Acknowledgments

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Photo: Eva-Lotta Jansso
Executive summary

Under Oxfam Great Britain’s (OGB) Global Performance Framework (GPF), samples of projects are being randomly selected each year for a rigorous evaluation of their effectiveness. Oxfam’s programmatic work in supporting pastoralist households to reduce their risk from drought was one of the projects selected for an Effectiveness Review under the adaptation and risk reduction thematic area in the 2012/13 financial year. The activities of two separate projects were covered by this review: one was the third phase of the cross-border ‘Regional Drought Decision’ programme, which focused on building the capacity of community-based disaster risk management committees, as well as construction of water storage facilities and setting up some pilot pastoralist field schools (PFSs). The second project, the Somali Region Drought Recovery and Preparedness Project, was launched following the severe drought of 2008/09, and involved rehabilitating communal rangeland, restocking herds for female-headed households, training of community animal-health workers, a livestock vaccination campaign, a public-health campaign, and latrine construction.

To assess the effectiveness of this programme work, a quasi-experimental impact evaluation was implemented. This involved carrying out surveys with 699 households in 22 kebeles in Awbare and Harshin woredas. Ten of these communities had seen implementation of one or both of the projects under review, while an additional 12 kebeles had not been targeted by those projects, but were included in the survey for comparison purposes. Household resilience was evaluated along five interrelated dimensions: livelihood viability, innovation potential, access to contingency resources and support, integrity of the natural and built environment, and social response capability. Thirty-seven characteristics of a resilient household were identified, and a composite index of household resilience was constructed. At the analysis stage, the statistical tools of propensity-score matching and multivariate regression were used to control for demographic and baseline differences between the intervention and comparison households in order to estimate the projects’ impacts.

Comparison of the intervention and comparison households provides good evidence that the two projects had a positive effect on household resilience. Households in the communities where the two projects had been implemented scored positively on average 44 per cent of the characteristics of resilience, compared to 40 per cent in the comparison communities. Most of the specific characteristics in which differences are found, not surprisingly, are those related to the key interventions of the projects: availability of water and grazing land, vaccination of livestock, involvement in community drought-preparedness meetings and activities, and receipt of early-warning information. The households in project communities were also found to be faring better than those in comparison communities in terms of livestock lost to disease, access to livestock markets, and to have slightly more awareness of climate change and to be slightly more positive about innovation in livelihoods activities. Probably as a consequence of some of these changes, fewer of the households in project communities experienced severe losses of livestock during the drought of 2011.

The households of members of the PFS groups were found to score more highly than comparison households in many of the characteristics of resilience. However, it was not possible to assess to what extent this represents an impact of the project because the PFS households are probably systematically different in unobservable ways (such as motivation) than the average household in the comparison group.

To take forward learning from this project, Oxfam in general and the Ethiopia country team and partners in particular are encouraged to consider the following:

- Explore how to involve community members more widely in community-level drought preparedness activities, and to ensure that training and early-warning information is fully disseminated.
Introduction and purpose

Oxfam GB has put in place a Global Performance Framework (GPF) as part of its effort to better understand and communicate its effectiveness, as well as enhance learning across the organisation. As part of this framework, modest samples of mature projects (e.g. those closing during a given financial year) associated with each thematic indicator area are being randomly selected each year and rigorously evaluated. One key focus is on the extent they have promoted change in relation to relevant OGB global outcome indicators.

One of the projects randomly selected for the Effectiveness Review under the women’s empowerment thematic area in 2012/13 is the ‘Somali Region Drought Recovery and Preparedness Project’ (ETHB25). This project, that was funded by Oxfam’s drought appeal fund and by the Canadian International Development Agency (CIDA), aimed to support pastoralist communities and households in Jijiga and Shinile zones to recover from previous droughts, and to reduce their vulnerability to future droughts. The Effectiveness Review concentrated specifically on the project as implemented in Jijiga Zone, where activities have involved rehabilitating communal rangeland, restocking herds for female-headed households, training of community animal-health workers, a livestock vaccination campaign, a public-health campaign, and latrine construction. In this zone, implementation has overlapped with phase III of the cross-border ‘Regional Drought Decision’ project (RDD III), which also seeks to build the resilience of pastoralist households and protect their livelihoods against drought. The first two phases of this project focused on the provision of water sources for communities throughout Harshin woreda. In the third phase, the activities have been broadened to include work on building the capacity of community-based disaster risk management committees, including by setting up early-warning systems, giving support in contingency planning, and providing the committees with contingency funds. As a pilot initiative, a pastoralist field school (PFS) has been established in one community in each woreda, with the aim of promoting good practices in livestock management and risk management.

