



**Resilient Futures:** An integrated approach to managing risk and building sustainable livelihoods in Oelbiteno, NTT

## CASE STUDY







## AN UNPREDICTABLE ENVIRONMENT

Drought has become a major issue in Nusa Tenggara Timur (NTT) in the eastern part of Indonesia. **NTT is known for its extreme weather and difficult farming conditions** - the islands are crowded with mountains and volcanoes, and semi-arid grassland savannah dominates the landscape. NTT is also a very **disadvantaged region**, with 1.149 million people or 22% of its population living on or below the poverty line (Central Statistics Agency, 2015).

A dramatic drop in rainfall in NTT over the past decade, exacerbated by climate change, has led to regular crop failures. The **increase in frequency and severity of drought** has also destroyed the topsoil, causing erosion and flooding when the rains do arrive.

## FARMERS ON THE FRONTLINE

The village of Oelbiteno in NTT is one of several villages in the district of Kupang that is **vulnerable to flooding, drought, and landslides**. Farmers in the village run small-scale subsistence operations with a limited range of crops that are prone to failing, leaving the communities

short of income for extended periods of time. With a **dependency on an abundant rainy season to ensure a successful harvest**, in a year of drought farmers and communities experience a significant drop in income and an increase in malnutrition.

When CARE first started to engage with the community, **farmers in the village were only planting once in a single season**. This lost them a valuable opportunity to supplement their income and diets with harvests from other crops. As Yusef Zetmin, a 33-year-old farmer from Oelbiteno said, "When the harvest is finished I just sit down. **I do not know what to do any more.**"

## AN INTEGRATED RISK MANAGEMENT APPROACH TO BUILD RESILIENCE

From 2014-2015 CARE ran a community-based **Integrated Risk Management (IRM)** program to increase resilience and safeguard livelihoods in Oelbiteno in the face of these natural hazards.

The program included the development of a **Community Action Plan (CAP)** for the village, and a series of Small





## WHAT IS AN IRM APPROACH?

Promotes community self-management

Focuses on partnerships

Works on different timescales

Stimulates learning

Integrates different disciplines

Recognizes broader geographical scales

Strengthens institutional resilience

Focuses on livelihoods

Scale Mitigation Plans (SSMPs) to address the various causes of livelihood disruption in the community and identify solutions.

The project used a **multi-pronged approach to building resilience**, integrating local community and landscape risk perspectives into the broader disaster risk reduction approaches, and **working in partnership** with a range of stakeholders to ensure multiple and competing interests were incorporated into solutions.

The project included the establishment of a **Cross-Actor Climate Forum (FILA)**, which served as a platform through which to share information about climate change adaptation and current and future weather patterns.

Farmers and community members also received vocational training through the FILAs on **new, sustainable farming techniques**, including the use of

organic fertilizer and how to schedule planting to reduce risk of crop failure from flood or drought.

The project resulted in farmers' groups adopting two planting seasons a year, with the second season focusing on a wide range of horticultural crops, which could be both consumed by the community and sold to outside buyers. **This led to a significant increase in incomes in the community.**

## LANDSLIDE PREVENTION THROUGH ECOSYSTEM RESTORATION

One of the core areas of focus for the project was the prevention and mitigation of landslides, which are common after a prolonged drought and often triggered by severe weather and storms.

**Soil erosion, caused by drought and deforestation**, is exacerbated by the widespread community use of slash and burn techniques to clear land prior to planting new crops. The **frequent landslides** not only endanger lives, but also destroy crops, reduce soil fertility, reduce biodiversity and disrupt the natural ecosystem.

Through the project's integrated approach, farmers learned about the risks of slash and burn methods of land clearing, and learned to adopt more **sustainable clearing techniques to reduce the risk of landslides**. This has resulted in an improvement in the health and biodiversity of the surrounding ecosystems.

## A PARTNERSHIP FOR RESILIENCE

CARE is a proud member of the **Partners for Resilience (PFR)**, an alliance of five humanitarian, development, and environmental organizations working together to



**“I was surprised to see how successful the farmers had been in this project. The results are outstanding. I believe this should be replicated. To my knowledge, this is the only village in Kupang that can harvest these types of crops”**

***Beatriks Kolnel, Head of Fatuleu Tengah Sub-district.***

strengthen community resilience across Indonesia. PfR advocates for an **innovative IRM approach** to address effects of climate change, strengthen ecosystem management/restoration, and promote risk-proof investments from the private and public sectors. Over the course of this five-year program (2016-2020), CARE will work with communities to ensure development plans and budgets integrate IRM principles.

### **A MODEL TO SCALE UP AND REPLICATE**

The success of the interventions in Oelbiteno village has led to the area being used as a **learning site for neighbouring villages**, who have now started to adopt

the same techniques to improve crop productivity and reduce vulnerability to droughts and landslides. Local farmers are now developing a written contract with vegetable traders in the urban markets to help to secure long term buyers for the new crops.

The success of the program in providing food security and sustainable incomes to farmers in low-water areas in general makes it **suitable for scaling up and replication across the country.**

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