

Capacity-building for productive and resilient rural communities, El Salvador

Over the past 55 years, FUNDASAL has developed a methodology to empower and train low-income rural and urban communities to improve and manage their habitat. During the last decade this work has increasingly focused on climate change adaptation, and the use of nature-based solutions to reduce risks of disasters, but also on gender and youth empowerment. In this application, they present their comprehensive work in 12 rural communities and two rural new housing cooperatives.



What inspires us ...

FUNDASAL has already reached the final stage of the competition four times (finalist in 2017, 2014, 1997, Gold winner 2004), but this application focuses on their methodology to empower communities and guarantee long-term sustainability, and the food sovereignty, gender, and youth aspects. Their comprehensive and holistic approach stands out compared to NGOs who focus only on the provision of housing or sanitation or kitchen, or post-disaster shelter, etc.

Submitting organisation: FUNDASAL

Type of organisation: Non-Profit Foundation

Key elements of the project:

- **Nature-based solutions and food sovereignty**

136 earth homes built and 504 improved; hundreds of dry toilets, kitchen, wells and community facilities built; 115 vegetable gardens and 59 rainwater harvesting systems.

- **Capacity-building for men, women, and youth**

Self-help strategies underpin all interventions, but there is also a strong focus on gender- and youth-based empowerment. 822 young people were trained in health, culture, agroecology, gender issues and placemaking.

- **A clear working process based on strengthening communities.**

Interventions generally last for six to seven years, from the needs assessment, capacity-building, pilots, implementation, and creation of management committees and regional networks.

Introduction

This project considers comprehensive habitat improvement interventions in 12 rural communities from three municipalities in El Salvador and two rural housing cooperatives. All of them share an environmental approach based on protection of ecosystems, agroecology, and adaptation to the effects of the climate emergency. The frequency in which communities face droughts, tropical storms and flooding deepens the levels of precariousness and limits communities' responsiveness and recovery capacity, worsening their vulnerability.

To break this vicious circle, the projects aim at improving the life conditions of the most vulnerable residents through a safe and secure home, a healthy and productive environment, and an organised and resilient community. FUNDASAL's working approach with communities is based on participatory assessments and planning, capacity-building, demonstrative construction works, mutual aid, and the strengthening of community organisations.

The interventions allowed for the construction or improvement of 640 earth houses for 2708 people, seven community centres, 367 dry toilets, 273 ecological kitchens, 59 rainwater harvesting systems, and 115 organic vegetable gardens. During the process, 447 women and men were trained in construction work, and 833 young people developed skills in a range of different topics.

Context

El Salvador has a significant housing deficit (80% of the national population) and high levels of socioeconomic vulnerability. Despite this, there is no housing policy and rural communities (38.3% of the population in 2022) mainly live in self-built earth houses. These homes are not built to any technical standards, they lack earthquake and storm-resistant features, basic finishes, repairs, natural ventilation, running water and sewage infrastructure. These poor living conditions encourage infestations of insects that can transmit diseases.

El Salvador suffers from high levels of natural disasters, with 89% of the territory at risk from landslides and slope movements, flooding and geological instability. Increasing tropical storms and droughts caused by the climate emergency mean that rural communities suffer from loss of homes, crops and even human lives.

Water quality and availability is also a major problem for these communities. Water generally comes from springs, rivers, community fountains or handmade wells, but is being diverted by large urban or tourist mega projects and industries. Large-scale intensive farming with its overuse of chemical weedkillers and pesticides, also contaminates groundwater supplies.

Due to the COVID-19 pandemic, household income levels have dropped by 40% or more, whilst the cost of living, construction materials and food essentials have increased dramatically. Over time, big hotel and tourism resorts have taken over rural and coastal areas, and along with increased gang violence, many families and community leaders feel they have no choice but to move away to other communities within or outside the country.

Project Description

FUNDASAL carried out multiple projects aimed at improving living conditions, in twelve small, scattered rural communities across four municipalities in four regions. Their approach focused on community empowerment and comprehensive habitat improvement using nature-based solutions.