Both the Appeal/CIDA project and the RDD III project have been implemented in three woredas (districts) in Jijiga Zone. Since some communities have been included in both projects, the effects of the two projects on households’ resilience cannot be completely separated, and so they have been considered together in this report. Of the three implementation woredas, Kabribaya was excluded from the Effectiveness Review because it was not possible to identify communities suitable for comparison. The review focused instead on the impact of the two projects in the other two woredas, Harshin and Awbare.
Evaluation approach
As explained above, the two disaster risk reduction projects implemented in Jijiga Zone sought to reduce the targeted population to the extreme droughts that often take place in the region. From an impact evaluation perspective, the best way to evaluate such an intervention would have been to restrict the project’s implementation to randomly selected geographical areas, leaving others sites for comparative purposes, i.e. as controls. This impact evaluation design is known as a clustered randomised controlled trial. If it had been successfully implemented, the impact of the two projects could have been assessed by directly comparing the intervention and control populations in relation to the resilience characteristics presented in the next section. This is specifically because the randomisation process would have made the two populations comparable in every way, save for their exposure to the two projects.

However, Oxfam did not implement the projects in randomly selected geographic areas; the targeted villages were purposively chosen. Consequently, an alternative impact assessment design was pursued. This design is referred to as a quasi-experiment because it attempts to ‘mimic’ what a randomised controlled trial does by purposively identifying a comparison group that is similar to the intervention group, and then statistically controlling for any measured differences between the two.

To implement the design, a survey was carried out in November 2012 with 701 randomly selected households in 24 villages – 11 targeted by the two projects and 13 purposively matched comparison villages. The numbers of households interviewed were calculated through proportionate stratified sampling. The survey took place after implementation of the RDD III and Appeal/CIDA projects was complete, and at a time when planning was ongoing for the next phase of the RDD initiative. In the two communities where pastoralist field schools (PFSs) had been established, their members (48 in total, in the two communities) were deliberately targeted for interview. Unfortunately, robust conclusions about the impact of the projects on the PFS member households cannot be made from the results of this survey, since they do not appear to be comparable with the ‘average’ household in the comparison villages. Consequently, the focus of the analysis was on comparing members of the general population in the project communities with the population in the comparison communities. To reduce bias, the statistical tools of propensity-score matching (PSM) and multivariate regression were used in the statistical comparison of these two groups.
Intervention logic of the project

Figure 1 is a simple diagram of the logic model behind the various project activities that were assessed in the Effectiveness Review.

![Figure 1: Intervention logic for the project activities](image)

The overall aim of the two projects was to enable households to respond to and withstand future droughts. Each of the project activities shown at the bottom of the logic model was intended to contribute to this, either through providing training or information enabling households to better plan for and respond to drought, or through improving the capacity of community-level resources (including communal grazing land and water sources) to cope in times of stress.

It should be noted that some activities of the two projects were not assessed as part of the Effectiveness Review, either because they were implemented in different communities, or because they benefited communities across a wide geographic area. These activities include the training of community animal-health workers, livestock vaccination campaigns, the drilling of a borehole, a public-health campaign, and latrine construction.
Measuring resilience

Within Oxfam GB, efforts are being undertaken to develop an approach to measuring the resilience of households to shocks and stress and their ability to adapt to change. This approach involves capturing data on various household and community characteristics falling under the five interrelated dimensions presented below.

