



Livelihoods and resilience in Timor-Leste

Building community and environmental resilience to climate change effects



Case study

Lucia and her husband practise sustainable land management techniques, providing their family with a greater variety of food.



Climate, environment and livelihood challenges in Timor-Leste

In this mountainous Southeast Asian nation, forest and soil degradation is a major problem. Unsustainable land management practices, including slash and burn agriculture, have contributed to rapid deforestation.

Deforested hillsides are more prone to erosion and less able to hold water. Climate change, which is predicted to increase the frequency of extreme rainfall events, may further increase the likelihood of erosion, landslides and flooding.

These challenges pose significant risks for rural communities. They rely heavily on natural resources for their livelihoods, but have limited capacity to adapt to climate change. The country's tumultuous history means it continues to grapple with poverty, under-development and low levels of education, and many regions experience a distinct "hungry season" for up to four months a year.



Building Resilience to a Changing Climate and Environment (BRACCE)

Our pilot BRACCE project, funded by the Australian Government, ran in Aileu District from 2011 to mid-2016.

Its goal was to build community and environmental resilience to climate change effects.

Its three main aims were:

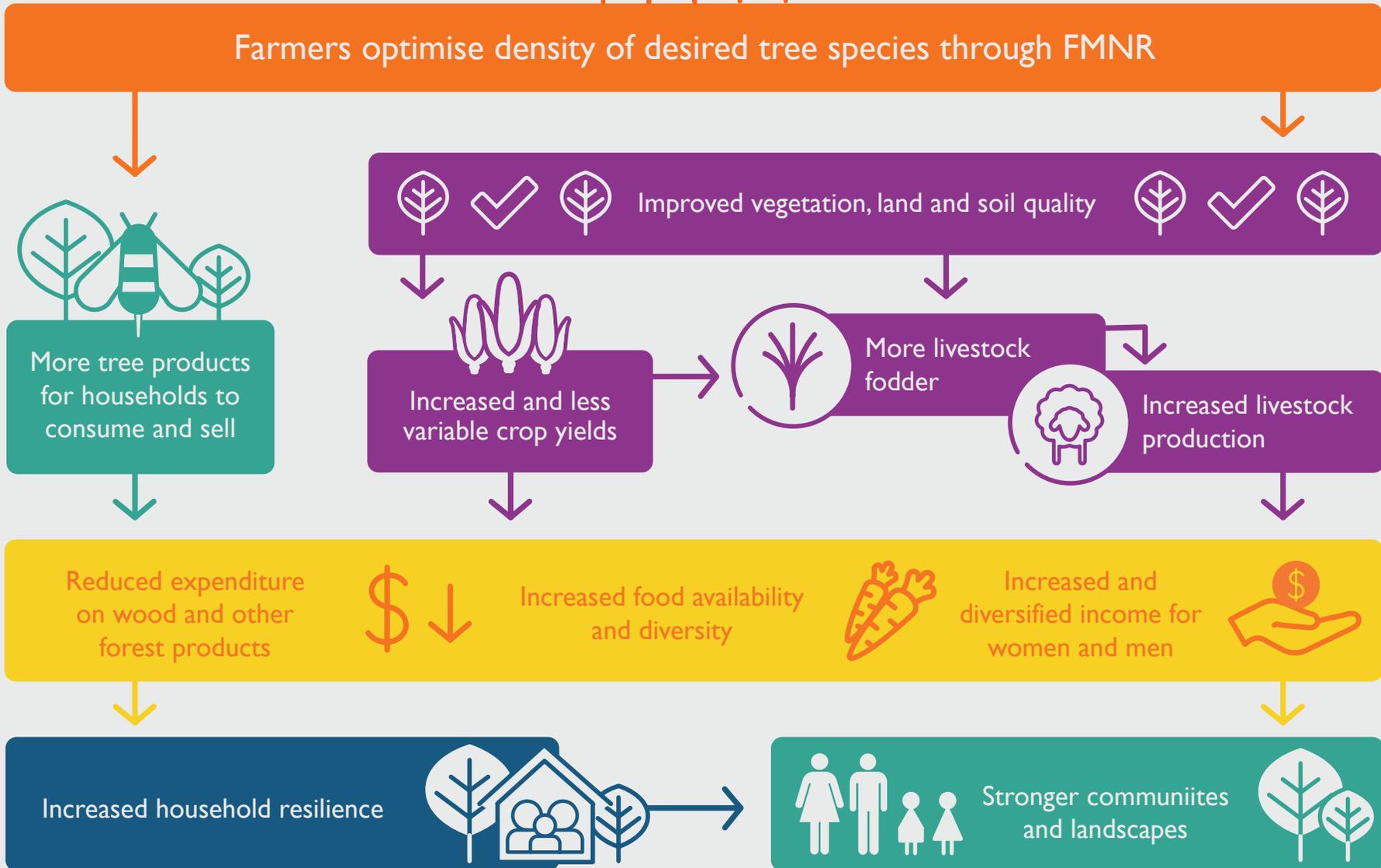
- **improved management of natural resources;**
- **increased household income through environmentally sustainable methods; and**
- **advocacy and awareness raising on climate change and sustainable land management.**

Through Farmer Managed Natural Regeneration (FMNR) and other adaptation methods such as agroforestry, it was designed to protect the environment while creating long-term income opportunities for farmers.

