Save the Children

Regional Learning & Advocacy Programme for Vulnerable Dryland Communities

TECHNICAL BRIEF: Participatory natural resource management with Somali pastoral & agro-pastoral communities in Ethiopia: a lasting community led response to climate change

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Summary

Mobile pastoral communities have been coping with changing environmental conditions for centuries, and as a result they have a long established capacity for adaptation. However, changes in their environments in recent years—including the increasing frequency of drought, land fragmentation and natural resource degradation—have undermined their adaptive strategies, which is now increasing their vulnerability. Trends point to a pattern of climatic hazards that are more frequently turning to disasters. One option for pastoralist and agro pastoralists is to build on their adaptive capacity and resiliency using a response that is closely based on their skills in managing natural resources. Save the Children UK (SC UK) has been working with communities in the Somali Region of Ethiopia to help protect their assets and improve community preparedness for hazards for the past 20 years. This technical brief examines the experiences of SC UK working with communities in two districts of Shinile Zone on participatory natural resource management (NRM), and shows how this approach can contribute to disaster risk reduction and climate change adaptation.

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, 2008). Ninety-five percent of the population is engaged in pastoral or agro pastoral activities (SCUK and DPPA, 2008), with pure pastoralism being the more prevalent. In a recent study on climate-related vulnerability and adaptive capacity in Shinile Zone, communities identified the most significant hazards as drought and extreme heat (Riché *et al*, 2009). Both these hazards have similar effects: decreased pasture and water, the death of livestock, crop failure and depressed market prices for livestock. Future climatic change projections for the zone suggest these hazards are likely to be intensified in the coming years. The most likely critical NRM problems identified in studies conducted in Shinile Zone (Kassahun, 2006) have been outlined as:

- Increased encroachment by non-palatable, and undesirable, endemic woody plants and exotic weeds
- Deforestation
- The loss of biodiversity with social and economic value
- Rangeland deterioration (Mc Sweeney *et al, 2008)*.

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Shinile Zone has experienced a number of droughts over the past 20 years. The effect of these droughts, coupled with the increase in human population, has had a direct correlation with the decrease in livestock holdings at household level amongst the pastoralist and agro pastoralist communities (SC UK and DPPA, 2008). Long-term meteorological data does not exist for the zone, but community perceptions suggest that rainy seasons have shortened during the last decade—with rains starting later and ending earlier—and that rain frequency, distribution and predictability is decreasing. Shinile community members also state that daytime peak temperatures now occur earlier than in previous times (Riché *et al, 2009*). Overall there is a perception of increasingly erratic climate variability, further exacerbated by a myriad of other under-lying factors, creating vulnerability. These underlying factors include: limited community access to infrastructure, resources and information; limited community access to educational opportunities; and increased population pressure and conflict. Altogether these make the communities in Shinile Zone at high risk of drought vulnerability in the coming years.

Participatory NRM in two districts of Shinile Zone

In Ethiopia's 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 utilisation has now surfaced as one of the key opportunities for communities to increase their resilience to climate change. SC UK began working with the pastoral and agro pastoral communities of Shinile and Dembel districts in Shinile Zone in 2007 in order to explore lasting solutions to the NRM problems being faced at the local level. The methodology utilised was adapted from the Flintan and Cullis "Introductory Guidelines on Participatory Rangeland Management" (later published in 2010), which itself built upon the participatory forest management successfully led by Farm Africa and others. SC UK has now worked with over 23 communities in Shinile Zone using a comprehensive step-by-step process. The steps undertaken in Shinile and Dembel districts covered:

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

Step 2 Community Action Plan: Participatory tools were used to identify the local natural resources, to understand traditional NRM techniques and knowledge, the uses of local natural resources, and the constraints to their 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 on the ground. The major NRM issues identified by the communities were similar to those in the stakeholders' assessments, but each community had its own specific NRM issues in terms of scope and magnitude. Community members prioritised the activities they wanted to see completed, and their mapping and prioritisation then fed into the development of community action plans (CAP). These were later transferred to paper versions that were stored for the community's future reference.

Step 3 Establishment of community development committees: In each community one adult development committee was formed with five members (and 30% female composition), as well as one child committee (with 40 % girls). These groups then mobilised their communities in creating awareness on NRM activities, and acting as a link to the SC UK staff and the larger community. They assisted with beneficiary selection, progress reporting, conflict resolution, safeguarding tools and materials, and mobilising community contributions.

