

# Healthy Homes for Humanity, Guatemala

## Organisation implementing the project

[Habitat for Humanity Guatemala](#) (Habitat Guatemala) is a non-profit organisation that helps low-income families improve their living conditions by building new homes and stabilising and improving existing houses and facilities. Its projects include home financing; home improvements; disaster relief; and the Healthy Homes for Humanity programme.

Founded in 1979, it is the oldest and largest affiliate of the global non-profit, Habitat for Humanity. The organisation's vision is that all families in Guatemala live in an adequate home.

Almost all of its 250 employees are Guatemalan. They also host an average of 1,000 international volunteers annually, who take part in constructing houses, smokeless stoves and sanitary latrines. A further 1,100 people from the country are involved, including 661 volunteers on 181 local committees.

Since it began, Habitat Guatemala has provided over 100,000 housing solutions for over 600,000 people, with 75% of these being implemented within the last decade.

## Project Description

The Healthy Homes for Humanity project comprises three essential interventions which make up the Healthy Home Kit: a smokeless stove, a water filter, and a sanitary latrine.

The programme is being implemented across all 22 departments of Guatemala. It began in 2010 with the smokeless stove, with the water filter added in 2011 and the sanitary latrine included in 2013, before the Healthy Home Kit was officially established in 2014.

Habitat Guatemala has successfully scaled-up the programme each year since it began. Over the past few years, the number of Healthy Homes solutions implemented has increased - on average - by 16% each year with around 300,000 people in total now benefiting.

## Aims and Objectives

The main purpose of the Healthy Homes for Humanity project is to provide families, living in poverty, with access to basic services in their homes, depending on their individual needs. These are often indigenous families who face multiple forms of exclusion and vulnerability - four in every five (79%) of the country's indigenous population live in poverty and two in five (40%) live in extreme poverty.

Overall Habitat Guatemala provides an average of 11,000 housing solutions each year (including new homes, home improvements and Healthy Home Kits) and has helped decrease the national housing deficit by 6.06%.

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The Healthy Homes project alone aims to provide a further 8,000 solutions for families in 2019 - based on specific interventions needed by each household. This will consist of 5,250 stoves, 800 latrines, 800 full Healthy Home Kits (stove, latrine and water filter), 375 greywater sumps and 775 concrete floors.

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## Context

Over half (almost 60%) of the 17.5 million people of Guatemala live in poverty, surviving on less than \$4 USD per day.<sup>1</sup>

Guatemala suffered a 36-year civil war, which ended in 1996, leaving the country fragmented and experiencing extreme inequality. Just over 1% of the population owns 60% of the land and there is a housing deficit of 1.8 million homes. For many of those who do have a home, legal claim to the land is lacking and housing conditions are inadequate. Lacking the resources to invest in basic services and without state support, many families live in dangerously unhealthy conditions, using open-flame stoves, unsanitary cesspit latrines or open defecation, and consuming contaminated water. Particularly in rural areas, where poverty is even more prevalent, respiratory and gastrointestinal illnesses are common consequences of these harmful practices.

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## Key Features

The Healthy Homes for Humanity programme uses three main essential interventions.

### Smokeless stoves

Cooking over open-flame stoves causes families to use large amounts of firewood and inhale lots of smoke. This particularly affects women and children, who spend more time in the home, in the poorest of families who use this cooking method. Consequently, they suffer from chronic respiratory illnesses and burns. The smokeless stove is made of adobe bricks and designed with a chimney to carry out harmful smoke. It also has a double burner which makes cooking more efficient, giving women more time to carry out other tasks.

### Water filters

Over four million people living in rural areas do not have access to drinking water. The health implications of this are huge - five of the 20 most common causes of death can be related to water contamination. Supplying a filter to purify water is an extremely straightforward intervention with immense health benefits.

### Sanitary latrines

Just over half the Guatemalan population has access to proper sanitation services. The rest rely on poor quality, make-shift latrines, or nothing at all. The poor sanitation system means that wastewater is often dumped in local water sources, leading to contamination and increasing the water-related health problems described above. Sanitary latrines help to reduce this contamination and improve the safety and health of families.

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<sup>1</sup> In 2014, the World Bank reported that 60% of Guatemalans live in poverty, under this \$4 USD poverty line. (<https://openknowledge.worldbank.org/handle/10986/24694> Page 19).

