Save the Children

Regional Learning & Advocacy Programme for Vulnerable Dryland Communities

Technical brief: Participatory natural resource management with Somali pastoral & agropastoral communities: a lasting community led response to climate change

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INTRODUCTION

Mobile pastoral communities have been coping with changing environmental conditions for centuries. As a result, they have long established their capacity for adaptation. However, in recent years, changes in their environments from increased frequency of drought, land fragmentation and natural resource degradation have undermined their adaptive strategies increasing their vulnerability. Trends point to a pattern of climatic hazards more frequently turning to disasters. One option for pastoralist and agro pastoralists to build on their adaptive capacity and resiliency is closely related to their skills on managing their natural resources.

Save the Children UK (SC UK) has been working with communities in the Somali Region of Ethiopia to help them protect their assets and improve community preparedness for 20 years. This paper examines the experiences of SC UK working with communities of Shinile Zone, Somali Region on participatory natural resource management (NRM) and how it contributes to disaster risk reduction and climate change adaptation.

INTERVENTION AREA OVERVIEW

Shinile Zone is located in the extreme east of Ethiopia bordered by Djibouti to the northeast. Shinile is arid or semi-arid and mostly lowland. The population is 95% ethnically Somali and 86% rural (CSA). Ninety-five percent of the population is engaged in pastoral or agro pastoral activities (SCUK and DPPA), though pure pastoralism is the more prevalent.

In a recent study on climate-related vulnerability and adaptive capacity in Shinile Zone, communities identified the most significant hazards in their area as drought and extreme heat (Riché *et al*). Both hazards have similar effects; decreased pasture and water, death of livestock, crop failure and decreased market prices for livestock. Future climatic change projections for the Zone suggest that these hazards are likely to be intensified in the coming years (Mc Sweeney *et al)*.

The consequent critical NRM problems have been outlined in studies conducted in Shinile Zone (Kassahun) as:

- Increased encroachment by non-palatable and undesirable, endemic woody plants and exotic weeds,
- Deforestation
- Loss of biodiversity with social and economic values,
- Rangeland deterioration

Shinile Zone has experienced a number of droughts over the past 20 years. The effect of these droughts, coupled with the increase in population, has a direct correlation with the decreasing livestock holdings at household level for the pastoralist and agro pastoralist communities (SC UK and DPPA). Long term meteorological data does not exist for the

Zone. The community perceptions suggests, though, that rainy seasons have shortened during the last decade, with rains starting later and ending earlier, and with rain frequency, distribution and predictability decreasing, with Shinile community members further stating that day time peak temperatures now occur earlier than in previous times (Riché *et al*).

In sum, there is a perception of increasingly erratic climate variability which is further exacerbated by a myriad of other under-lying factors of vulnerability, including limited access to infrastructure, resources and information, limited access to educational opportunities, population pressure and conflict – leaving the communities in Shinile Zone at high risk of increased level of vulnerability in the coming years.

PARTICIPATORY NRM IN TWO DISTRICTS OF SHINILE ZONE

In the Afar and Somali Regions, SC UK is increasingly promoting interventions that embrace disaster risk reduction principles. Through assessments, community discussions and local observations in the Somali Zone of Shinile, natural resource utilization has increasingly surfaced as one of the key opportunities for communities to increase their resilience to climate change.

In 2007, SC UK began to work with pastoral and agro pastoral communities of Shinile and Dembel districts in Shinile Zone to explore lasting solutions to the NRM problems faced at the local level. The methodology utilized was adapted from the Flintan and Cullis "Introductory Guidelines on Participatory Rangeland Management" which built upon participatory forest management successfully led by Farm Africa among others in Ethiopia. SC UK worked with over 23 communities, following a comprehensive process:

Step 1 Stakeholders' assessment: This included discussions with key informants (community leaders, local government officials, community based animal health workers, men and women) on NRM issues in the two districts. Major issues identified included land degradation from soil erosion and water run-off, invasive species, deforestation and water access.

Step 2 Community Action Plan: Participatory tools were used to identify the local natural resources, understand traditional NRM techniques and knowledge, the uses of local natural resources and the constraints to current use / management. Care was taken to include perspectives from men, women and children, and local materials (e.g. rocks, sticks) were used to map out issues. Major NRM issues identified by the communities were similar to those in the stakeholders' assessments, but each community had its specific NRM issues in terms of scope and magnitude. Community members prioritized the activities to be completed, and the mapping and prioritization then fed into the development of community action plans (CAP) which were later transferred to paper versions which were stored for community reference.

