The middle wealth group tend to buy water from retailers, water truckers (or people), and from donkey cart sellers if this option is available.

In an emergency, although there is a significant decrease in the yield of shallow wells during August and September, these communities still rely on shallow wells throughout the year, even when water access is more restricted by well owners who begin to charge for the water or restrict water well access to their families. In 2011, the community relied on the water pan from October through December and in some places up to January. For the rest of the year (Jan-Sept), alternatives are government water trucking which is paid (very poor, poor, middle, and rich), commercial water trucking (middle and rich), and opportunistic retailers and donkey carts (poor, middle, rich). The rich are able to hire a truck during this period to transport water to meet their needs.

3. Communities with a borehole, shallow wells, and water pans

In a normal year, water pans are a source for the different wealth groups of this type of community between April-June and October-December. Additionally, the very poor and poor use the shallow wells, which are free, while the middle and the rich get their water from the borehole (paid). During the dry seasons of a normal year (Jan-March, July-Sept), private owners may restrict the access to their shallow wells especially for animals, although not usually for human consumption (except for non-community members, i.e. pastoralists). During the dry season, the middle and rich may buy water from trucks, retailers and donkey carts if available. The rich may hire trucks alone or in a small group for their animals, and sell part of it at an inflated price to make up for the truck hiring costs.

In an emergency year, the shallow well and boreholes are options for the different wealth groups in these communities; however the very poor and poor are unable to pay for the

borehole water, and the middle and rich will tend to buy water most frequently from the borehole. From March to September and in some few cases even in Jan-Feb, the better off may use commercial water trucking to deliver water for their livestock, purchasing it individually or in a group of people. The middle may also get together as a group to hire a truck for their livestock. As for the water pans, in 2011 due to the rains, the community was only able to use it from October to December.

4. Communities with borehole and pans only

In a normal year, the water pan is used by the different wealth groups from January to July, and October to December. When the water pan dries, the only source of water is the borehole. The very poor and poor will use the pans as much as possible as it is free or involves a small, once-per-year membership cost, and the middle and better off will use the borehole as their priority source. The very poor and poor may search for free water in nearby communities that have a shallow well or water pan when the pan dries, especially during August-Sept (Note that these are found in the south of the district, and there are very minimal shallow wells, so may be only applicable in other districts of Wajir).

In an emergency year, the borehole is used throughout the year although the poor and very poor have very little purchasing power to pay for water and will therefore search for free water in nearby locations with pans and shallow wells from January until September, and will rely on the water pan (used by all wealth groups) from October to December.

5. Communities with no source (new settlements)

In a normal year, these communities rely on water trucking from the government (paid) throughout the year, and search for free water in nearby locations with shallow wells or water pans.

In an emergency year the situation is the same, although the distances and queuing time may increase for other shallow wells or pan sites (and the community in question may restrict access in any case.)

Village typology: Examples

Wajir North	Village Classification and examples visited	Other examples not visited by water team	Other examples not visited by water team
Village Classification based on Water Access (Dry Season) Versus Examples of Villages	Community with water pan only	(Ogorji, Eresteno, Bute, Qarsa bula)	Korodille
	Community with water pan and shallow well only	(Gurar, Ajawa, pastoralist group close to Adadi Joli)	Adida Joli, Batalu

	Community with borehole, shallow wells, and water pans / or borehole only	(Buna, Eldas, pastoralist close to Qudana)	1.1.1 Godoma, Masalale, Gigile, Dela
	Community with borehole only and water pan (none visited)	NA	NA
	New Settlements (none visited)	NA	Bosich

Annex 9: Water balance

Within the hydrologic catchment area on which Wajir depends for water, there is sufficient water to cover Wajir water needs as well as the needs of the other areas that depend on this same hydrologic catchment area.

This is proven by the fact that during the worst year (severe drought of 2010 - 2011), needs of the catchment area were covered, while water points still have scale up capacity in their production. Existing water points can expand their production of 25% in Wajir North and West (the analysis below is based on main boreholes and shallow wells).