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Families are not simply given the Healthy Home Kit but are involved throughout the whole process of implementing the solutions. They participate in educational and technical training on how to assemble, use and maintain each of the products. For the smokeless stove, each family learns to make the adobe bricks themselves from locally-sourced materials. They then build the walls of the stove, working with a mason to place the stovetop and chimney. Similarly, for the sanitary latrine, the family digs a 2.6 metre pit on which the mason lays a concrete base. The family build the structure from wood, or other locally available materials, and again works with a mason to place the toilet seat and ventilation tube. The programme promotes local empowerment through its training processes, instilling local capacity to drive community development.

Habitat Guatemala works with a network of local volunteer committees who speak local Mayan languages, and support the organisation in finding and connecting with families with the greatest need. They supervise the construction processes and information collection. Through these 'on-the-ground' sources, Habitat Guatemala can guarantee that the Healthy Homes for Humanity programme reaches those even in the most remote areas.

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## Funding

Habitat Guatemala's total annual budget is \$24.6 million USD.

They invest 3.4% of their construction budget into the Healthy Homes for Humanity programme (\$675,000 USD annually), which comes from a variety of sources, including the revolving fund of Habitat homeowners' mortgage payments (they work with families by offering affordable low-interest mortgages to become homeowners), fundraising from foundations, and families' contributions towards their Healthy Home solutions. This small financial contribution towards the product (when this is the whole kit, the contribution is usually \$20 USD or roughly 5% of the kit cost) can be paid through a microloan or in one instalment. Approximately 90% of families pay in one instalment - the other 10% are not subject to any interest rate on the repayment.

They also receive funds from grants to implement solutions in specific areas - currently this includes:

- Rotary Foundation / Rotary Club of Greater Bend - 140 Healthy Home Kits in San Lucas Tolimán, Sololá;
- Habitat for Humanity Netherlands - 25 Healthy Home Kits in San Pedro las Huertas, Sacatepequez;
- Efico Foundation - 75 Healthy Home Kits with coffee farmers in San Marcos and Huehuetenango;
- Portland Roasting Coffee - 30 Healthy Home Kits with coffee farmers in Huehuetenango; and
- Tillotson Foundation - 95 greywater sumps in Puerto Barrios, Izabal.

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## Innovation

Habitat for Humanity's Healthy Home Kit is unique in its flexibility to adapt to the diverse conditions and needs of communities across the country. Each solution has been the result of an understanding of the daily life of families, through work with local Mayan community ambassadors, and the building materials are adapted to suit local conditions and availability of natural resources.

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Families actively collaborate in the construction of each of the products and they must also participate in training sessions about the construction process, finances, home hygiene, and the use and maintenance of products, helping them to gain maximum benefits from it. Training also ensures that the long-term impact of the programme is further guaranteed as families have a real stake in, and are accountable for, their own community's development.

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### **Environmental Impact**

Low-carbon solutions which positively impact the environment are key to the Healthy Home Kits. The efficiency of smokeless stoves reduces firewood consumption by almost half (43.6%), helping to tackle deforestation across Guatemala, as well as decreasing household carbon monoxide emissions by 98%<sup>2</sup>. The use of adobe bricks means less water, energy, and transportation (due to local availability of materials) than concrete.

Sanitary latrines protect water sources from contamination by eliminating open defecation and the use of cesspits. In addition, greywater sumps filter water from sinks and showers in areas where there is no drainage provision. This allows the land to return to its natural hydrologic cycle and prevents contamination from detergents and soaps.

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### **Financial Sustainability**

Most of the funding for the Healthy Homes for Humanity programme comes from Habitat Guatemala's construction budget, which includes the revolving fund of Habitat homeowner's mortgage payments (85-90%) and a small amount from donations or grants. As beneficiaries only pay for 5% of the cost of their Healthy Home Kit, the programme is largely reliant on the availability of external funds to maintain the construction budget.

The programme supports the local economy of transport and material providers, and provides employment for local masons, who are contracted as skilled labourers to help families build the different solutions.

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### **Social Impact**

The Healthy Homes for Humanity initiative has improved the lives of thousands of Guatemalan people across the country through the implementation of basic facilities that promote and support good health and hygiene. It is tackling a major health issue - almost all (95%) water in Guatemala is contaminated and approaching half (40%) of all infant mortality is caused by waterborne diseases.

Over half (52%) of the population suffers from respiratory illnesses and almost all (90%) rural families use wood as their main source of fuel. The smokeless stove greatly reduces toxic indoor smoke and risk of burns, creating a safer and healthier cooking environment, particularly for women and children who traditionally spend more time in the kitchen.

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<sup>2</sup> [Smokeless-Stove-Study-translation.pdf](#)

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Training programmes that run alongside the installation of Healthy Home Kits - on topics such as financial education and home hygiene - encourage local empowerment and community development. Similarly, the families' financial contribution and ongoing participation fosters local ownership of the project and further promotes sustainable change.