1. [Santa Ana](#), Santa Ana department, Western area (2012-2015).
2. Alegría, Usulután department, Eastern area (2017-2023), post 2015-earthquake intervention.
3. [San Pablo Tacachico](#), La Libertad department, Central area (2017-2024).

And two rural housing cooperatives by mutual support, in:

4. La Palma, Chalatenango department, North area (2019-2024).

Altogether, 50,484 people live in these municipalities, and all of them directly or indirectly benefited from: 504 improvements and reinforcements of earth houses; 136 new constructions with different reinforced techniques; seven community centres; 367 'composting' latrines (dry toilets); 273 ecological kitchens; 112 individual vegetable gardens and three vegetable gardens in schools; 227 poultry farmyards; 59 rainwater harvesting systems; two systems of house drinking water with wells; elevated water tanks and pump systems.

Organisation implementing the project

The Salvadoran Foundation for Development and Minimum Housing ([Fundación Salvadoreña de Desarrollo y Vivienda Mínima - FUNDASAL](#)) is a non-governmental and non-profit institution dedicated to improving neighbourhoods holistically and promoting female and youth participation in processes affecting their rights.

Founded in 1968, FUNDASAL is well known and respected for working in different contexts: from urban informal settlements to marginalised rural communities, with migrants and people displaced by war, and responding to climate disasters and earthquakes. Despite the diversity of their activities, projects always focus on the creation of community organisations and the development of skills to respond to and transform their environment.

In 55 years, FUNDASAL has developed nearly 600 projects throughout the country, empowering 871,623 people (70% of whom are women) in different ways to promote habitat improvement and protect ecosystems.

FUNDASAL won a World Habitat Award in 2004 ([La Paz post-earthquake reconstruction programme](#)) and was finalist in 1999 ([Rehabilitation of Community Las Palmas](#)), 2014 ([Rural Habitat Improvements](#)) and 2017 ([How the community rescued the historic centre of San Salvador](#)).

To date, the Foundation has 120 employees. Their work involves: project planning and fundraising; training and technical support; designing and supervising construction works; evaluating and disseminating experiences; participating in international networks for knowledge exchange and housing and habitat rights' advocacy; applied research on technical construction systems.

FUNDASAL has strong connections with community organisations in the country, which has helped to keep work going despite challenges related to security threats, forced displacements and states of emergency (confinement, curfews), disasters and inflation.

Aims and Objectives

Rural housing projects are targeted at highly vulnerable families providing them with adequate, safe and productive housing, as well as community spaces to strengthen social dynamics and livelihoods.

FUNDASAL carries out a preliminary assessment of the threat posed by materials and housing conditions, as well as the lack of basic services. Beneficiaries tend to work in agriculture and crafts within the informal economy, with unstable incomes not exceeding an average of \$300 USD per household per monthly.

Every intervention is based on training people in construction techniques, along with skills for them to pass on their knowledge to others in the community, so that the learnings can be replicated. The community is empowered with construction and management skills, training on safe techniques for earth construction, and capacity-building for men, women and young people on different aspects of sustainable living.

In each municipality, FUNDASAL began with one community, that then replicated the training and passed on its knowledge to other villages in the area. The cooperative model implemented in La Palma will also be transferred to other cooperatives in Chalatenango and San Vicente which has taken in displaced people.

Key Features

FUNDASAL responds to communities' requests for interventions. They then map stakeholders in the area to identify synergies and establish partnerships that will strengthen the social impact. FUNDASAL's stages are:

1. **Preparation (six months to a year):** Assessment of issues, social dynamics, residents' skills and expectations; inspection of territory; participatory designs, initial training; agreements with the community.
2. **Implementation (two to five years):** Community organisation, planning and management skills development; formal and practical learning tailored to different levels; practical construction training; technical advice and support; creation of handbooks on maintenance and communal living.
3. **Closure and exit (one to two years):** development of skills and knowledge to strengthen inter-community relations, operations, maintenance and knowledge transfer, and collective property management for cooperatives.
4. **Post intervention monitoring (occasional):** Spaces for training and cross-community education; support and guidance for other community initiatives.