FMNR is the systematic regeneration and sustainable management of trees and shrubs from living tree stumps, roots and seeds. BRACCE was the first comprehensive introduction of FMNR to Timor-Leste.

In conjunction with BRACCE, we implemented another project in the same communities. LIFE (Livelihood Improvement through Farmer Enterprise) concentrated on vegetable production and marketing.

Simplified FMNR program theory



Australian
Aid 

World Vision 

Project highlights

Through BRACCE, coffee farmers are dramatically increasing their yields.



The project evaluation found that BRACCE made significant progress towards its goals.

FMNR has been taken up enthusiastically across the project area.

There is also compelling evidence of an increase in farmer incomes, particularly from fruit sales, and in climate change awareness.

Improved natural resource management

- **46 FMNR demonstration plots were established during the project, covering 54 hectares.**
- **98 percent of household respondents who were aware of FMNR were also practising it.**

Increased household incomes

- **40 percent higher incomes (on average) in households involved in BRACCE and/or LIFE compared to non-participating households.**

- **82 percent of households reported incomes of more than \$100 per year at the end of the project, compared to only 53 percent of households at the beginning.**

Increased awareness

- **96 percent of project participants reported a decrease in the incidence of burning forest lands since the project began.**
- **92 percent of BRACCE participants were aware of climate change, compared with 34 percent of non-project participants.**

Improvements are continuing beyond the life of the project as participants continue to apply new knowledge and skills.

The production of crops with longer lead times (such as fruit trees) is also yet to have a full impact on household incomes.

Coffee farmer Rui transforms his livelihood

Rui da Costa, 35, became involved in BRACCE in 2013. He received seedlings, farming tools and training in FMNR, terracing and tree nursery management. As a lead community farmer, he also had the opportunity to go to Indonesia to learn about coffee tree pruning.

Since 2015 Rui has been part of a new coffee cooperative, which has 25 members (15 men and 10 women). World Vision supported the cooperative by providing machines for de-husking, roasting and grinding, as well as training in using and maintaining the machines.

“Before, I had a coffee plantation. I only grew it. But now we can collect, produce and sell it ourselves,” Rui says.

New techniques

Rui originally learned about coffee farming from his father and his grandfather before him. They would let the trees grow tall, then sell off their beans. Income varied depending on the season, but if Rui grew one tonne of coffee he would make about US\$350 for the year.

After Rui saw the success of pruning older coffee trees in Indonesia, he pruned his trees right back. Everyone was shocked. Rui’s father told him, “No, we have done it like this for generations.”

Gradually, it became clear how much more coffee Rui was growing. People started asking how to follow his techniques, and Rui happily shared his knowledge. Even Rui’s father now prunes his coffee trees.

In 2016, Rui won first place in a coffee competition in Dili for the best-tasting coffee. Organised by the national government, it was judged by representatives from Brazil, Mexico and China.

While Rui used his own beans, he processed them through the cooperative’s plant and entered the competition on their behalf. He shared the \$200 prize money with the group to encourage other members to become more involved.



“BRACCE is very helpful for us, because before, we were just collecting the coffee beans for the community, but now we produce the coffee ourselves,” Rui says.



Teresa at her local market stall.

Increasing income

Rui and his wife Teresa, 37, now sell their coffee at the local market six days a week. They sell small, medium and larger bags for US\$1, US\$2 and US\$5 respectively, as well as cups of coffee for 50 cents each.

Each member of the cooperative earns an income proportionate to what they grow. Because Rui is such an active member, he and Teresa earn around US\$200 per month. In a very good month, they can earn US\$400.

The increased and regular income makes a big difference for the couple and their four daughters. Teresa also runs a clothing store in front of the coffee stall. The coffee income boosts her business, as it means she can buy more clothes to sell.

Future sustainability

Rui knows firsthand the benefits of sustainable natural resource management. As an FMNR group leader and the chief of his sub-village, he's passionate about continuing these practices – even though BRACCE has finished.

“Our ancestors would cut and destroy all the trees. So we didn’t know what will happen to us in the future. Now erosion has started to threaten us. So we are starting to improve the condition of the existing trees,” he says.

“I’m really, really happy because this program is already very helpful for this community. Most of the community live in a rural area and in this place we have a lack of information, but now the project has brought lots of information and many skills to the community.”