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## Barriers

As there are physical and cultural differences among indigenous communities, Habitat Guatemala has faced the issue that one single smokeless stove design cannot be applied equally across the entire country. As a result, Habitat Guatemala adapted the smokeless stove design to different contexts, in a way that makes the stove accepted by each community and family yet maintains a standardisation and ensures the quality of the product. For example, in the Western highlands, individuals are shorter on average, so the stove has to be lowered to a comfortable position for cooking. Also, in the Eastern rainforest area, families prefer their stoves to be built atop a wood structure. The specific modifications must be approved by Habitat Guatemala's architects, who work with the local affiliate members to provide the best solutions possible in each circumstance.

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## Lessons learned

From 2011 to 2014, extreme poverty in Guatemala increased by 10%, equating to 1.8 million Guatemalans falling below the extreme poverty line in just four years. More recently this trend has continued, meaning yet more families have been unable to cover even their most basic necessities. In response, Habitat Guatemala is constantly working to strengthen both national and international strategic alliances. For example, it has formed strategic partnerships with other NGOs, such as America Solidaria (a Chilean non-profit) and Agua del Pueblo (a local non-profit working on Water, Sanitation and Health (WASH) projects across Guatemala). It has also improved connections with local community leaders, to increase the reach of the programme and diversify solutions depending on need, whilst always ensuring both environmental and financial sustainability.

Throughout the process, Habitat Guatemala has learned that to have the most impact, it must adapt to local context and need. Whilst the Healthy Home Kit is standardised with the three products, in some areas additional projects have been introduced to target localised problems. For instance, recent installations have included concrete floors and greywater sumps. Concrete floors - to promote clean surfaces inside the home - were first introduced in 2017 through a project funded by the Ramsey Social Justice Foundation. Greywater sumps - to reduce contagious diseases by eliminating disease-carrying insects attracted by still water - were first introduced in 2018 through a project funded by the Tillotson Foundation. Both were formally incorporated into the Healthy Homes programme in 2019. They have also carried out pilot projects with mosquito nets but are still in the process of evaluating the cost-benefit ratio and plausibility of including this as a solution in the Healthy Homes programme.

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## Evaluation

Over 50,000 solutions have been implemented since 2010 through the Healthy Homes for Humanity programme. This includes the standard Healthy Home Kit with a smokeless stove, a sanitary latrine, and a purifying water filter, as well as recently added solutions - greywater sumps and concrete floors. Based on the average Guatemalan family size of six members, Habitat Guatemala's Healthy Home solutions have improved the housing conditions of 300,000 individuals.

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An initial impact study<sup>3</sup> collected follow-up data on 20 families in communities surrounding San Lucas Tolimán after they implemented the Healthy Home Kit. Habitat Guatemala found that families experienced an 83% reduction in cases of respiratory illness within the first six months of having a smokeless stove. The sanitary latrine and water filter both helped to reduce diarrhoeal illness and improve overall gastrointestinal health, with results showing an 81% reduction in cases of diarrhoea within the first year of receiving the filter and latrine. A full external evaluation is part of the organisation's strategic plan for 2023.

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### **Recognition**

Healthy Homes for Humanity was commended in the World Habitat Awards 2018. The project has since continued to develop in both scale and scope - for example, the formal addition of grey-water sumps and concrete floors in 2019.

They also achieved third place in 2016 and first place in 2018 in the Successful Social Projects Prize from the Guatemalan Association of Non-Governmental Development and Service Entities.

Groups from national corporations and universities, as well as individual volunteers from overseas, have visited the project, constructing different housing solutions through Habitat Guatemala's volunteering programmes.

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### **Transfer**

Having increased the number of solutions provided by approximately 900 every year since it first began in 2010, the Healthy Homes for Humanity programme has already transferred across Guatemala and continues to grow.

In the different communities where the Healthy Homes for Humanity programme is implemented, some individuals are already familiar with the practice of adobe block-making, as it is an ancestral Guatemalan tradition. Yet, given the loss of knowledge over generations, there is still a considerable population that learns this practice for the first time during the construction of their stoves. Through specialised training, each of the families involved in the programme learns how to produce adobe blocks, and their final products are monitored to assure quality. After the stove is constructed, Habitat Guatemala has seen families apply the knowledge and practice of adobe block-making in other elements of their homes, such as ovens, traditional Mayan saunas, and interior walls, as a sustainable technology that utilises local materials. This demonstrates an organic process of transfer and growth beyond the structures of the programme.

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<sup>3</sup> [Rotary-Club-Bend-Evaluation-Report-HHK-San-Lucas-Toliman31.pdf](#)