

# Drought in El Salvador: response and mitigation



*'Green pepper farm, being produced during the dry season, with water supplied by the low-cost irrigation system. Previously in this soil, nothing was grown, with the exception of grass which grew when it rained.'*

Irregular rains from 1998 until winter 2001 – particularly in the east of El Salvador – seriously damaged the crops of families on subsistence incomes. Earthquakes in early 2001 further reduced the amount of arable land available. And the onset of 'red tide', a harmful algae which contaminates seafood, hit fishermen's incomes hard. According to the World Food Programme (WFP), the drought affected maize, bean, rice, sorghum and watermelon crops in 62 municipalities. In the most seriously affected areas, 80 per cent of crops were lost, while small and medium-sized farmers lost 38 per cent of their average annual income. Meanwhile, according to the UN Development Programme, three quarters of the land in departments with the highest poverty indices was being used in an unsustainable way.

This situation was further aggravated by the economic crisis triggered by falling world coffee prices (one of El Salvador's main export crops), leading to widespread unemployment among plantation workers. In August 2001, the government declared a "State of National Emergency for Drought" across the east, centre and north of the country. This emergency decree allowed for adjustments to be made to the budget, the administration of international loans and the suspension of seizures from farmers.

## The intervention

In mid-September, the International Federation launched an appeal which emphasised the need to develop short, medium and long-term strategies to reverse the effects of the drought. The Spanish Red Cross, the Salvadorean Red Cross Society and the Regional Delegation discussed various forms of action, resulting in a single Drought Response and Mitigation Project with one overall objective: "To increase the capacity of subsistence farmers in the east of the country to better respond to and recuperate from future unfavourable climatic conditions". Specific objectives included:

- Contribute to reducing the effects of drought during the 2001 rainy season.
- Provide technical assistance to diversify and market crops, to improve income and daily diet.
- Improve environmental conditions through reforestation using fruit trees, integrated management of plagues and soil conservation measures.

From the outset, coordination with other actors was seen to be vital. Cooperation agreements were signed with the Inter-American Institute for Cooperation in Agriculture and the El Salvador Post-Harvest Coordinating Unit. The Inter-American Institute for Cooperation in Agriculture provided technical assistance, certification of plants and support with planting of fruit trees.

First of all, affected farmers and their families were given food aid for three months, in cooperation with WFP. Next came agricultural recovery, crucial to break the



*'The participation of women in the training was evident. This is a meeting in La Joya Canton, village in Meanguera municipality, Morazan Department, regarding maintenance activities for the fruit trees planted in 2002'*



*'To protect the soil from erosion caused by water and wind, barriers consisting of stone and pine suckers were made, with the labour provided by beneficiaries of the project. The pine suckers serve two purposes, as within a year their fruits can be reaped, thus improving the diet, and provide additional income.'*

cycle of failed crops. Two agronomists and an agricultural engineer were hired to support this phase, which started in January 2002 and continued for 12 months. Targeting Morazán, one of the most affected departments, the project benefited 200 families (around 1,200 people). Priority was given to: small producers; owners of one or two lots of land; those for whom agriculture is their only source of income and who lack other goods. Those farmers selected received tool kits (one shovel, two pickaxes and two sowing tools) to help them prepare their land for sowing. Seeds from the first harvest of maize and beans were used to plant the next crop.

Specific activities included soil conservation, stubble treatment, use of sustainable agricultural techniques for basic cereals and vegetables, crop diversification, reforestation with fruit trees (7,000 were planted, with an average of 35 per family), use of organic fertilisers and small-scale irrigation systems. This greatly reduced the operational cost of farming crops, in a way which enabled beneficiaries to use locally-available resources. Throughout the process, project technicians provided training and constant technical assistance to guarantee and improve production. Support was also given in post-harvest management and the marketing of vegetables produced. Metal silos with a capacity of 18 quarts were distributed to beneficiaries, to store food reserves which could be used or sold later as necessary.

## Positive impacts

- Owing to savings made during project implementation, the number of beneficiaries was increased to 300 families (approx. 1,500 persons). The total cost of the project was US\$ 258,000.
- Women have been given a leading role, comprising around 75 per cent of those involved in the project. Many of the area's men had either migrated to the US in search of work or died in the war of the 1990s. In some communities, the project was led by women, changing the attitude of men towards women's ability to take decisions on behalf of the whole community.
- 1,200 children benefited from the earnings of their parents who sold agricultural produce. Young people saw the project as an alternative form of development, which could help reduce migration away from home communities.
- The project led to the cultivation of crops in the summer – not possible previously, because of insufficient irrigation.
- The National Society benefited from a new approach to disaster response, which involved not only food aid but longer-term efforts to reduce vulnerability to future droughts.
- The project has continued, despite the end of funding. One technical expert from the National Society continues to provide follow-up in the communities. The beneficiaries have continued to plant more fruit trees, and to sow more vegetables. In some instances, they have discontinued their traditional production, as the crops which were introduced during the project have proved to be more economically viable.

## Lessons learned

- The participation of local women in all the project's development activities was fundamental, since it is the women who best know the basic needs of the home and the community.
- Maximising the use of water resources by implementing practical, low cost irrigation systems in the communities resulted in local people readily adopting this method to improve the productivity of their plots.
- The concentration of technical assistance on beneficiary families contributed to the successful development of the project, since on this depended the acceptance of the recommendations made by the technical personnel, thereby guaranteeing the sustainability of the action taken.

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