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

Step 5 NRM activities implemented: The prioritised works were carried out through two different mechanisms—community contribution or cash-for-work (CFW). The selection of the mechanism was decided in consultation with the community, and depended on the scale of the work needed and the available resources (in the community and in SC UK). The development committees, local authorities and community members identified the beneficiaries of the CFW scheme using a community-based set of criteria. This included the very poor (traditional recipients of the *zakat*[3]*),* 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, with the work being mainly done at the beginning of the dry season (i.e. a low season for agricultural work and for mobility among pastoralists).

Step 6 Experimentation and innovation: In one activity the effectiveness of six traditional ways of controlling *prosopis*[4] was tested through simple trials, with 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 activities included fodder production in communities not previously familiar with its production.

Achievements of the Community Action Plans

The achievements of the CAPs in Shinile Zone are many, ranging from the immediate to the longer term. They include:

- **Immediate income:** CFW beneficiaries received an immediate cash injection. In 2008-2009, beneficiaries received ETB 140 per household, representing 2% of their minimum food needs or 3% of the estimated total income of poor households in the 2009-10 year for 10 days of work (King *et al, 2009*). CFW schemes were conducted during the dry season, *jilaal*, which is the hunger gap period. The cash earned in CFW therefore helped to protect livestock assets and could be readily used for household food purchases. The timing of the transfer held more significance than the cash itself as it was during a period of low cash availability for the communities.
- **Conversion of under-utilised land:** Land that had been abandoned due to the encroachment of invasive species, soil erosion and degradation was converted into productive use. One 4.5ha plot of previously farmed land was cleared of its invasive species and later used to cultivate maize, sorghum, vegetables and fruits. The transformation of the plot was so remarkable that 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 also rehabilitated with diversionary canals. The rehabilitation activities re-opened 400km² of grazing lands that are now being used by over 500 households.

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

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

- **Increased access to food**: The rehabilitated land was used both for cultivation and for improving grazing in degraded areas, having a direct impact on household and community access to grains, fruits, vegetables and milk.

- **Alternate income sources:** Additional income was obtained from the sale of horticulture, for example from the sale of watermelons (cultivated in irrigation canals) to truck drivers along the international Ethiopia-Djibouti highway. Another example was the sale of *prosopis* for firewood, fences and charcoal. 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* reduced pressure on the native species and the potential for increased deforestation. As part of the NRM training process the control of charcoal production was highlighted, discussed and agreed upon by community members—with the involvement of local officials.

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

Lesson Learned

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

- **Promoting innovation & experimentation can work**: Communities in Shinile Zone had for years watched the degradation of their key natural resources. Though there had been some efforts to remedy the effects, they had not been at the right scale nor had they used the most effective methods. Through the CAPs communities have now realised that small-scale community led efforts can bring about immediate results, and an improvement to their livelihoods. The CFW scheme started a spark in some communities towards tackling NRM issues in an organised manner. And with this catalyst many were inspired to do more. Embracing indigenous knowledge to find solutions to local problems provided a clear example of the importance of innovation.

- **Involvement of women, children & local officials throughout is key:** Each community is a unique group of people with different needs, priorities and relations to their natural resources. Bringing together and consulting an inclusive selection of the community brings together their different perceptions and needs. The meaningful involvement of women in the project committees has clearly 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. As a key stakeholder in the process they contributed positively to the development and implementation of the CAPs. Having the local government involved has been important for sustainability, transparency and for 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 their natural resources, collective action towards problem identification is not always done in a participatory way with mixed gender and age groups. Through the CAP process each participating community member could see, discuss and comment on NRM problems. This not only facilitated discussions at the community level, but also externally, when two communities bordering each other engaged in the joint planning of their CAPs after acknowledging the interrelationship between them.

Conclusion and Recommendations

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, the results indicate they are leading in that direction.