During the assessment, FUNDASAL's team analyses residents' skills and knowledge, resources, specific needs, community organisations, time availability, etc.). They begin to develop trust and put agreements and aims in place relating to desired physical and social transformations.

FUNDASAL takes the local construction systems and sources of natural materials into account and analyses each house to decide on the best course of action: structural reinforcement, repairs, improvements or replacement with a new construction made of local materials.¹

Participatory design identifies good practices that can improve families' living environments. For example, a smoke-free kitchen to reduce respiratory illnesses, plastered walls to reduce the presence of bugs that transmit the Chagas disease², and chemical-free vegetable gardens and composting latrines to reduce water contamination.

A characteristic of FUNDASAL's approach is mutual aid: residents provide labour and attend training to maintain what has been built and replicate it in new community projects. Making demos and pilots contributes to the training and helps to define the quantities of materials required.

For capacity building purposes, FUNDASAL created different training levels:

- **School on Human Rights and Community Organisation** (four headquarters at national level). Training sessions with different levels on subjects such as housing, agroecology, finance, housing rights, climate emergency, community governance, project management, and gender issues.
- **Youth training school** (in different locations): covering children's and young people's rights, gender and equity, cultural identity; participatory design of public spaces, 'placemaking' practices with recycled materials.
- **Agroecological school** (six at national level): agroecology training for youth and adults.
- **Technical construction training** (in each community): delivered before, during and after the building works with a focus on women's skills development, on participatory design, construction, maintenance and good use of the house (materials' identification, aseismic structures, foundations, roofs, sanitation, etc.)

Throughout the process, FUNDASAL advises community organisations on project planning and management, compliance and stakeholder management. FUNDASAL's involvement reduces as community skills increase to the point at which FUNDASAL only gets involved in specific matters or to run new projects.

¹ Even though earth is a traditional material in rural communities, lack of maintenance makes it vulnerable to damages. Self-construction of concrete elements not compatible with earth blocks or mud is counterproductive in case of earthquakes and storms. Some features of precarious homes are cracks and walls' separation due to structural flaws, cracks in walls and plasters, weakness in gaskets due to loose material and erosion, weakness at the base of walls due to erosion and lack of stem walls against humidity, lack of supported beams against winds and earthquakes, lack of lighting and ventilation.

² Chagas disease is a tropical illness that causes physical and mental degeneration in children and adults and can be fatal. Insects that live in firewood, wood holes or cracks, or in walls made of soil introduce the pathogenic bacteria *Trypanosoma cruzi* in animals and humans when they bite them. Due to these characteristics, 'chinchés', the disease's vectors, are particularly found in rural houses badly preserved, poorly lit or ventilated, and with domestic animals inside the house, or in rural schools. However, due to lack of awareness-raising campaigns from healthcare authorities, residents usually don't know the relationship between the insect and the disease's symptoms. Therefore, in 2009 FUNDASAL started education campaigns in rural areas.

In rural housing improvement projects, homes are repaired or rebuilt directly on the family-owned land. In the case of La Palma, all homes are new, and were built through mutual support in collective ownership of two housing cooperatives: ACOVICUPÄ (17 homes) and ACOVIAMET (23 homes). These are the first cooperatives from FUCVAM's Uruguayan model that were built with reinforced adobe in Latin America.

Innovation

These projects, in comparison with previous interventions from FUNDASAL, are innovating with nature-based solutions and livelihood improvements for rural homes. FUNDASAL promotes the construction and improvement of earth houses through the traditional techniques of adobe, quincha and bahareque Cerén,³ but reinforced with technology tested in laboratories, instead of purely industrialised materials.

