



From Rust to Resilience (R2R)

The project helped farmers remove plants infected with coffee leaf rust and replace them with disease-resistant varieties.
Photo by Morgan Arnold for CRS

CRS' Response, Recovery and Resilience (R3) program

Cyclones, tornados, drought, cholera and devastating crop disease are among the hazards facing communities that CRS has been helping in Guatemala, Nicaragua, Haiti, India, Bangladesh, Vietnam and Indonesia. In 2013, CRS launched the R3 program to reduce underserved vulnerable communities' risks to multiple natural disasters and build their resilience. A strong dimension of all of these projects was to better understand how people perceive their own resilience. Disaster management and resilience plans developed by communities, households and farmers detailed ways to mitigate and respond to disasters.

From Rust to Resilience (R2R)

This project was designed to build recovery capacity for poor families who were severely affected by the coffee leaf rust disease on their farms through the development of production systems that were more resilient to adverse events.

PROJECT OVERVIEW

The project supported 2,000 people from 400 smallholder coffee-producing families with less than 5 hectares of land and a monthly income equivalent to approximately US\$111. These families had been severely affected by the coffee leaf rust disease that had devastated their plantations and substantially decreased their income and food security during the 2012 and 2013 production cycles.

2,000

PEOPLE FROM 400 SMALLHOLDER COFFEE-PRODUCING FAMILIES WERE SUPPORTED BY THE R2R PROJECT TO INCREASE THEIR RESILIENCE

The project's multi-activity approach focused on building the resilience of the vulnerable smallholder farmers with the development of farm-level resilience plans, renovation of coffee trees (removing infected plants and planting disease-resistant varieties), improved fertilization and the diversification of crops in farm production systems. It also included food- and cash-for-work activities, technical support through the establishment of Farmer Field Schools (FFS) and Local Agriculture Research Committees (LARCs), and the development of financial management skills through Savings and Internal Lending Communities, or SILC.

Rust to Resilience also aimed to build evidence of technologically appropriate and economically viable crop production techniques that foster resilience in a changing climate. The El Niño phenomenon had caused a severe scarcity of rainfall in the project intervention areas. Improvement of agricultural techniques as well as soil and water conservation practices—taught in FFS and validated by the LARCs—helped farmers weather the severe drought that gravely affected farm production. Farmers were able to create a new source of relatively stable income through the establishment of cacao and fruit trees within their agroforestry coffee production systems, and sustain basic grain production through the installation of water catchment systems. They also collaborated in the cultivation of coffee and cacao nurseries, road repairs, protection of water sources, and soil and



AT A GLANCE

Project	From Rust to Resilience (R2R)
Location	San Juan del Río Coco and Telpaneca municipalities, Madriz province; Quilalí municipality, Nueva Segovia province, Nicaragua
Duration	June 2014 to May 2016
Partners	<ul style="list-style-type: none">• Regional Coffee Growers Cooperative of San Juan del Río Coco (CORCASAN)• Cooperative Development Promoter (PRODECOOP)• San Juan del Río Coco Union of Agricultural Cooperatives (San Juan UCA)
Funder	CRS private donors
Budget	US\$873,050

water conservation measures on their farms through food- and cash-for-work schemes.

A revolving fund—managed by the cooperatives and providing low-interest loans with generous deadlines— was established. This drew from a successful fund used during a previous CRS project, Bridges from Scarcity to Sufficiency. Interest on loans from that project made more funds available for further loans in the R2R project. The fund allowed activities such as the renovation of coffee farms and the production of basic grains to be implemented during the project.



The diversified agroforestry system of farmer Melvin Sanchez includes coffee, fruit trees, wood species for long-term harvest, bananas, and plenty of mulch. This system protects and restores the soil and offers diversified income and food production. *Photo by Kristin Rosenow/CRS*

RESULTS

Project participants improved their technical knowledge to manage coffee leaf rust, reducing diseased trees in their plantations to an average 34 percent from 46 percent, and increasing their yields by 10 percent and their income by 4 percent. The project formed 22 new SILC groups and strengthened 84 pre-existing ones, with 1,064 members (565 women and 499 men). By the end of the project, these groups had a cumulative savings of US\$64,900 and had made 1,529 loans to help members cover their basic household needs and to foster productive and commercial activities in their communities. The SILCs strengthened their capital through the interest earned on the loans while contributing to the vibrancy of the local economy through purchases made to improve their farming systems.