![Dimensions affecting the ability of households and communities to minimise risks from shocks and adapt to emerging trends and uncertainty](image)

**Figure 2: Oxfam GB’s conceptual framework for understanding and measuring resilience**

First, if we think about what a household would need in order to cope with current and future shocks, stresses, and uncertainty, a viable livelihood is likely to be one of them. If a shock happens, for instance, a household dependent on just one precarious livelihood activity is likely to be more negatively affected than another that has one or more less sensitive alternatives to fall back on, *all other things being equal*. In addition, households that are on the margins of survival are less likely to be resilient than their relatively more wealthy counterparts. Where longer-term climatic trend prediction information exists, it is also important to assess how viable current livelihood strategies would be given the range of likely future climatic scenarios.

Innovation potential is different and hence separate. It is focused on a household’s ability to positively adjust to change, whether anticipated or not. We can hypothesise that such potential is dependent on factors such as the knowledge and attitudes of relevant household members themselves, their ability to take risks, and their access to weather prediction and market information and relevant technology and resources.

Moreover, there will likely be times when even households with the most ‘resilient’ and adaptive livelihood strategies will find it tough to get by. Access to contingency resources and external support – e.g. savings, food and seed reserves, social protection, kin and non-kin support networks, and emergency services, etc. – are, therefore, likely to be critical in supporting households to cope with shocks and positively adjust to change.

It is further recognised that healthy ecosystems are better able to cope/adjust to climatic shocks/change than those that are relatively more degraded. We may reasonably assume – again, with all other things being equal – that households whose livelihoods are dependent on...
healthier ecosystems will be in a better position to adjust to climatic shocks/change than those that are not. The presence of appropriate infrastructure (e.g. pit latrines and roads) that is resilient to shocks and stresses (e.g. flooding) is equally important; if critical infrastructure no longer functions, or collapses in times shocks and stress, the livelihoods and/or health of community members can be negatively affected.

In most, if not all cases, it is necessary to look beyond the household level when examining resilience and adaptive capacity. Indeed, it is reasonable to assume that households are likely to be better able to successfully adjust to climatic shocks/change when they are part of larger coordinated efforts at the community level and beyond. The social and institutional capability dimension, in particular, is concerned with the effectiveness of informal and formal institutions in reducing risk, supporting positive adaptation, and ensuring equitable access to essential services in times of shock/stress. In the absence of this capability, we can assume that community-level duty bearers will be less effective in fulfilling their responsibilities in supporting community members to reduce risk and/or successfully adapt.

Specific characteristics believed to influence both resilience and adaptation fall under each of the five dimensions. However, no ‘one size fits all’; that is, many of the characteristics appropriate for a particular population (e.g. slum dwellers in Mumbai, India) may not be so for another (e.g. Bolivian shifting cultivationists). As such, each particular suite of characteristics needs to be appropriately specified given the nature of the population in question and the hazards and change processes to which it is likely to be subjected.

**Application of the resilience framework**

To make use of the framework described above in measuring resilience, an approach was used which is adapted from that employed by the Oxford Policy and Human Development Initiative (OPHI) and other organisations in the measurement of complex constructs such as poverty and women’s empowerment.

Firstly, under each of the five dimensions of resilience, specific characteristics were identified which are believed to be important to household resilience in the agro-pastoral context in Somali Region. The full list of the 37 characteristics used is shown in Figure 3 below. Some of

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**Figure 3: Characteristics and dimensional weights used in the Effectiveness Review**

- Social and Institutional Capability
- Livelihood Viability
- Innovation Potential
- Access to Contingency Resources & Support
- Integrity of Natural & Built Environment

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- Receipt of information or training on drought preparedness
- Awareness of local drought risk reduction initiatives
- Experience of violent disputes
- Awareness of local efforts to support adaptation
- Effectiveness of local leaders and institutions
- Extent of soil erosion
- Access to irrigation for farming
- Availability of water for livestock & consumption
- Availability of grazing land
- Awareness of drought preparedness plan
- Participation in drought preparedness meetings
- Group participation
- Social connectivity
- Perceptions of local government emergency support
- Savings
- Remittances or formal earnings
- Ownership of fungible livestock
- Household asset ownership
- Household food security
- Household dietary diversity
- Livelihood diversification
- Gender risk differential
- Crop diversification
- Livestock diversification
- Livestock herd size
- Ownership of pack animal
- Livestock lost to disease
- Livestock lost to drought
- Livestock vaccination
- Access to early-warning information
- Drought preparedness practice
- Attitudes to new livelihood practices
- Awareness of climate change
- Adoption of innovative practices
- Access to credit
- Access to state innovation support
- Market access