Agroecology and circular economics are reflected by:

- Agroecological vegetable gardens (112 individual gardens with an average area of 45 m² and three collective gardens in schools) supplying healthy food to families and the creation of seed banks for barter and sale (In San Pablo and Alegría)
- Basic seeds kit consisting of up to 20 species of green vegetables, aromatic plants and fruits. FUNDASAL also delivers popular booklets that guide families on how to set up and manage a vegetable garden, identify plants for organic supply, and recognise flowers for organic pest control.
- Low-cost technology such as longitudinal greenhouses with plastic tarpaulin covers firmly tied up to protect vegetable gardens from strong winds (called 'macro tunnels').
- Rainwater harvesting systems (tank and cistern) to use in vegetable gardens and domestic chores, and biodigesters to filter grey water.
- Segregated dry toilets that produce compost from the dry matter and fertiliser from the urine. These 'composting latrines' are small buildings made of *quincha* that improve the safety and privacy of women and girls.
- Ecological kitchens made by women, consisting of a 9 m² room with *bahareque* walls and a combustion chamber made of brick plastered with earth on top of a concrete base. A chimney completely evacuates the smoke that often causes chronic obstructive pulmonary diseases⁴. The earth walls keep the heat in, thus reducing the consumption of wood.
- Reforestation of hillsides with endemic species to prevent soil erosion and protect villages from strong winds. In Alegría and San Pablo Tacachico communities used bamboo, stone, reeds and vegetation as live barriers against natural phenomena such as extreme rain.
- In La Palma, the community looks after a large native wood as an ecotourism area to preserve it and raise awareness amongst visitors. The project's master plan has allocated future building away from protected areas for water infiltration and to reduce the risk of disasters.

³ **Reinforced adobe:** earth bricks arranged in a zigzagging pattern or intertwined between rows, reinforced with reeds, bamboo or similar, vertical and horizontal, on top of stone foundation. **Reinforced quincha:** walls made of raw earth projected in entwined bamboo or reeds, plastered with lime. **Bahareque Cerén:** similar technique to *quincha* with a knitting made of wood and raw earth.

⁴ Third cause of death worldwide in 2021 according to World Health Organization.

Funding

The interventions' overall budget is **\$4.5 million USD**. This covers construction (44%), materials and supplies (20%), FUNDASAL's technical staff (32%) and training expenses (4%).

Mainly, the resources come through funding from international cooperation agencies and foundations from France (Agence Française de Développement, Fondation Abbé Pierre), Germany (Embassy, Misereor), Spain (NGO Manos Unidas), Sweden (We Effect) and Chile (SELAVIP).

Budget per project, main donors and community contributions:

- Santa Ana (2012-2015): \$1.46M USD from [Manos Unidas](#) (71%), FUNDASAL (6%), **community (14.5%)**
- Alegría (2017-2023): \$0.4M USD from [AFD](#) (57%), [Misereor](#) (17%), [SELAVIP](#) (16%), **community (10%)**
- San Pablo Tacachico (2017-2024): \$1.1M USD from [Manos Unidas](#) (78%), FUNDASAL (2%), **community (20%)**
- La Palma (2019-2024): \$1.56M USD from [Fondation Abbé Pierre](#) (73%), [We Effect](#) (11%), **community (12%)**

To a lesser extent, FUNDASAL also received funds from El Salvador's private sector (Corporate Social Responsibility). Local government jurisdiction and funding are limited. Municipality support is reflected machinery, workforce and permits for construction.

Mutual aid equates to an average of 24 hours of labour per family per week until the work is completed. Communities provide local materials for construction, make the adobe bricks, prepare wood sticks and build the houses, kitchens and latrines. This is essential as not only does it reduce costs, but it also creates training for collective work involved in future projects. The financial savings from using local natural materials and mutual support are, on average, 55% compared to social housing with industrial materials.

Impact

Financial

To guarantee their affordability, FUNDASAL funds part of the construction from international donations. Families in rural communities do not have the means to take on and repay a loan. Depending on the type of intervention, the mutual support has the equivalent monetary value of hours worked:

- Improvement of earth house: \$700 USD
- New *bahareque* house: \$3.360 USD
- New reinforced adobe house: \$3.600 USD
- New *quincha* house: \$1.680 USD

In La Palma's cooperatives, for the land purchase, families take a small loan from FUNDASAL, with instalments adjusted to their ability to pay, in addition to the mutual aid. In total, their contribution through mutual support and monetary aid for a 64 m² adobe house is around \$5 000 USD out of an overall

cost of \$16,457 USD. This house is 1.5 times cheaper than an urban social housing unit and 3.1 times cheaper than a house with the same area on the private market.