Water Point	Volume (Potential)¹	Volume (2011)²	Volume (Local Access)³	Volume (Trucked 2011)⁴	Volume (Additional Scale-Up Capacity)⁵
Eldas BH	192,000	192,000	72,000	120,000	0
Kilkilley BH	686,400	572,000	492,000	80,000	114,400
Masalale BH	240,000	240,000	70,000	170,000	0
Mulka Gulfu BH	34,320	34,320	14,320	20,000	0
Batalu BH	480,000	0	50,815	0	429,185
Qudama BH	2500	0	2,500	0	0
Korondile BH	300,000	300,000	230,000	70,000	0
Buna BH	480,000	350,000	300,000	50,000	130,000
Ogomdi BH	28,800	28,800	unknown	0	0
Danaba BH	19,200	19,200	16,800	2,400	0
Eresteno BH	12,000	0	unknown	0	12,000
Dela BH	12,000	0	unknown	0	12,000
Gurar Shallow Wells	676,650	676,650	676,650	0	0
Beramu Shallow Wells	124,155	124,155	124,155	0	0
TOTALS	3,288,025	2,537,125	2,049,240	512,400	697,585

*All Volumes in
Liters

BH = Borehole

¹Maximum daily volume the water point is capable of producing (based upon observed pumping levels at times of peak demand)

²Daily volume of water produced by the water point at the peak of the 2011 drought

³Volume of water collected by people, pack animals and livestock at the peak of the 2011 drought

⁴Volume of water that water trucks collected from this point during the peak of the 2011 drought

Annex 10 Response recommendations

Response objective:	Contributing to saving lives and minimizing the negative consequences of the drought on the livelihoods of affected communities in Wajir County
Outcome of the response	Providing water, public health promotion, food security and livelihoods support to xx people affected by the drought in Wajir County
Activities for WASH component	
1.1 Support to water access through water vouchers linked to local traders and / or community groups, in villages with no borehole	<ul style="list-style-type: none"> • In villages with no borehole, the response will aim at linking local market actors with water transporters and existing water points (mainly boreholes). The response will be based on local traders / community groups. • Targeting within communities: Since water access is mainly determined by households' purchasing power – especially during a severe drought - targeting should focus at least on very poor and poor categories. However blanket targeting should be considered for the following reasons: <ul style="list-style-type: none"> ○ Intra-community coping mechanisms: the response shall not disrupt communities' redistribution mechanism; ○ 80% are poor and very poor, specific targeting might represent an over cost that might not make substantial difference. • Oxfam / Partner contracts pre-identified local traders and / or community groups (like women's and Youth groups) that have trading capacity and experience (identified through capacity analysis and community consultation). • Water vouchers (commodity vouchers) distributed to beneficiaries, are to be redeemed from contracted local traders / community groups. • Through contract, the local traders / community groups are in charge of water procurement, transportation, and redistribution to beneficiaries against water vouchers. • The community should be given a central role in the choice of water trucks, in the negotiation of the water price, as well as in making sure that the distributions are fair. • Traders and transporters selection process shall also ensure market competition. • Payment is ensured by Oxfam/Partner to contracted local traders / community groups upon reception of beneficiaries' vouchers, including a transaction cost. • Delivery of water by trucks would be ensured in existing and newly established tanks to ensure Hygiene chain, before redistribution to beneficiaries. • According to the local trader / community groups' capacity, Oxfam / Partners can facilitate the link with the water transporter if needed as well as support capacity. In particular, Oxfam / Partners can provide a "stock" advance or stock grant (depending on analysis of their capacity) to the local trader and / or community group. • The present recommendation is to ensure the provision of free water through this system: i.e. people receive vouchers with no condition of participation and get the water for free when it is delivered by trucks. • If the situation analysis concludes that people have the capacity to

