

Integrating disaster risk reduction in livelihoods programming in the Northwest of Nicaragua

A case study

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1. Background to the livelihoods project

From 2004-2009, Oxfam worked with the Centre for Promotion, Research and Rural and Social Development (CIPRES) in the León and Chinandega departments, to implement an Organic Cashew project, funded by the European Union. The project has improved the conditions of hundreds of farming families through the production, processing and marketing of the organic cashew seed, which when processed becomes the well-known cashew nut.

The idea of introducing cashew in the dry tropical departments of León and Chinandega was first introduced by CIPRES in 1994, based on experience of a programme that had worked well in similar conditions in Honduras. In Nicaragua, the focus was on strengthening women's cooperatives. A market study revealed that the production of organic cashew was possible through soil reconversion, and CIPRES believed that this could help improve environmental and livelihood security for women in the region and promote empowerment.

Hurricane Mitch (1998) also revealed the importance of women's roles in ensuring food security: *"women guarantee food security for the family after disaster by going out and looking for food, firewood and other forms of employment and taking on the responsibility of feeding their children"*, Irma Ortega, Director of CIPRES. In the aftermath of the hurricane, cashew plantations were encouraged as a response to the need to reforest and diversify the crops in the area. CIPRES believed that cashew would help to improve the soil quality and generate an alternative source of income without hindering the production of traditional crops like maize, sorghum, sesame, and pulses. New technologies were also introduced to improve processing of the seed: women would no



Members of the emergency committee in La Danta, Municipality of Somotillo. Photo credit: Emily Wilkinson/Oxfam.

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Irma Ortega
Director of CIPRES

longer have to take off the peel by hand or burn firewood; now they cook the seed by steaming it, using an organic process.

The EU-funded project implemented in the departments of León and Chinandega began in 2004 with a small disaster risk reduction (DRR) component. However, during the first year of implementation, the project was affected by a number of environmental hazards and Oxfam, CIPRES and the cashew seed producers themselves realised that a broader range of interventions were needed to help them protect their plantations and communities.



Members of the Cooperativa Agroindustrial de Mujeres de Somotillo preparing the cashew nuts for packaging.
Photo credit: Emily Wilkinson/Oxfam.

2. Integrating disaster risk reduction: motives and methods

The departments of León and Chinandega face a range of different environmental hazards, all of which have affected rural livelihoods in recent years. Recurrent, sudden-impact hazards include floods, volcanic eruptions and forest fires, although the region also suffers from soil degradation, which is responsible for flash floods and desertification in some areas. Drought and water shortages are also common, as are locust infestations and other crop diseases.

Risk management did not form part of the original EU-funded project, although Oxfam included it as one of its programmatic goals using its own funds. Initial DRR activities focused on dealing with drought conditions by building dykes to retain water, but both the implementing agency and cashew seed producers soon realised that their plantations were vulnerable to different hazards and that more needed to be done to raise awareness and increase the resilience of rural livelihoods.

In view of the need to build DRR capacity in communities and amongst CIPRES staff, Oxfam decided to modify its work plan in the second year to include more DRR elements. The revised project began with an awareness-raising workshop for CIPRES management and operative staff and personnel from the National Disaster Prevention System (SINAPRED). This led to the revision of some of the goals and a restructuring of the project. New funds were allocated to DRR measures and a series of capacity building and awareness-raising exercises were carried out with technical staff from CIPRES and cashew seed producers and processors.

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Cashew grower
Jiñocuago (Municipality of Somotillo)

Oxfam's DRR activities have focused on providing training and guidance to strengthen existing organisational structures. Community-level committees for disaster prevention and emergency response (COLOPRED) had already been set up by municipal authorities prior to the project, but many were not operating properly. By providing talks and training to members of these committees, Oxfam has help reactive them: *“The committee existed before the cashew project, but when we received training this reactivated it. We took advantage of the change to include new people because many former members had left”, cashew grower, Jiñocuago (Municipality of Somotillo).*

Capacity building exercises helped communities identify risks and vulnerable areas, draw-up risk maps, put together an emergency plan, and provided search and rescue and first aid training. These workshops built awareness of risk and a series of measures that could be undertaken to reduce it. Members of the committees were encouraged to allocate responsibilities for different preparedness and response activities and identify the most vulnerable groups who would need help evacuating, particularly areas prone to landslides and flooding.