COMMUNITY VOICES

Joel Antonio Torres Calderón lives with his wife and daughter in the community of Las Delicias de las Cañas in San Juan de Río Coco municipality. He says the project helped him and his family overcome their vulnerability to the coffee leaf rust that had severely affected their livelihoods and wellbeing.

“I received training in the Farmer Field School and learned how to better manage my farm. For example, I now practice better crop management and wet milling. I am planting on contours to maximize water use and incorporating cuttings into the soil to improve fertility; things that I didn’t do before the project. I now have 150 cacao plants, a new crop on my farm, which I have intercropped with bananas and plantains. These will help us to have income in addition to what we earn from our coffee production.

“Now, we manage our coffee plantations better and know more about farming systems to produce cacao. The project’s food parcels kept many of us from migrating to look for work to support our families during very hard times. The work that the project generated with the collective coffee nurseries

LEARNINGS

1. Given the importance and content of the resilience plans (including family structure, socio-economic assessment, financial analysis, productivity assessment, mapping and planning), more time was needed for the process. Fortunately, the project extension has made it possible for farmers to further augment implementation of their plans.
2. When preparing the Farmer Field School curriculum and schedules, the respective crop production cycles must be taken into account. For example, attendance drops during the coffee harvest because the producers must focus on their production as their first priority.
3. For future SILC initiatives, planning should ensure that enough time is built into the project for SILC members to fully adopt the practices.
4. Because SILC groups were able to save, contributing to the creation of small businesses and helping revitalize the local economy, other organizations have been encouraged to adopt this methodology among their members and beneficiaries. CRS is now broadening alliances with other agencies in Nicaragua and is including the SILC methodology in other projects to expand and scale up its level of impact.
5. Future projects could facilitate exchanges of experiences between SILC groups, and collect success stories to encourage the formation of new SILCs to broaden their impact.



Joel Antonio Torres Calderón has diversified his farm by intercropping cacao with bananas and plantains as an alternative source of income. *Photo by Luis Lorente for CRS*

allowed us to earn money and we were able to work to remove our infected coffee plants and plant more resilient varieties. The introduction of the new rust-resistant coffee has contributed to improving my capacity for recovery and risk reduction.

“We think we will continue to do everything in our resilience plans. If we do not do it, we are hurting ourselves.”

COMMUNITY VOICES

Imer Antonio Palacio Matey lives with his wife and three-year-old daughter in San Lucas, San Juan del Río Coco municipality. More than half of his plantation was damaged by the outbreak of coffee leaf rust. Through the application of best practices for plant management, which he learned in the Farmer Field School and included in his resilience plan, he has a leaf rust incidence of only 6 percent from the average of 46 percent affected plants previously.

“I think I will continue implementing the techniques that I learned in the Farmer Field School, such as the establishment and management of nurseries for future replanting (of coffee and cacao), as well as the coffee maintenance practices (weed control, shade regulation, pruning and proper fertilization).”



Imer Antonio Palacio Matey has implemented farming techniques he learnt in the Farmer Field School. *Photo by Luis Lorente for CRS*

Evenecer SILC group in San Lucas, San Juan del Río Coco municipality, has 12 members (6 women and 6 men) and has cumulative savings of US\$1,241. “[The SILC group] is important to us because it has shown us that we can save. We used to think that saving meant holding onto at least 100 Cordobas [about US\$3.52] and that 10 Cordobas was something that you just spent because it was too small to save. The savings group has helped us to increase the availability of everyone’s money to benefit ourselves and invest in the improvement of production,” says group president Marta Lanzas.



Evenecer SILC group has helped members to develop good saving habits and access financial services in their own community without having to sell their coffee at low prices. *Photo by Alexa Escobar for CRS*

“Members can access small loans in times of need. We also have a social fund that helps with costs related to such things as serious illnesses or sad events. Previously, neither the bank nor our local cooperative supported us because we had lost our coffee and we didn’t have any way to repay a new loan. Now, we have a place to turn to.”

The group believes that the SILC has helped members to develop good saving habits and access financial services in their own community without having to sell their coffee at low prices like they used to do with microfinance institutions.

The project also formed a small network of promoters for SILC groups for youth and children, to encourage a culture of saving. At the end of the project, there was a network of trained promoters to help communities to continue promoting the SILC methodology.

The group has helped to strengthen participation and leadership among women and to change the habits of men in the group to save rather than spend.

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CATHOLIC RELIEF SERVICES

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