Step 3 Establishment of community level development committees: In each community, one adult development committee with five members was formed (with 30% female composition) as well as one child committee per community (with 40 % girls) were also formed. These groups then mobilized communities and created awareness on the NRM activities, and they also acted as link to SC UK staff and the larger community, by assisting with beneficiary selection, progress reporting, conflict resolution, safeguarding tools and materials and mobilizing community contributions.

Step 4 NRM training: SC UK staff worked closely with local government to enhance community skills and knowledge of NRM interventions, encourage experimentation with local and new NRM techniques and promote active participation in NRM activities.

Step 5 NRM activities implemented: The prioritized works were done through two different means—community contribution or cash-for-work (CFW). The selection of the means used depended on the extent of the work needed and the available resources (community and SC UK), and was decided in consultation with the community. Beneficiaries of CFW were identified by the development committees, local authorities and community members using community-based criteria. This included the poor (traditional recipient of the *zakat*[1]) as well as female-headed households, households with chronically sick family members, pastoralist 'drop-outs' and male-only headed households. Overall 35% of all beneficiaries were women, across most activities. The NRM work took 10 days per beneficiary on average and the work was mainly done at the beginning of the dry season (a low period for agricultural work and mobility for pastoralists).

Step 6 Experimentation and innovation: The effectiveness of six traditional ways of controlling *prosopis*[2] was tested through simple trials of different removal methods conducted on small plots. The methods were applied on three to four *prosopis* trees and changes observed for three months. Other experimentation plots included fodder production in communities not previous familiar with its production.

RESULTS OF COMMUNITY ACTION PLANS

The results of the CAPs in Shinile Zone are many and range from the immediate to the longer term, including:

- **Immediate income:** CFW beneficiaries received an immediate cash injection. In 2008-2009, beneficiaries received ETB 140 per household, representing 2% of minimum food needs or 3% of the estimated total income of poor households in the 2009-10 year for only 10 days of work (King *et al*). CFW schemes were conducted during the dry season, *Jilaal*, which is the hunger gap period. Thus cash earned in CFW helped to protect assets and / or could be readily used for household food purchases. The timing of the transfer held more significance as it was during a low cash availability period for the communities.
- **Conversion of under-utilized land:** Hectares of land that had been abandoned due to the encroachment of invasive species, soil erosion and degradation were converted to productive uses. One 4.5ha plot of previously farmed land was cleared of invasive species and later used to cultivate maize, sorghum, vegetables and fruits. The transformation of the plot was so remarkable it was used as a demonstration area for other communities. A grazing area that had been abandoned due to degradation from drought and water run off was rehabilitated with diversionary canals. The rehabilitation also re-opened 400km² of grazing land now being used by over 500 households.
- **Increased access to food**: Rehabilitated land was used for cultivation and improving grazing in degraded areas, both of which have a direct effect on increasing access to grains, fruits, vegetables and milk on household and community levels.
- **Alternate income sources:** Additional income came from the sale of horticulture. One example is the sale of watermelons, cultivated in irrigation canals, to truck drivers along the international Ethiopia-Djibouti highway. Another example is the sale of *prosopis* for firewood, fences, charcoal, vegetables and seeds. In one project, more than 75 sacks of charcoal were made from the uprooted *prosopis* and sold for more than ETB 3,000. Though charcoal making is often considered a negative adaptation strategy, in this case the use of *prosopis* to make charcoal reduced pressure on native species and potential for increased deforestation. As part of the NRM training, controlled charcoal production with the involvement of local officials was stressed, discussed and agreed among the community members.

1 The Muslim form of giving to those who are less fortunate or alms.

2 Prosopis Juliflora is an evergreen shrub with large crown and open canopy growing to a height of 5-10m. It is drought tolerant, grow s well at marginal and strongly saline soils and tolerates seasonal water logging. It was introduced in Ethiopia in the 1970s and has spread a large area of many of the country's pastoral areas.

- **Community inspiration:** In various communities, buoyed by the successful clearing of previously noxious plants and rehabilitated lands, NRM activities continued and expanded by themselves without the support of SC UK.

LESSONS LEARNED

Lessons learned from the CAP implementation in Shinile and Dembel districts include:

- **Promotion of innovation & experimentation works**: Communities in Shinile Zone had for years watched the degradation of key natural resources. Though there have been some efforts to remedy the effects, they have not been at scale nor have they used the most effective methods. Communities have now realized that small scale community led efforts such as these bring immediate results and improvements to their livelihoods. The CFW scheme started a spark in some communities to tackle NRM issues in an organized manner; and with this catalyst many were inspired to do more. Embracing indigenous knowledge to find solutions to local problems through trials gave clear examples of the importance of innovation.