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these characteristics – such as participation in community-level drought-preparedness planning – are closely linked to the project interventions. Other characteristics were not directly linked to the objectives of the project, but were included in order to provide an overall view of resilience among the surveyed population.

For each characteristic of resilience listed in Figure 3, a benchmark was defined, based on what it means for a household to be faring reasonably well in relation to the characteristic in question. For example, a household was defined to score positively in terms of livelihood diversification if household members were engaged in two or more livelihoods activities, with more than half of household income deriving from activities judged to be reasonably tolerant to drought. The survey data was then compared to these definitions, to determine whether each household scored positively in terms of each of the characteristics.

Weights were assigned to the characteristics under each of the dimensions, as shown in Figure 3. For example, the characteristics of livelihood viability together accounted for 30 per cent of the total weight in calculating overall measures of resilience. The overall index of resilience was then defined as the proportion of weighted characteristics in which each household scored positively.

The Oxfam GB global indicator for resilience was defined to be positive for any household that scored positively in more of the characteristics than a ‘typical’ household in the area. For these purposes, the ‘typical’ household was taken to be the median household surveyed in the comparison communities.

Summary results table

The following table provides a summary of the key findings of the Effectiveness Review. A short narrative description related to each outcome then follows to unpack each key finding. A separate report is also available that provides a more detailed and technical description of the evaluation design, process and results. The table below summarises the extent to which there is overall evidence that the two projects successfully built resilience, disaggregated by dimension and characteristic. A simple five-point ‘traffic light’ system is used, and the key above illustrates what the various traffic lights represent.

For each characteristic the table shows the proportion of households from the sample in the project communities that scored positively. The columns to the right show whether each characteristic was directly related to the activities of the project, and whether it is a higher-order outcome, which can be reasonably be expected to result from the project. The final column shows whether this Effectiveness Review does, in fact, find evidence of positive impact on each characteristic.
Disaster Risk Reduction Programming in Ethiopia’s Somali Region – Summary Review

