



# Enhancing resilience in Timor-Leste:

Achievements and lessons from the CARE and WaterAid MAKAS project





**Increasingly irregular rainfall, higher temperatures and longer dry periods conspire with already highly variable microclimates to create a patchwork of exposure to climate hazards in Liquiça. The high dependence on rain-fed agriculture of rural households, marginal sloping land and ongoing degradation across the Laklo and Gularlo river catchments contribute to making this one of the most food insecure areas in the country.**

CARE and WaterAid recognised these factors and took a watershed approach in the MAKAS project<sup>1</sup> to enhance access to safe drinking water, deliver improved sanitation, promote climate-resilient livelihoods and reduce landslide risks and erosion. The MAKAS project, which was funded by Australian Aid, worked with government to enable broader village plans for climate change adaptation. Between July 2012 and March 2015, the MAKAS project increased the resilience of 4,057 beneficiaries (2,125 women and 1,932 men) in 1,525 rural households in Timor-Leste's Liquiça district.

The MAKAS project successfully built on previous closely related projects and this meant that key staff were retained to ensure local knowledge capture and a quick project start up. Existing partnerships were extended through the project with local non-government organisations (NGOs) such as Centro do Desenvolvimento da Economia Popular (CDEP), Hafoun Timor Lorosa'e (HTL), Maladoi and Naroman Timor Foun (NTF), and development cooperation initiatives financed by the Government of Australia, such as Seeds of Life, and the Rural Water Supply and Sanitation Program (BESIK).

This Learning Brief summarises the findings of the end-of-project evaluation (February 2015)<sup>2</sup> and draws together program lessons and case studies to share the key learning and recommendations, for CARE Timor-Leste, partners and the broader sector.

The MAKAS project goal was to build the adaptive capacity of women and men in vulnerable households living in 33 hamlets within six villages in Liquiça District, Timor-Leste in order to increase their resilience to the unavoidable impacts of climate change.

#### End-of-project<sup>1</sup> outcomes:

- 1) Vulnerable women and men are implementing water management and water resource protection strategies that support livelihoods, domestic consumption and disaster risk reduction;
- 2) Vulnerable women and men are implementing climate resilient land management practices which support sustainable livelihoods and household food security; and
- 3) Communities, partners and local government have enhanced understanding of and capacity in climate change adaptation that informs local planning processes.

<sup>1</sup> *Mudansa Klimatica iha Ambiente Seguru / Climate Change in a Secure Environment*

<sup>2</sup> An end-of-project evaluation was completed in February 2015, which included visits to eight of the 33 target hamlets in Liquiça district and a survey of 292 households, community workshops, and key informant interviews were completed. The findings can be found in full in *Food, Water Rain, Risk: The Uphill Struggle to Adapt (Final Evaluation of the MAKAS project on community-based adaptation in Timor-Leste)* which is available on CARE Australia's website: [https://www.care.org.au/wp-content/uploads/2015/07/CBA-Portfolio-Evaluation\\_MAKAAS\\_Evaluation-Report\\_FINAL1.pdf](https://www.care.org.au/wp-content/uploads/2015/07/CBA-Portfolio-Evaluation_MAKAAS_Evaluation-Report_FINAL1.pdf).

<sup>3</sup> Tool available at CARE's Climate Change Information Centre, <http://careclimatechange.org/tool-kits/cvca/>

## Project achievements

At its outset the project conducted a baseline, a gender and power analysis, an environmental impact assessment, and Climate Vulnerability and Capacity Assessments (CVCAs)<sup>3</sup> to refine the relevance of its activities. The CVCAs also served as part of the planning process for the livelihood and water related activities and helped raise awareness towards sustainable agricultural techniques and water use. Through interventions with an explicit adaptation benefit such as check dams in response to flooding, and interventions to address more general development needs such as food security, livelihoods and governance, the project was relevant to community needs.

At the conclusion of the MAKAS project, it was found that the project led to increased agricultural production and higher incomes amongst farmer group members. It also generated significant improvements in access and availability of safe drinking water, reduced open defecation rates, and increased hand-washing practices, which together lead to reduced health risks, particularly to children. Furthermore, it raised climate change awareness amongst villagers and government partners, built linkages to government and reinforced community capacity – all of which are important aspects of adaptive capacity. Significantly, most project outcomes were seen as sustainable given the willingness and capacity of villagers to continue pursuing critical project activities.

**Across the twenty rural sub-villages that were supported, water access, management practices and sanitation improved substantially.**

Key activities were:

- The construction of 20 water distribution and sanitation systems at the sub-village level
- The formation of Water Management Committees to facilitate maintenance of these systems
- Hygiene and sanitation training (including using the community-led total sanitation approach)

Key achievements:

- The applied approach of community-led total sanitation was found to be particularly effective, resulting in 14 of the 20 hamlets declaring open-defecation-free status during the project period.
- Water access was considerably improved (81.7% of Water Management Committee members saw improvements);
- 50% of Water Management Committees have women in leadership roles, including seven women as chiefs, eight female secretaries and 15 women as treasurers.



Sustainable outcomes with happier, healthier people accessing safe drinking water.

