

# On the ground with the StoveTeam Justa project



“The stove is beautiful! I think it’s going to save us a lot of firewood. The cooking surface is excellent too.”

- Luis Santos, Guatemala



StoveTeam trains local people to build cookstoves in their own communities, providing meaningful employment and stimulating economies in areas that need it most.

## Join StoveTeam International's new humanitarian effort in Guatemala

# Proyecto Estufa Justa

### **MISSION and VISION:**

StoveTeam International's mission is to facilitate the placement of low-smoke, fuel-efficient, and safe cookstoves in collaboration with local communities to support families and protect the environment. Our dream for the future is the complete eradication of open cooking fires throughout the world. In this vision, communities and families thrive because they have been given back their health and their time. Cooking ceases to be a major contributor to climate change and deforestation, and there is universal global knowledge that daily cooking over open fires is hazardous to health and the environment.

StoveTeam currently fulfills this mission through direct service to families and communities who cook over open fires or are in need of more healthful cookstoves in Latin America. We equally stand for the preservation of the planet and specifically in the fight to reverse the effects of climate change.

### **HISTORY:**

StoveTeam International started in 2007, shortly after its founder, Nancy Hughes, a volunteer with a medical team in Guatemala, met Irma, a young indigenous woman who had fallen into an open cooking fire at the age of two. Irma's hands had been burned shut, and for sixteen years she had been unable to use her hands. Shocked by Irma's story, Nancy wanted to help. Originally, Nancy wanted to solve the issue of burns. She soon learned that the issue was so much larger.

### ***Why stoves?***

We focus on stoves because, globally, nearly 3 billion people use smoky, open fires to prepare their family meals, an inefficient cooking method that causes over 4 million premature deaths per year, killing mostly women and children.<sup>1</sup> This is more each year than tuberculosis, malaria, and HIV combined.<sup>2</sup> The inhalation of smoke, equivalent to smoking 3 packs of cigarettes per day, is a leading cause of death of children under the age of five. In fact, household air pollution from solid fuel (biomass or coal) combustion is the leading environmental cause of death and disability in the world.<sup>3</sup>

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<sup>1</sup> "Household air pollution and health - World Health Organization." 8 May. 2018, <https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health>. Accessed 20 Oct. 2020.

<sup>2</sup> "The top 10 causes of death - World Health Organization." <https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death>. Accessed 20 Oct. 2020.

<sup>3</sup> "Household Air Pollution in Low- and Middle ... - NCBI - NIH." 4 Jun. 2013, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3672215/>. Accessed 20 Oct. 2020.

We focus on stoves because this issue has a devastating economic impact. The World Bank recently stated, "A global failure to provide...half the world's population with access to clean, safe and affordable ways of cooking is costing \$2.4 trillion a year in damage to health, the climate, and local economies."<sup>4</sup> This affects communities at a very basic level because in addition to disease and poor health, an average man, woman, or child spends 20 hours per week collecting fuel, valuable time that could be spent at work, school, or leisure.

We focus on stoves because open cooking fires are also a leading contributor to environmental degradation and climate change. Cooking fires emit more than one billion tons of greenhouse gases, and require massive amounts of wood, causing deforestation, erosion, loss of biodiversity, and poor water quality. The Clean Cooking Alliance states, "Clean cooking is vital to combating global climate change and reducing environmental degradation. Cooking over polluting, open fires or inefficient stoves emits one-quarter of global black carbon emissions, the second largest contributor to climate change after carbon dioxide."<sup>5</sup>

Since 2007, StoveTeam, with many partners throughout the world, has assisted local entrepreneurs in Latin America to establish sustainable factories to produce fuel-efficient stoves locally, providing both jobs and a healthy and safe alternative to traditional cooking fires. Through our partner factories, we have distributed over 78,000 fuel-efficient cookstoves in Mexico, Guatemala, Honduras, Nicaragua, and El Salvador.

***In 2020, StoveTeam began an exciting new project, Proyecto Estufa Justa; we are actively seeking financial support to expand this project in Guatemala. We invite you to join us!***

#### **PROJECT SUMMARY:**

In Guatemala, more than 54% of the population relies on solid fuels for their household cooking. As a result, household air pollution contributes to nearly 4,500 deaths annually. This includes more than 700 children who die as a result of acute lower respiratory infections caused by the use of solid fuels. The need for improved cookstoves in Guatemala alone is estimated to be 9.3 million households.<sup>6</sup> In Guatemala, as in all our service locations, StoveTeam serves the poorest of the poor, who are often living on less than \$2.00 per day.