	<p>purchase a portion of their water needs, then the response could consider subsidizing partially the water by asking people to “buy” the vouchers: i.e. pay a portion of the water.</p>
1.2 Support to water access through water vouchers for free water provision at boreholes	<ul style="list-style-type: none"> • In villages with boreholes, free water distribution will be ensured to the local population by reimbursing the cost of the water delivered. • Water vouchers - distributed to beneficiaries- are proposed as a means to ensure that water is provided for free; however this could be avoided if effective accountability and complaints mechanisms are put in place to empower the community in enforcing the rule. • Reimbursement to WUA for the water distributed will be done by Oxfam / Partners against vouchers gathered by the WUA. • Reimbursement could be done in cash or in a combination of cash, fuel and / or spare parts vouchers linked to inputs and services providers pre-identified.
1.3 Integrated response combining WASH and EFSL	<ul style="list-style-type: none"> • Integration with the EFSL support to the very poor and poor households will be critical to allow them covering their survival needs (food + water) during the months of deficit in covering their basic needs. This shall also be integrated to protection and recovery interventions to support those households in covering their livelihoods deficit and protecting their assets and livelihood strategies. • Given the points above, joint EFSL – WASH targeting, beneficiaries’ selection and verification and vouchers distribution could be done at least where there is overlap in targeting. This is highly recommended, also to increase response efficiency and cost-effectiveness. • In an EFSL response addressing basic needs through cash grants, the possibility of increasing the cash amount to ensure the coverage of water needs should be considered. In this case there should be a careful analysis of prioritization and decision making on expenses at household level to make sure that extra cash will translate into sufficient water accessed. This could also be tested through a pilot comparing the increase of a cash grant for basic needs and the combination of a water voucher with a basic needs grant. • In particular, synergies with the HSNP programme should be examined.
1.4 Improve capacity of water points	<ul style="list-style-type: none"> • Increase storage capacity at Boreholes (tanks). • Establish stand pipes for truck filling in order to ensure that multiple users can access water at the borehole. • Maximize harvesting of rainwater in seasonal rivers through sub-surface dams and/or sand dams. • Rehabilitate and/or improve capacity of existing shallow wells and surface water harvesting structures, particularly as these are the preferred water sources of the poor and very poor. • Further development of high yielding boreholes only where shallow wells and surface water harvesting structures cannot be established. • Establish large capacity earth pans appropriately designed and placed (greater than 10,000 cubic meters).
1.5 Support to Operation and maintenance of	<ul style="list-style-type: none"> • Establish a service agreement for boreholes between Oxfam and a service provider. • The service agreement will include minor maintenance, breakdown

boreholes	<p>fixing, and major repairs up to a fixed value; for major repairs, during severe drought, Oxfam can act as guarantor for specific repairs in case of need, where relevant.</p> <ul style="list-style-type: none"> • Include training of mechanics within the service agreement, and link that training service to vocational training centers if those exist.
2.Public health Promotion (PHP)	<ul style="list-style-type: none"> • Drought appropriate PHP (safe water chain).
3.Sensitization and set-up of an accountability system	<ul style="list-style-type: none"> • Broad sensitization of the community should be ensured so that the community can hold different actors involved accountable. • An accountability system should be put in place where beneficiaries and community members can share comments and complaints with Oxfam. The complaint mechanism should be managed by Oxfam as the actor ultimately accountable to the donor.
4.Preparedness & DRR	<ul style="list-style-type: none"> • Community DRR and Community Water Management: the present project of the La Nina consortium includes the support of communities to develop community water management plans and community contingency plans. In discussing with communities about how they can address periods of drought, the options proposed here could be discussed. In particular, it could be discussed if contingency funds could be formed to ensure water trucking in cases of drought. And modalities could be considered involving local community groups and / or traders. • Options for insurance schemes should be explored (communities pulling funds to be used to address basic needs – including water needs). • Design of vouchers and analysis of different delivery mechanisms. • Identification of community groups and local traders and capacity analysis; linkage with water transporters where needed. • Support storage capacity (provide and establish underground tanks) in villages where they are not yet present. • Support storage maintenance, cleaning and protection. • Identification of service provider for O&M following capacity analysis. • Preparation to set-up an accountability system when the response is implemented. Options of mobile phone systems should be explored. • Pre-identification of beneficiaries and identification opportunities to link with or use learning from HSNP targeting criteria and systems.
5.Advocacy and coordination with other actors	<ul style="list-style-type: none"> • With ALRMP / Drought secretariat and WESCOORD: advocate for establishment of standards for water provision. • Advocacy towards other NGOs to avoid market distortion and for use of market actors. • Advocacy to donors for coherent responses between different actors. • Lead on piloting of alternatives to water trucking at national level: piloting, sharing and promotion of learning.
6.Governance & Integration with longer term programming	<ul style="list-style-type: none"> • Empowerment of communities to hold WUA accountable. • Hold Ministry of Water accountable through WESCOORD. • Reinforcement of community market actors to undertake water transportation and delivery as a business (this will focus on the reinforcement of trading capacity, not only for water trucking). • Integration with long term programming.
7. Definition of triggers for	<ul style="list-style-type: none"> • Early warning indicators:

emergency water provision	<ul style="list-style-type: none"> ○ Rain in Ethiopian highlands; ○ 1 failed rain season (in particular the <i>Deyr</i> rain) is an early indicator of a drought if the consecutive rain is failed; ○ Rain forecast. ● Trigger for response: <ul style="list-style-type: none"> ○ 2 consecutive failed rains; ○ Restriction of shallow well use by owners; ○ People sending jerry cans to be filled with lorries and vehicles; ○ Selling of water by water trucks and local traders.
8. Further analysis	<ul style="list-style-type: none"> ● Update of livelihood zoning and profiles (especially with evolution of pastoralism) and HEA outcome analysis to measure gap in households capacity to cover their basic and livelihood needs. ● Clan aspect of access to water to be further explored. ● User survey planned within the Consortium work plan will be the opportunity to explore further those aspects. ● Other market assessment for Livelihood needs.

a. Comparison of response options

While vouchers are often cited as an innovation and alternative to water trucking, it is important to make the distinction between vouchers as fair redistribution of the water delivered (delivery mechanism, i.e. voucher for water), and vouchers using the market system (real cash transfer, i.e. water voucher transferring the purchasing power to beneficiaries).

Adding vouchers to the response modality used in past responses (water trucking) would only ensure a fair redistribution of the water from the delivery point. This would not avoid distorting the market and creating a parallel system, and would not use the capacities of the market system, leaving Oxfam& Partners to bear the major part of the risks.

In addition to the advantages of vouchers as fair distribution modality, it is then key to highlight the advantages and added value of using the market system to deliver the water in the communities.

Water trucking, with partners paying water and hiring trucks	Water vouchers through local traders and / or groups	Fuel subsidy 2011	Water vouchers through WUA: water repayment is ensured to the WUA upon reception of vouchers from beneficiaries, collected by WUA while distributing water for free
683,000 GBP for around 76,000 beneficiaries (5 to 7 liters per person per day), including Partner costs Oxfam operational costs are not	615,000 GBP for same number of beneficiaries, Oxfam operational costs are not included here in the calculation but are estimated as	198,000 GBP for around 175,000 beneficiaries (5 liters per person per day) But at least 53,000 GBP did not reach beneficiaries since subsidies only led to	140,700 GBP for the same number of beneficiaries

included here in the calculation but are estimated as sufficient to implement the project	sufficient to implement the project either directly by Oxfam or by Partner	a reduction of price by half.	
Risks			
Oxfam bears all risks, at each level (water procurement, water transportation, water distribution), even when the truck breaks down.	Risks are shared along the market chain: in particular market actors bear transport risk and security risks.	Risk that water is still sold even if at lower cost than normal price	Risk that water is still sold even if at lower cost than normal price, but lower as voucher state agreement on free water
Advantages			
We know how to do it. Strong control over the whole chain	Oxfam does not distort the market. Market actors bear the risks in areas where they are experienced. Community groups and local traders, as well as communities are empowered Less resources spent by Oxfam for same output Impact includes reinforcement of local market and local actors	Easy to implement.	Water is provided for free. WUA is repaid in cash, fuel and spare parts that contribute directly to borehole operation. Impact includes reinforcement of local market and local actors
Disadvantages			
Oxfam is a water trucking actor and distorts the market by offering higher conditions than normal and creating a parallel system.	Requires fine design of contract and support to community trading entity (but we have the skills at institution level). Requires careful design to not put traders in power position.	Did not fully achieve free water provision. WUA not accountable in the absence of specific mechanism.	Requires adequate preparation for beneficiaries pre-identification and vouchers preparation.

b. Questions and Answers:

Cash grants or vouchers?

- Both are cash transfer programming, so both make use of the market system to deliver the emergency response;
- The present paper is proposing vouchers rather than cash grants for the simple reason that needs from vulnerable groups are multiple, leading them most probably to cover their food and other basic needs as well, and therefore not reaching the minimum water access (in ASALs the WASH cluster recommends that a person accesses at least around 7.5 Liters per day).