Effectiveness Review summary table

**Overall results**

Positive and statistically significant differences found between general intervention and comparison groups on the base resilience index, on the Alkire-Foster resilience index, and on the Global Indicator for adaptation and risk reduction.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Characteristic</th>
<th>% of household in project communities scoring positively</th>
<th>Directly targeted by project</th>
<th>Connected to project logic</th>
<th>Evidence of impact on characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livelihood viability</td>
<td>Household asset ownership</td>
<td>29%</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Household food security</td>
<td>70%</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Household dietary diversity</td>
<td>18%</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Livelihood diversification</td>
<td>13%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Gender risk differential</td>
<td>74%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Crop diversification</td>
<td>41%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Livestock diversification</td>
<td>40%</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Livestock herd size</td>
<td>42%</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Ownership of pack animal</td>
<td>70%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Livestock lost to disease in 2011</td>
<td>77%</td>
<td>No</td>
<td>Yes</td>
<td>Yes (RDD III)</td>
</tr>
<tr>
<td></td>
<td>Livestock lost to drought in 2011</td>
<td>54%</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Livestock vaccination</td>
<td>62%</td>
<td>No</td>
<td>No</td>
<td>Yes (RDD III)</td>
</tr>
<tr>
<td></td>
<td>Access to early-warning information</td>
<td>43%</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Drought preparedness practice</td>
<td>62%</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Innovation potential</td>
<td>Attitudes to new livelihood practices</td>
<td>24%</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Awareness of climate change</td>
<td>17%</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Adoption of innovative practices</td>
<td>76%</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Access to credit</td>
<td>36%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Access to state innovative support</td>
<td>10%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Market access</td>
<td>86%</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Access to contingency resources and support</td>
<td>Awareness of drought preparedness plan</td>
<td>14%</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (RDD III)</td>
</tr>
<tr>
<td></td>
<td>Participation in drought preparedness meetings</td>
<td>17%</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (RDD III)</td>
</tr>
<tr>
<td></td>
<td>Group participation</td>
<td>28%</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Social connectivity</td>
<td>55%</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Perceptions of local government emergency support</td>
<td>41%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Savings</td>
<td>24%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Remittances or formal earnings</td>
<td>8%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Ownership of fungible livestock</td>
<td>34%</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Natural &amp; built environment</td>
<td>Extent of soil erosion</td>
<td>73%</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Access to irrigation for farming</td>
<td>31%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Availability of water for livestock &amp; consumption</td>
<td>57%</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (Appeal/ CIDA)</td>
</tr>
<tr>
<td></td>
<td>Availability of grazing land</td>
<td>73%</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (RDD III)</td>
</tr>
<tr>
<td>Social &amp; institutional capability</td>
<td>Receipt of information or training on drought preparedness</td>
<td>9%</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (RDD III)</td>
</tr>
<tr>
<td></td>
<td>Awareness of local drought risk reduction initiatives</td>
<td>42%</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (RDD III)</td>
</tr>
<tr>
<td></td>
<td>Experience of violent disputes</td>
<td>99%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Effectiveness of local leaders and institutions</td>
<td>36%</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Awareness of local efforts to support adaptation</td>
<td>15%</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (RDD III)</td>
</tr>
</tbody>
</table>

Applicability: These results apply to the general intervention population of all the communities targeted by the two projects in Awbare and Harshin woredas, except for Kam Harshin and Baligas. The Effectiveness Review did not cover the project activities as implemented in Kabribiaya woreda.
Impact assessment findings

Overall results

As described above, the indices of resilience are defined from 37 different characteristics, all of which were assessed by means of a survey at household level. The proportion of characteristics in which each household scored positively was calculated: this measure is known as the base resilience index.

Interviewed households scored positively, on average, on 41 per cent of the characteristics. The chart below shows the average base resilience index scores, with the darker-shaded bars representing the results in the project communities, and the lighter-shaded bars representing the results in the comparison communities. It can be seen that the base resilience index is higher for the average household in the project communities – at 44 per cent – than in the comparison communities – at 40 per cent. The various statistical models that are used to control for baseline and demographic differences all concur that this represents a significant positive difference between the members of the supported and comparison groups. There is no evidence that this difference differs between the communities in which the two projects – the RDD III project and the Appeal/CIDA project – were implemented. However, there is evidence that the effect of the project is greater in the surveyed communities in Harshin woreda than in Awbare woreda. This may be related to the communities in Harshin woreda having had a longer exposure to this type of project work, since they were included in phases I and II of the RDD initiative – though it should also be noted that the communities surveyed for comparison purposes in Harshin woreda were also covered by RDD I and II.

It can also be seen in the chart that the base resilience index was higher among the members of the pastoralist field schools (PFSs). Unfortunately it cannot be claimed with any confidence that this is a result of the project activities: there are very likely to be unobserved baseline differences between the PFS members and comparison households that mitigate against estimates of impact being made.

The Oxfam GB global indicator is defined to be positive for any household with a resilience index score greater than the median score in the comparison group. In this way, the global indicator reflects whether a household scores positively in more characteristics than a ‘typical’ household in the comparison group. The proportion of households in project communities scoring positively on this measure is estimated to be between 14 and 18 percentage points higher than among households in the comparison communities.

While the overall resilience index provides an overview, it is essential to know the situation of the population in relation to each of the characteristics, and which characteristics are driving the difference between the project and comparison communities. The following sections, therefore, consider the various characteristics, and the contributions that each makes towards households’ resilience.
Dimension 1: Livelihood viability

The first dimension included in the resilience index is that of livelihood viability. To what extent is there evidence that households in the intervention villages possess livelihoods that are more resilient to shocks than the comparison households?