- **Involvement of women, children & local officials throughout is key:** Each unique group of people in communities has different needs, priorities and relations to the natural resources. Bringing together and consulting an inclusive selection of the community brings together these different perceptions and needs. The meaningful involvement of women in the project committees has shown the communities and local officials that women are effective decision makers. Children in Shinile Zone have a close relationship with natural resources as their household duties generally encompass their use and, as a key stakeholder in NRM, they contributed positively to the development and implementation of the CAPs. Having the local government involved has been important for sustainability, transparency and connecting the community to government initiatives and resources. Some communities were also able to receive support from the local government in achieving their CAPs.

- **CAPs provide a tool for communities to engage:** While the communities in Shinile Zone have traditional means to manage natural resources, collective action towards problem identification is not always done in a collective, mixed gender and age groups. Through the CAP process each participating community member could see, discuss and comment on NRM. This not only facilitated discussions at the community level, but also externally, when two communities bordering each other engaged in the joint planning of CAPs after acknowledging the interrelationship of their individual CAPs.

CONCLUSIONS

The communities, local government officials and SC UK have seen a wealth of benefits from the NRM activities implemented in Shinile Zone over the past four years. These benefits have been economic and social, immediate and long-term. Although climate change adaptation was not the original focus of the projects, it is clear that indeed the results are leading in that direction.

The activities were designed in line with the United Nations International Strategy for Disaster Reduction (UNISDR) disaster risk reduction framework, and achieved three of the five points of action:

- Identify, assess and monitor disaster risks
- Use knowledge, innovation and education to build a culture of safety and resilience at all levels
- Strengthen disaster preparedness for effective response at all times (UNISDR)

The NRM activities done by SCUK with the communities of Shinile and Dembel district built on two of the five characteristics of adaptive capacity outlined in the African Climate Resiliency Alliance (ACCRA) framework, including 'asset base' (individual, social and community)' and 'innovation'. To a lesser extent the activities have contributed to 'knowledge and information', 'institutions and entitlements' and 'flexible forward-thinking decision making and governance' as the four projects drawn on were too short in duration to adequately address these two characteristics. Subsequently SC UK needs to analyze when best to incorporate these points into future programming. What is clear through this study is that participatory, community owned NRM projects have a great potential for positive impact on livelihoods.

RECOMMENDATIONS

In order to further promote and strengthen participatory community led NRM activities, with an implicit connection to climate change adaptation and disaster risk reduction, the following recommendations are made:

Donors:

- **Support short term activities as well as sustainable drylands management support:** In areas such Shinile Zone that normally experience predictable changes in weather-related hazards and are vulnerable to gradual changes in climatic impacts, two tracks of support are needed by communities. This approach will address immediate needs *and* foster enabling conditions to longer term NRM, as the approach bridges both disaster risk reduction and climate change adaptation programming.

- **Longer term funded to support adaptive capacity in robust manner: I**n order to work towards strengthening all five characteristics of the adaptive capacity framework, donors need to provide longer-term funding for activities that can build on institutions and entitlements.

Non Governmental Organizations:

- **Link community livelihoods activities to NRM protect and synergy:** NRM activities in isolation may be undermined by other community activities, or synergies may not be sufficiently leveraged. Making these connections may multiple the positive impacts and may also give opportunities for scale up of NRM activities, such as through the public works activities of the government safety net program

Ethiopian policy makers:

- **Develop and implement policies and strategies related to invasive species removal / control:** Invasive species are a serious threat to the livelihoods of pastoral and non-pastoral communities alike. Community led initiatives are a good start to addressing their eradication. However, inefficient removal techniques or harmful practices, such as the use of toxic chemicals, used by some communities can increase the threat to human and animal health as well as place continued burden on communities. National policies on the introduction, control and removal of invasive species are essential to reduce the impact on communities and economies. In Ethiopia, it is clear that these types of policies need to reach the lower levels of government so that community actions can bear them in mind.

Researchers:

- **Expand research on NRM in pastoral areas:** National research bodies with links to implementing agencies and government programs can contribute much to current knowledge and understanding, in particular through research on the impact of NRM on the socio-economics in pastoral areas and the management of invasive species in these areas.

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