Projects integrate income generating activities for some people:

- Groups of Community Seeds for Financial Improvement: credit and solidarity savings groups that develop administrative skills and boost financial initiatives.
- A dozen female builders are starting to be hired or are in the process of acquiring certification.
- A young man was hired by FUNDASAL as a 'local agroecology promoter' to monitor the progress of vegetable gardens and train his community.
- In La Palma seven individual financial initiatives emerged (a shop, jewellery and clothing sale, food sale), as well as two collective ones (rental of the communal house, chairs and tables for events). When the houses are completed, income-generating ecotourism activities will begin in full operation (camping, restaurant, handicraft and agroecology workshops).

Through agroecology, grower families can sell surpluses food and organic fertiliser in the local solidarity economy or trade seeds and food with other farmers. FUNDASAL also buys seeds from growers at a fair price and takes them to other communities in different regions of the country.

Social

FUNDASAL projects develop knowledge, individual skills, practices and community management organisations. This guarantees the long-term continuity of the methodologies and improves construction safety. In these four municipalities, 447 women and men developed construction or home improvement skills, and 833 young people were trained in different subjects, from agroecology and the improvement of public spaces with recycled materials, to women and children's rights.

FUNDASAL encouraged the creation of 18 Community Development Associations in the different communities where it works. At the same time, they created 41 themed committees with five to ten members for managing construction works (Construction Work, Employment, Purchases...) or permanent committees (Women, Young People, Education, Health, Housing, Water, Financial Initiatives, Disaster Risks' Management).

Community organisations were at the heart of making it through tropical storms, the COVID-19 pandemic, and the two-year state of emergency due to the government's fight against organised crime. Risk committees, Community Development Associations and young persons' committees helped to prevent disasters and identify and assess the impacts of storms. During the pandemic, they provided advice on food production virtually.

Many young people have moved abroad due to a lack of economic opportunities and violence in the country. Professional training for rural young people aims to offer work opportunities within their communities. Links with other national or international institutions have also been crucial to create awareness about Human Rights violations and to provide personal support, as well as the possibility of studying.

Projects positively impact the wellbeing of all members of the community, through the introduction of smoke-free kitchens, organic seeds, and compost as a natural fertiliser instead of pesticides. Seeds introduced by FUNDASAL allow for a diverse diet and improved self-sufficiency for the communities, which leads to better health and environmental awareness. Awareness raising and homes improvements have reduced Chagas disease.

Environmental

Construction materials are mainly local (soil, clay, lime, straw, wood, bamboo, stones). Foundations and floors are made of concrete to guarantee structural safety. Roofs in new homes have a bamboo or wooden structure and a micro-concrete roofing tile cover. The use of local materials reduces pollution and gas emissions for raw material extraction, production and transportation to the construction site.

Through training in agroecology, young people and adults incorporate new knowledge and 'unlearn' practices linked to traditional agriculture based on pesticides and chemical fertilisers. Thanks to new skills development, FUNDASAL has noticed a change in the practices of farmers that grow basic grains or fruits, reducing the use of chemical fertilisers and increasing the use of local compost.

By raising environmental awareness among children, young people and community members in general, they have improved their drinking water supply and distribution systems. They also learned to monitor water quality to prevent diseases. Community reforestation and protection of springs contribute to water quality and availability.

Environmental measures through nature-based solutions and community empowerment help to protect biodiversity and increase resilience against the effects of climate change.

Learning, evaluation and recognition

Throughout the process, the different actors involved, including community's representatives, participate in internal evaluations. FUNDASAL also requests intermediate and final external evaluations. The evaluations consider criteria such as the long-term adoption of practices, and their expansion to other areas. Impact is measured by the technical and social skills acquired by women and young people trained, as well as their satisfaction levels.

The external consultants' [evaluation of the project's phase IV in San Pablo Tacachico](#) provided by the organisation is very positive about impacts and the ability to achieve the quantitative and qualitative objectives of the theory of change on time.