The households surveyed scored positively on average on 47 per cent of the characteristics of livelihood viability. As for the overall index, this proportion differs significantly between the project communities and comparison communities: 50 per cent in the project communities score positively, compared to 46 per cent in the comparison communities.

The chart below shows the difference between households in the project and comparison communities in terms of each of the 14 characteristics of livelihood viability. Here it can be observed that the general intervention population is better off than the comparison population in terms of four of these characteristics: vaccination of livestock, access to early-warning information in 2011, livestock lost to disease and livestock lost to drought during that year.

A key activity of the RDD III project has been in improving access to early-warning information, so the result on this characteristic may imply some success from those activities. Examination of the underlying data confirms that the difference between the project and comparison communities is due to a greater proportion of households receiving early-warning information from community leaders or from a community-based disaster risk management committee, rather than from sources that were not affected by the project, such as the radio or local government officers. However, it may be a cause for concern that still less than half (48 per cent) of households in the RDD III communities reported having received any early-warning information in advance of the drought of 2011. At household level, there are only a few indications of recipients taking action to protect their livestock and livelihoods. While more of those in the project communities reported storing feed or water in advance of the dry season that year (and also were slightly less likely to send family members to urban areas to look for work), there were no differences in the proportions who engaged in migration, destocking or herd splitting.

However, it should be noted that the survey did not ask for detailed information about the timing or extent of these mitigation activities: it is possible that the project influenced differences in behaviour that cannot be observed here. In addition, there is good evidence of a
difference in the drought-preparedness planning being undertaken at a community level: these are considered under Dimension 3, below.

For whatever reason, it is clear that losses during the drought of 2011 were significantly lower in the communities where the two projects were being implemented. Forty-six per cent of households in those communities experienced severe losses due to drought that year (meaning that three or more large livestock or nine or more sheep and goats died or had to be sold off for a low price), compared to 60 per cent of households in the comparison communities.

The majority (62 per cent) of households in the project communities reported that at least some of their livestock were vaccinated in the 12 months prior to the survey, a considerably higher figure than the 43 per cent of households in comparison communities. Interestingly, the highest vaccination rates are reported in communities that participated in RDD III – even though the vaccination activities themselves were implemented under the Appeal/CIDA project. In addition, much larger proportions in the RDD III project communities reported having good access to veterinary services: 25 per cent reported that veterinary services were always available when required, compared to only 12 per cent in the comparison communities. Whether as a result of the vaccination campaigns or better veterinary services, households in communities where the RDD III project was implemented suffered significantly lower losses to disease than did those in comparison communities.

The chart above also clearly shows that the PFS households are better off in relation to several of the livelihood viability characteristics. These include: food security; dietary diversity; gender risk differential; livestock vaccination; drought warning information; and good drought practice. Again, it is likely that some of these differences are based on the existing differences between the PFS members and non-members, so that they cannot be attributed with confidence to the project.
Dimension 2: Innovation potential

Six characteristics of innovation potential were examined in this Effectiveness Review. On average, surveyed households scored positively on 39 per cent of these characteristics, and again this figure was slightly higher among households in the project communities than in the comparison communities.

The chart on the following page shows the proportions scoring positively on each of the six dimensions. There are small but statistically significant differences between the intervention and comparison communities in terms of respondents’ awareness of climate change, attitudes towards innovation, actual adoption of innovative practices, and access to markets. For example, 68 per cent of households in the project communities reported that they experienced no difficulties in bringing their livestock to market during the last 12 months, compared to 55 per cent of the households in comparison communities. There are no clear differences between the participants in the communities where the Appeal/CIDA project was implemented and those where the RDD III project was implemented in terms of these results.

Again the members of the PFS groups generally scored higher on most of the characteristics than non-members (with the notable, but strange exception of awareness of climate change), but these differences cannot necessarily be attributed to the project activities.