- And this of course does not mean that water needs should be covered in preference to food and other basic needs, it clearly means that all needs should be taken into consideration in the design of the response;
- So, if the water emergency support is clearly provided complementarily to an EFSL support to food and basic needs, then water could be counted as one of those basic needs and be included in a cash grant for example. Further understanding on people's decision making for the spending of a cash grant is required to make sure that people would then access their water requirement in addition to their food and other basic needs. In all cases, this requires a careful and appropriate calculation of the cash grant. This could be the purpose of a pilot comparing (Cash grant for food and other basic needs + voucher for water) and (cash grant for all basic needs = food, water and others).
- At the borehole, vouchers would not be necessary if sufficient accountability is reached and water is effectively distributed for free. This can indeed be ensured through active sensitization and by setting up effective accountability systems;
- Following the same logic, vouchers would be necessary at community level (in community with no borehole) if there is unfair redistribution of free water brought by agencies. The advantage of the vouchers is to mitigate risks of power abuse and ensuring an accountability system where the community monitors the delivery of water by traders, truckers and community groups. They represent a substantial work (to prepare and deliver vouchers) but ensure transferring the monitoring and accountability check from Oxfam to the community, increasing cost-efficiency and more importantly appropriateness. Before Oxfam and Partners used to post a monitor per delivery point for 3 months.

Total subsidy of water at the borehole vs Partial subsidy of water at the borehole

- Water transportation is not required in communities where water is available at the boreholes; the issue then is to support people's purchasing power to access water at the borehole;
- Partial subsidies at the borehole can be a means of reducing the selling price of water and allow people's increased access to water;
- The situation analysis in 2011 considered that vulnerable groups (ie the majority of the population) did not have the means to access sufficient quantities of water: they were indeed migrating for farther water sources and/or selling assets to buy water. The decision was to provide free water (through complete subsidy of water at the boreholes) in order to reduce pressure on the stretched resources of vulnerable groups. Also, with a goal of fairness, the response aimed at providing free water through water trucking – in communities without borehole – and free water at the boreholes in the communities that had them.
- If water is only partially subsidized at boreholes (ie providing support to WUA so that the price is reduced), then it would make sense to do the same for water trucking.
- Partially subsidizing water (at boreholes and through water trucking) could be considered if the analysis shows that the vulnerable have the means to cover part of the water cost in the case of severe emergency or if they are already targeted for basic needs support (through basic needs grants for example).

Accountability: how to ensure it?

- Vouchers are proposed as one way to make sure that people access the entitlement that the project aims at providing; but, as said above, vouchers would not be necessary in the case where sufficient accountability is reached and water is effectively distributed under total or partial subsidy. This can indeed be ensured through active sensitization and by setting up effective accountability systems;
- Accountability shall be ensured through a monitoring system led both by the community and Oxfam and Partners;

- Rather than monitoring each truck (for water trucking) and each borehole, the proposition is to ensure wide sensitization and to empower community members and relevant community structures in order to strengthen their role in monitoring and holding different actors accountable for their role in the relief delivery;
- One of the advantages is also to concentrate resources in sensitizing and empowering communities rather than having monitors in multiple areas.

Paying or not for water?

- The present paper does not discuss the need for cost recovery at water points so that their operation is sustainable. This is a given;
- The paper proposes a temporary free provision of water in the times of emergency when the majority of the population (80% of the population is very poor to poor) does not have the financial and economic means to cover the entirety of their basic needs;
- The paper proposes to offer free water for all, given that the vulnerable ones represent a substantial majority of the population: this proposition looks at the cost-effectiveness of the responses proposed: how much more appropriateness would be achieved by delivering to the most vulnerable? That would imply extra costs of targeting;
- But it is clear that in the case of integration with EFSL responses where there is already a system set up (EFSL responses using HSNP targeting for example) then that targeting approach could be used, saving time and resources;
- It is clear that such response is not sustainable and that the present recommendations aim at progressively setting a system where communities and local authorities can be in charge themselves: community contingency plans, building people's resilience, integrating water to HSNP grant calculation.