The Justa cookstove, (pronounced "hoos-tuh") and named after Doña Justa Nuñez who helped design the stove, is a vented, multi-pot, plancha stove built in-place inside the home. Each stove

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<sup>4</sup> "Dirty secret: Half of world lacks clean cooking, at a huge cost ...." 25 Sep. 2020, <https://www.reuters.com/article/us-global-energy-cooking-idUSKCN26G2GE>. Accessed 20 Oct. 2020.

<sup>5</sup> "Climate & Environment - Clean Cooking Alliance." <https://www.cleancookingalliance.org/impact-areas/environment/index.html>. Accessed 20 Oct. 2020.

<sup>6</sup> "Guatemala - Clean Cooking Alliance." <https://www.cleancookingalliance.org/country-profiles/focus-countries/2-guatemala.html>. Accessed 20 Oct. 2020.

reduces smoke in the home to nearly zero, uses half as much wood as an open fire, and saves up to 15 tons of CO2 from entering the atmosphere over its useful lifespan. Each stove benefits an average family of 8 people and allows local entrepreneurs to grow their business while contributing toward a solution to climate change and deforestation.

Proyecto Estufa Justa is built on a community model. StoveTeam works with local municipalities to recruit and educate stove recipients on the health and environmental benefits of improved cookstoves. Each family is directly involved in building their stove, leading to greater community adoption and project sustainability. Since research shows that even a nominal financial contribution and participatory effort on the part of the recipient greatly increases the adoption, care, and maintenance of new technology, we require that each recipient agrees to build the base of their stove. They can do this with materials they have on-hand or that they can purchase for less than \$15. This is important because we want our stove recipients to adopt this new stove, take care of it, and stop using their old smoky fire entirely. Following our history of helping local people build and distribute stoves, we are now training a network of technicians who can build and service Justa cookstoves in their own communities. This approach, coupled with sourcing materials locally, provides meaningful employment and stimulates economies in areas that need it most. The Justa stove is built from scratch from local materials; we support local stove technicians, construction companies, brick makers, steelworkers among others.

### ***How is the Justa made?***

Before construction, a technician visits the home to ensure that the Justa will be placed correctly and that the family will properly maintain the stove. The family then builds a base for the stove using StoveTeam's construction guide and finds a local person or family member to help StoveTeam's technician build the stove itself.

StoveTeam provides all materials and employs a local technician to build the Justa stove inside the home. Materials include bricks, a plancha cooktop, ceramic pieces for the firebox, and a chimney. At the time of installation, StoveTeam geo-locates the stove using GPS and provides the family with a proper use and maintenance guide including the contact information for a local technician or stove factory. We revisit stoves six months after installation, and then again after one year, to ensure the stove is functioning well and being used properly.

### **FUNDING DETAILS:**

We always welcome participation in our efforts and are actively seeking support for a project to bring 3,000 fuel-efficient Justa stoves to communities in Guatemala by December 2022. This is a large, multi-year project with a total projected budget of \$500,000. StoveTeam can install one new Justa stove into a home for roughly \$100. Included in this price is the required monitoring and evaluation to make sure that each stove is maintained and functioning well to reap the maximum carbon offsetting benefit over the life of the stove (an average of 5 years).

Over 2 years, StoveTeam seeks to build, monitor, and test 3,000 fuel-efficient Justa cookstoves in communities in Guatemala. This project will: help 3,000 impoverished families use half the

amount of firewood, provide cooks with 5 years of smoke-free cooking, save our planet from 15 tons of carbon pollution over the life of each stove (the average American's total yearly output is 15 tons of CO<sub>2</sub>), provide jobs, and help numerous microenterprises grow. It will also allow StoveTeam to acquire Verified Carbon Standard Certification<sup>7</sup> and scale its operation through the sale of carbon-offsets on certified clean cookstoves to interested parties. Verra Certification requires that its projects: contribute toward sustainable development, require local stakeholder input and consultation, require local monitoring and evaluation, and make a net-positive contribution to the environmental, economic, and social welfare of the population hosting the project. StoveTeam's Justa project meets all of these criteria. Verra Certification will greatly increase the sustainability of the project for years to come.

For more information on the Justa Cookstove project, please visit <https://www.stoveteam.org/justa-stove>.

Please feel free to contact us with any questions and we thank you for your consideration!

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<sup>7</sup> "Verified Carbon Standard - Verra." <https://verra.org/project/vcs-program/>. Accessed 6 Jan. 2021.