Specialist training in fire prevention and fighting was provided to members of the community fire brigade. Run by personnel from Civil Defence

and the Fire Department, these sessions helped to ensure compliance with new legislation prohibiting the use of slash-and-burn techniques for land clearance without permits. Farmers were trained how to clear a corridor around their land to prevent accidental fires from spreading. They were also provided with fire fighting equipment.

Support was also provided directly to cashew farming and processing cooperatives to mitigate damage to crops and installations. In Los Genízaros (Municipality of Villanueva), Oxfam helped farmers to build dykes and terraces to protect their crops from flooding and landslides: *“These have helped to prevent loss of topsoil when there is heavy rainfall. Since then there have been no landslides”, Diego Rocha/cashew grower Los Genízaros.*

Another important component of DRR strategy was to strengthen the capacity of municipal disaster prevention committees (COMUPRED). In Villanueva and Somotillo Oxfam/CIPRES helped the municipal government to form an office for DRR. Although these already existed (in accordance with the law), like the community committees, they were not operative. Oxfam provided initial start up funds for training and equipment then the municipal government was encouraged to provide ongoing funding for operational costs and the director's salary.

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Diego Rocha/ Cashew grower
Los Genízaros

3. Innovation and good practice

The integration of DRR measures proved to be extremely important to the overall success of the livelihoods project given the high-risk environment in which cashew seed growers and processor live. With very limited funds and through training exercises, Oxfam was able to raise the level of awareness of disaster risk and the capacity of cashew cooperatives to implement measures to reduce damage to their product from environmental hazards.

Three aspects of Oxfam's approach are particularly innovative and can be considered examples of good practice in DRR: working with cooperatives; building on existing formal organisational structures; and programming flexibility.

A. Working with cooperatives:

One of the key characteristics of the cashew project as a whole and key to the success of DRR activities in communities has been the promotion of women's cooperatives. The production and sale of cashew seeds now represents an important source of income for members of the cooperatives so they are keen to invest in mitigation measures to protect their plantations from damage due to environmental hazards. By working with these cooperatives, the project also supports organisation in the community, making it easier to carry out other activities, such as capacity building workshops on emergency preparedness.

Capacity building exercises and leadership promotion in cashew production and processing have also encouraged women to play a more prominent role in DRR planning in their communities, something that would not have occurred before. As a result of talks and training



Cashew seeds ready for processing at the plant in Somotillo.
Photo credit: Emily Wilkinson/Oxfam.

“ “ *We have begun to reforest areas close to the streams to make the land safer and have built a number of dykes and terraces to hold the topsoil in place. Now we are trying to get the municipal government to improve the road so that we do not get cut off when it rains”*

*Francisca Moreno / Cashew grower
La Danta*

received over the last few years, cooperative members are also more capable of identifying mitigation projects and putting together proposals for municipal government and NGO funding: *“We have begun to reforest areas close to the streams to make the land safer and have built a number of dykes and terraces to hold the topsoil in place. Now we are trying to get the municipal government to improve the road so that we do not get cut off when it rains”, Francisca Moreno, cashew grower, La Danta.*

The project has therefore contributed to women's empowerment and this has helped contribute to improvements in the organisation and implementation of DRR activities.

B. Building on existing formal organisational structures for DRR:

By building links with COMUPREDs in different municipalities, Oxfam has ensured that its DRR activities in communities and with cooperatives are understood and welcomed by the government. Local governments can be suspicious of NGOs carrying out independent DRR activities in communities (Wilkinson 2011), however, by involving officials in training exercises and sharing information, Oxfam has gained the government's respect: *"The educational aspects of the project have been really good. The municipal government is focused on reducing risk in communities but education is needed to promote a culture of DRR"*, Margarita Hernandez, Director of the Risk management Office, Municipal Government of León.