## There is increased agricultural production and higher incomes amongst farmer group members and rural households.

Key activities were:

- Working with 31 new and 60 existing farmer groups to distribute new seed varieties and train in sustainable agricultural techniques and home gardening
- Construction of water ponds for irrigation and nurseries for seedlings
- Distribution of airtight drums to reduce post-harvest losses, tree seedlings and construction of nurseries and efficient cooking stoves to reduce firewood usage
- Implementation of erosion and landslide risk reduction activities through bioengineering, reforestation and dams

Key achievements:

- Increased crop diversification (the average number of planted crops over one cycle increased from 5.66 to 6.61)
- Increased conservation farming practices (in particular the uptake of integrated pest management, contour farming and crop covering)
- Increased access to climate information for all community members more than doubled to 34.9%. Amongst farmer group members 66.7% had access and most used this information to plan their activities
- More than two-thirds of villagers see themselves better off overall (68.8%)
- More than two-thirds of villagers see themselves better adapted and prepared for climate risks (69.2%).

## Rural households take enhanced collective action, have increased awareness and better links to the government.

Key activities were:

- Capacity building on gender equality and planning for climate change adaptation on the local level
- Awareness raising and training about climate change and adaptation on the local and the district levels
- Workshops and conferences on climate change adaptation on the district and national levels
- Hamlet, or Aldeia Resilience Action Planning (ARAP), which involved working with women and men to identify the key climate-linked challenges facing their village, and developing locally owned solutions.

Key achievements:

- Understanding of climate change impact and options for adaptation at village level increased substantially (89% of farmer group members and 76% of Water Management Committees members feel better prepared)
- The project supported the establishment of the National Climate Change Working Group and the inaugural National Conference on Climate Change Adaptation in November 2014, where the project had high visibility.
- At the district level the project was seen as a helpful “extended arm”, for the District Water and Sanitation Services department.

High in the hills above the coast of Timor-Leste lies the village of Kailelema where CARE is working with communities to increase food and water access, improving land and water management.



## Lessons and Reflections from the MAKAS Project

The MAKAS project provides numerous lessons as to how community-based adaptation (CBA) programming can be further enhanced. A watershed approach and integrated implementation across water and food ensured that the interventions would bring both short-term gains as well as long-term benefits. Through this, the project succeeded in generating interest, engagement, and uptake and ensured locally viable and technically sound actions. Further integration of multi-sectoral expertise into holistic designs, a broader reach into the community as well as greater attention to transforming gender inequality and power imbalances would further reinforce these achievements in the long term. Whilst climatic conditions were relatively favourable for agricultural production over the specific years of the project, an El Niño in 2015 will make these achievements even more critical to lives and livelihoods in Liquiça.

### *The watershed approach*

Taking a watershed approach draws ecosystem thinking into the CBA model and leads to improved implementation. Working across the three agro-ecological zones within the watersheds highlighted the varying impacts of climate variability and climate change can have at the micro scale.

Longer project timeframes are needed to implement a watershed and catchment approach. Focusing at the watershed level rather than more traditional borders is innovative but project timeframes of 6 to 7 years are needed.

Integrating food and water security approaches leads to solutions that address immediate short-term and long-term risks through locally viable and technically sound actions.

### *The partnership*

- Work in a consortium leads to collaboration on technical skills and enables integrated approaches
- The partnership led to greater efficiencies and these can be maximised by collaboration at the village as well as the national level

### *Implementation*

- Giving careful attention to gendered power imbalances in decision-making and women's workloads can enable CBA action to also address gender inequality
- Engaging groups as vehicles for change not just as targets for support leads to greater impact
- Getting community members to participate in activities, such as resilience action planning, which did not produce an immediate tangible benefit requires extra effort. Use of a more short-term entry point (e.g. improving agricultural production and incomes) can engage communities in longer term planning.



Part of the MAKAS project Carion's family built a water pond, plant nursery and expanded their kitchen garden with training from CARE.

### *Using scientific and community knowledge*

Analysing climate vulnerability and capacity is critical and must inform and drive tailored interventions. Vulnerability to climate change needs to be analysed from a participatory, scientific and technical perspective. Scientific perspectives need to be coupled with community perceptions and cultural mores in order to help prevent new information being dismissed. If communities feel threatened by technical information they may decide to ignore it in favour of traditional understandings of the environment and disasters.

The CVCA is also a useful tool in generating local information on climate impacts and vulnerability. It can be difficult to help communities appreciate the need to take adaptive action when specific scenarios are unavailable but the CVCA combines local and scientific knowledge which is a powerful and useful approach.

Understanding the underlying causes for landslides (including soil, climate, environmental conditions and human interventions) will mean the most appropriate mix of mechanical, biological and ecological techniques are used.

### *Contributing to national capacity and knowledge*

The National Climate Change Working Group and National Climate Change Adaptation Conference were effective ways to share information and contribute to the 'knowledge bank' in Timor-Leste. Agencies and line ministries should continue the dialogue, including holding conferences every two years.

Focusing on government capacity and commitment to adaptation planning from the outset of a project is needed for long-term sustainability.

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## **ABOUT CARE**

CARE works with poor communities in developing countries to end extreme poverty and injustice.

Our long-term aid programs provide food, clean water, basic healthcare and education and create opportunities for people to build a better future for themselves.

We also deliver emergency aid to survivors of natural disasters and conflict, and help people rebuild their lives.

We have 70 years' experience in successfully fighting poverty, and last year we helped change the lives of 72 million people around the world.