![Percentage of households scoring positively on characteristics of innovation potential](chart.png)

Dimension 3: Access to contingency resources and support

Household surveyed on average scored positively on 28 per cent of the characteristics of access to contingency resources and support. This overall proportion did not vary significantly between the project and comparison communities, but (as can be seen from the chart below) there are clear differences in the two characteristics that relate to community-level contingency planning. A larger proportion of respondents in the project communities were aware of whether the community had a drought contingency plan (and if so, had some understanding of its contents), and were also more likely to have participated in community meetings on drought preparedness. Community-level contingency planning was a major focus of the RDD III project, and, as would be expected, these differences are concentrated in the communities where the RDD III project was implemented.

It should be noted that the proportions of households scoring positively on these characteristics are low, even in the RDD III project communities. More than three-quarters of respondents in those communities said their household members were either not aware of
whether the community had a drought contingency plan, or were not aware of its contents. Similarly, only 24 per cent of households reported having attended a community meeting on drought preparedness during the 12 months prior to the survey. Male respondents were more likely to respond positively to these questions than female respondents – but even among male respondents, fewer than a third reported that they had attended meetings or were aware of the contents of the contingency plan.

Of the other six characteristics considered under this dimension, one relates to the capacity of local government structures to provide support in times of crisis. The other five are concerned with contingency resources at the household level, such as access to savings or outside earnings, or the strength of their social connections. There is little or no evidence of a difference between the project and comparison communities in any of these characteristics. However, this should not be surprising, since the two projects being considered did not seek to have an impact on these household-level characteristics.

Among households of PFS members, it can be clearly seen that most reported being involved in community groups. Clearly, participation in the PFS group itself accounts for a large part of this effect. Again, the other apparent differences between the PFS members and comparison households may not be attributable to Oxfam’s work.

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**Dimension 4: Integrity of the natural and built environment**

Only four characteristics were identified for the integrity of the natural and built environment dimension. On average, the surveyed population scored positively on just over half of the characteristic, with this proportion being significantly higher among households in the project communities. In particular, as shown in the chart below, a larger proportion of households in the project communities scored positively on availability of water for livestock or household consumption, and on quality of their soil. The difference in terms of availability of grazing land is not statistically significant overall. However, specifically among the households in the three communities in Awbare woreda, where rangeland rehabilitation was carried out as part of the Appeal/CIDA project, the proportion of households scoring positively on access to grazing land is 86 per cent – considerably higher than in nearby comparison communities. It is, of course, possible that improved access to grazing land and water contributed to the reduction in losses of livestock from drought and disease that were discussed under Dimension 1 above.
Surprisingly, a much smaller proportion of the households of PFS members scored positively on extent of soil erosion than did their neighbours in the same communities and in the comparison communities. Since this outcome measure is based on respondents’ subjective judgements of the extent of erosion of their soil, it is possible that PFS members tended to have higher expectations than others, and so ranked their soil quality lower.
Dimension 5: Social and institutional capability

The final dimension to be considered in the Effectiveness Review was social and institutional capability. On average, households scored positively on two or three of the five characteristics considered as contributing to social and institutional capability, again with a small difference in favour of households in the project communities. A majority of the PFS households also scored positively on this index.

Again the breakdown of the results for the five characteristics is shown in the chart below. There are significant differences between the project and comparison communities in terms of receipt of drought-preparedness information, and awareness that local risk-reduction initiatives are being taken. There may also be a small difference in terms of the perceived effectiveness of local leaders and institutions to respond to crises. Further analysis confirms that all of these differences are concentrated among the communities where the RDD III project was implemented, rather than in the communities included in the Appeal/CIDA project.

Programme learning considerations

- **Explore how to involve community members more widely in community-level drought preparedness activities, and to ensure that training and early-warning information is fully disseminated.**

While the RDD III project was found to have had some effect on the involvement of community members in drought preparedness activities, the fact that only a minority of households reported any involvement in these activities is a cause for concern. As noted above, less than half of households in communities where the RDD III project had been implemented reported having received any early-warning information in advance of the drought of 2011, and more than three-quarters said their household members were either not aware of whether the community had a drought contingency plan, or were not aware of its contents. This suggests that there is still scope for further embedding these activities in the life of the community, and for ensuring that all households are involved and can fully benefit.