Manuals and guidelines allow communities to continue working without the presence of FUNDASAL's teams. Where the foundation has concluded its involvement, communities only turn to FUNDASAL when facing new challenges that exceed their skills and abilities.



FUNDASAL published different manuals on agroecology based on San Pablo Tacachico's experience, which also feature pictures and the testimonies of people trained.⁵ It also created [a short video](#) with testimonies from female builders who made homes and ecological kitchens. The project has an impact beyond those who directly benefit from the improvement of homes and livelihoods. It is valued by all residents.

Recognition

Besides the World Habitat Awards, FUNDASAL is the recipient of a long list of international awards for different interventions prior to the ones in this application, like the Memorial Fund Yasuda Kasai Prize (Japan 1997), first prize in best practices in popular housing by We Effect (Sweden 2008), Order of Merit Cross (Germany 2009), award for best urban practices in Dubai (2010 and 2014, and more). In 2012, the Legislative Assembly of El Salvador recognised FUNDASAL with an award, and in 2023 with an official mention in the Republic's Human Rights Award. Also in 2023, the National Order of Merit was granted to FUNDASAL's director.

Transfer and future plans

Transferability

In coordination with the country's three main universities, FUNDASAL has collected evidence on the resistance of earth construction systems, using earthquake shaking tables in scientific laboratories. This resulted in acceptance of the reinforced adobe system into the Ministry of Housing's building regulations, allowing its legal use in the country.

The nature-based solutions used by FUNDASAL are *highly replicable*. Until 2024, FUNDASAL participated in the UN Environment's regional project '[City Adapt](#)', applying nature-based solutions in El Salvador and monitoring their progress. This *transfers approaches* to water harvesting, agroecological vegetable gardens and composting latrines to other vulnerable settlements in the country.

FUNDASAL has strong links with universities and other Latin American NGOs, and, through the Habitat International Coalition América Latina ([HIC-AL](#)), to the Central American Self-managed Coordinator for Solidarity Housing (COCEAVIS) and earth construction networks ([Red ProTerra](#), [Red MesoAmeri-Kaab](#)), amongst others. These spaces allow for exchange between NGOs and experts on earth construction such as CRATerre.

In each intervention, FUNDASAL collaborates with local Community Development Associations (such as the Western Movement for Habitat which has more than 50 member communities), which are part of wider national organisations (such as Housing and Habitat National Platform). This amplifies its vision and attracts other organisations and communities that complement the work.

When local administrations change, FUNDASAL advises and supports community delegates to present completed and in-progress work to the new authorities, to encourage awareness and support.

⁵ AEXID and FUNDASAL (2018). *Cultivar con la naturaleza, no contra ella*. Documentation. FUNDASAL. [Available online](#). FUNDASAL & City Adapt (2020). *Manual de huertos escolares*. [Available online](#).



Future plans

Knowledge exchange has a multiplier effect. Work is demonstrated and skills developed in each municipality, the people trained replicate and spread the knowledge and practices to neighbouring communities. Residents continue to develop plans, management agreements, and improvements to their habitat without FUNDASAL.

FUNDASAL hopes to continue adapting approaches to other places and is constantly searching for funding. Currently, it has begun works in the rural municipalities of El Paisnal and Ciudad Barrios, amongst others. Another FUNDASAL project has set up a regional cooperative training school for technical teams working with housing cooperatives in Central America.

World Habitat Reflections

Throughout its history, FUNDASAL has reinvented and adapted its practices to local contexts and needs. In this project involving four rural interventions, it has supported housing improvement and rescued earth architecture with new, low-cost, and nature-based solutions, to raise community awareness of looking after the environment, adapting to climate change, and reducing disaster risks. Due to the impact of the projects, communities can see the impact and are willing to replicate the learnings. Youth training and demonstration of the importance of agroecology and reforestation improves water, soil and food quality, consequently improving health and promoting a local circular economy.

FUNDASAL's methodology of intervention, resident training and knowledge exchange are fundamental to the long-term sustainability and empowerment of communities whose rights have been violated due to lack of government intervention and threats from extractive industries. This work offers a comprehensive and replicable solution and could be used as reference and inspiration for other organisations applying to the World Habitat Awards.