The training provided by Oxfam to help communities and cooperatives formulate emergency plans is based on the National Risk Management Plan. This is important because for communities and municipalities to receive funding from the national government, through SINAPRED, their plans need to be structured in the same way.

The COMPPREDs are better organised now and this makes it easier for the municipal office to coordinate with them. In disaster preparedness activities this is particularly important as the municipality has to warn the committees of heavy rain and flood risk, but preparedness activities and evacuations will not be effective unless the community can organise these before municipal authorities arrive.

C. Programming flexibility:

DRR interventions improved throughout the project thanks to its flexibility and the ability of project staff to learn from experiences with disaster. Communities were affected by different hazards in different years of the project and these experiences of flooding, landslides, locust



Member of the emergency committee explaining the risk map in La Carreta, Municipality of Somotillo
Photo credit: Emily Wilkinson/Oxfam.

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infestations, drought and outbreaks of disease prompted a number of new initiatives that had not been planned at the start of the project. In the first years of the project DRR measures were aimed at reducing drought impact and many dykes were built to keep water in the fields. However, in the second year of the project, Hurricane Felix caused heavy rainfall and in some instances, flooding was actually worsened by the dykes. As a result, in its third year of operation, the project focused more on reducing flood risk. Training and support was provided to cooperatives to build small-scale structures to protect roads and fields from flooding. In the third year of the project, cashew plantations were affected by insect infestations so a study was carried out and pest control training sessions implemented in ten communities. Over the five years of the project, therefore, a multi-hazard approach to DRR was gradually adopted.

4. Limitations and challenges for the future

Notwithstanding the considerable number and variety of DRR activities carried out under the auspices of the livelihoods programme, the outcomes in terms of building community resilience need to be carefully assessed. One limitation is that in most communities and cashew processing plants, emergency committees are not active unless there is an immediate threat. Despite greater awareness of the environmental risks faced in different seasons, preparedness measures are still often carried out at the last minute. For example, few communities have a medical kit stocked at the beginning of the rainy season in preparation for the community being cut off by floods. One explanation for the lack of use of these committees is the existence of so many other organisational structures for community-level decision making. Often, the same people are involved in all community committees so it would be worth exploring how DRR concerns could be better integrated into other decision-making processes.

Awareness-raising and training sessions on different aspects of DRR have had an uneven impact across communities because some face greater problems with sudden-onset and others with slow-onset disasters. In communities with recent experience of flooding and landslides, there is greater awareness of the need for mitigation and preparedness measures. However, for many communities, particularly in León, drought presents the greater risk for food security. Slow-onset disasters are the most difficult to deal with at community level and members of the cooperatives in Las Lomas and El Espino were unclear about what to do to increase resilience to drought. For many, the only option is to migrate during the dry season.

Another limiting factor is that despite early financial support and training, not all municipal authorities are taking DRR equally seriously. Capacity building needs to be an ongoing activity as enthusiasm wanes over time and trained government officials often change position or leave office. Follow-up studies would be useful to see if and how the maps and emergency plans are being used by municipal authorities.



*Drought conditions in Tecuaname, Municipality of La Paz Centro.
Photo credit: Emily Wilkinson/Oxfam.*

5. Final comments

DRR has been effectively introduced into the organic cashew project through a series of well-targeted capacity building initiatives, demonstrating that appropriateness of measures and programming flexibility are more important than high levels of funding. By integrating DRR measures into a livelihoods project, Oxfam has not only helped increase awareness of the importance of effective organisation for emergency preparedness and response, but also been able to help ensure that future sources of income are resilient to environmental and other shocks.

The capacity building activities implemented during the project have acted as an important catalyst for change towards a culture of DRR at community level. The challenge now is to institutionalise these changes across communities and within government.

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