The activities were designed in line with the United Nations International Strategy for Disaster Reduction (UNISDR, 2005) 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

The NRM activities undertaken by SCUK with the communities of Shinile and Dembel districts have also built on two of the five characteristics of adaptive capacity outlined in the African Climate Resiliency Alliance (ACCRA, 2010) framework, including 'asset base' (individual, social and community)' and 'innovation'. To a lesser extent the activities have also contributed to 'knowledge and information', 'institutions and entitlements' and 'flexible forward-thinking decision making and governance'—although the four projects drawn on were too short in duration to adequately address these characteristics. SC UK will need to analyse when best to incorporate these points into their future programming. What has become clear though through this study is that participatory, community-owned NRM projects have a great potential for positive impact on livelihoods.

In order to further promote and strengthen participatory community led NRM activities, with an implicit connection to climate change adaptation and to disaster risk reduction, it is recommended that:

Donors:

- **Support short-term activities as well as supporting sustainable drylands management:** In areas such Shinile Zone, which normally experience predictable weather-related hazards but are also vulnerable to gradual long-term changes in climatic impacts, a two-tier system of support is needed. Approaches need to address immediate needs and *also* foster enabling conditions for longer term NRM. Interventions need to bridge both disaster risk reduction and climate change adaptation programming.

- **Provide longer-term funding to support adaptive capacity in robust manner:** In 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 Organisations:

- **Link community livelihood activities to NRM protection and identify synergies:** NRM activities undertaken in isolation may be undermined by other community activities, and synergies may not be sufficiently leveraged. Making the connections may multiple the positive impacts and may provide opportunities for the scaling 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 for addressing their eradication. However, inefficient removal techniques or harmful practices, such as the use of toxic chemicals by some communities, can increase the threat to human and animal health—as well as place a continued burden on communities. A national policy on the introduction, control and removal of invasive species is essential to reduce the impact on communities and economies. In Ethiopia this type of policy also needs to reach the lower levels of government so that community actions can take it into account.

Researchers:

- **Expand the level of research on NRM in pastoral areas:** National research bodies, with links to implementing agencies and government programmes, can contribute much to current knowledge and understanding of NRM—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.

REFERENCES

African Climate Resiliency Alliance. 2010. "Consultation document: the ACCRA Local Adaptive Capacity framework (LAC)" ACCRA http://community.eldis.org/.59d669a8/Research.html

Central Statistical Agency (CSA). 2008. Summary and statistical report of the 2007 population and housing census. The Federal Republic of Ethiopia. CSA. Addis Ababa, Ethiopia http://www.csa.gov.et/pdf/Cen2007_firstdraft.pdf

Flintan, Fiona and Cullis Adrian. 2010. "Introductory Guidelines to Participatory Rangeland Management in Pastoral Areas" Save the Children USA. Addis Ababa, Ethiopia. www.elmt-relpa.org/aesito/HOAPN/

Kassahun, Amha. 2006. "Characterisation of Rangeland Resources and Dynamics of the Pastoral Production Systems in the Somali Region Of Eastern Ethiopia" Doctoral Dissertation. Natural and Agricultural Sciences Department of Animal, Wildlife and Grassland Sciences. University of the Free State. Bloemfontein, South Africa http://etd.uovs.ac.za/ETD-db/theses/available/etd-07302007-151852/unrestricted/GezahegnAK.pdf

King, Alexandra & Merkuria, Zerihun. 2009. "Evaluation of SCUK/US ECHO-funded PILLAR Project" FEG Consultants.

Mc Sweeney, C., *et al.* 2008. UNDP Climate Change Country Profiles – Ethiopia. School of Geography and the Environment. University of Oxford. Oxford, UK http://ncsp.undp.org/sites/default/files/Ethiopia.oxford.report.pdf

Riché, Béatrice et al. 2009. "Climate Related vulnerability and adaptive-capacity in Ethiopia's Borana and Somali Regions" Care and Save the Children UK. Addis Ababa, Ethiopia. www.elmt-relpa.org/aesito/HoAPN

Save the Children UK and Disaster Preparedness and Prevention Agency. 2008. Livelihoods and Vulnerabilities – An Understanding of Livelihoods in Somali Regional State, Ethiopia. Save the Children UK and Disaster Preparedness and Prevention Agency. Addis Ababa, Ethiopia.

United Nations International Strategy for Disaster Reduction. 2005. "Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters" UNISDR. Geneva, Switzerland http://www.unisdr.org/we/coordinate/hfa

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