

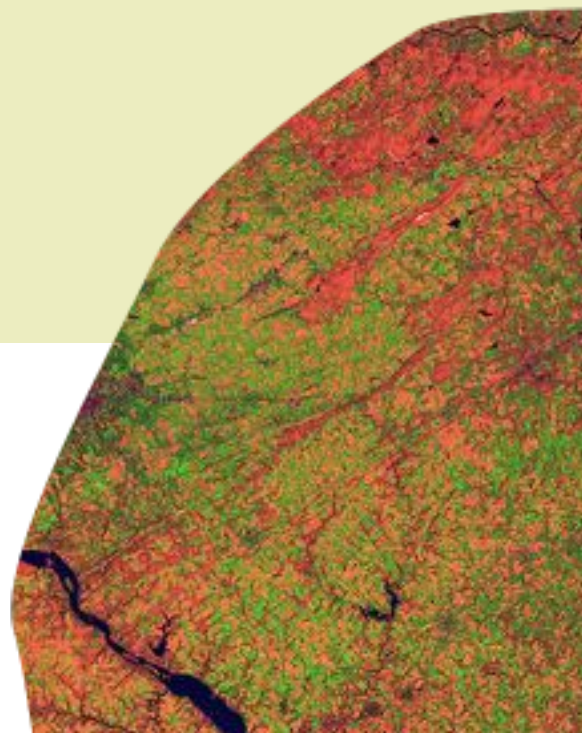
Title:

Author:

**Occupy Climate
Change (OCC!)**
*Grassroots initiatives
entry*



FORMAS

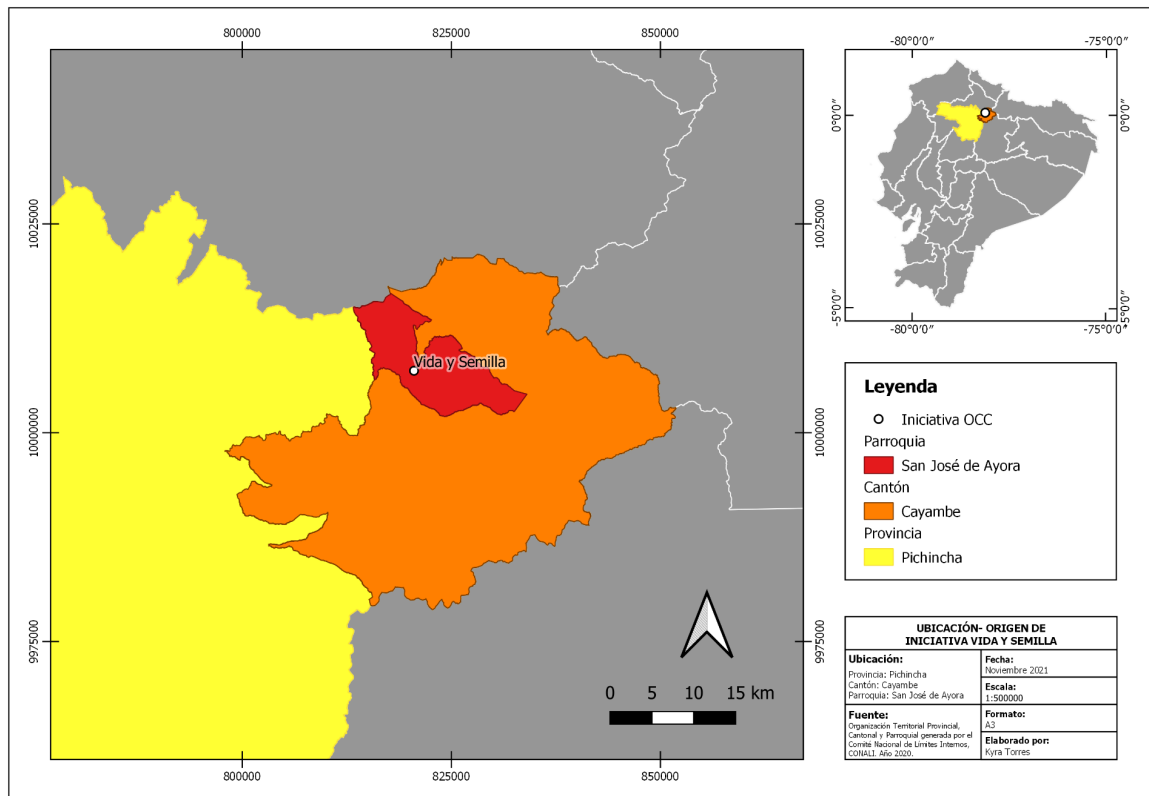


Vida y Semilla

Kyra Torres, Facultad Latinoamericana de Ciencias Sociales, FLACSO- Sede Ecuador

Where has this grassroots initiative been implemented? Who are the promoters? Who are the beneficiaries?

The organization arises as a personal initiative in the San José de Ayora parish, Cayambe canton, Pichincha province, Ecuador. Vida y Semilla works closely with people from Quito, the country's capital, and different parishes within Pichincha. Its founder is Isabel Sánchez, and her family is her support and inspiration in this endeavor that currently includes the participation of 12 people (Sánchez, interview, 2021).



Map 1. Vida y Semilla location, Kyra Torres

The association has several undertakings, including training and provisioning to produce and consume food in a local, healthy and responsible way (Quito Informa 2017). Relevant work has been carried out in the recovery of traditional knowledge and the training of seed guardians. Urban and rural populations in the province have significantly been influenced. They have gained access to diverse organic seeds,

including edible, medicinal and ornamental plants, and knowledge of their cultivation, harvesting, and consumption.

How does this initiative engage with climate? Does it tackle mitigation, adaptation, both or other dimensions of climate change?

Food increasingly travels greater distances from its origin to the consumer. Agroindustrial production processes, processing cycles, packaging, upkeep, distribution costs, and the waste generated require large amounts of energy that come primarily from fossil fuels (Mediavilla 2013, Crippa et al. 2021).

As Mediavilla points out, "the case of food is paradigmatic since it is estimated that it travels an average of 4,000 kilometers before reaching our table, when a large part of it can be produced nearby"[Translated from Spanish] (2013, 206). Thus, a third of global energy consumption and consequent carbon emissions are caused by the current agribusiness model that has shown to have lower energy efficiency per calorie produced when compared to the previous century (Mediavilla 2013).

Human influence on the recent alterations of the climate system is unequivocal, and greenhouse gases have been recognized as part of the main anthropic factors of climate change at a global level (IPCC 2021). The agri-food industry has become one of the biggest polluters, with solid contributions to the emission of greenhouse gases.

In 2015, GHG emissions (carbon dioxide, methane, nitrous oxide, fluorinated gases, amongst others) from the agri-food system represented 34% of total global emissions (Crippa et al., 2021). As Crippa and his colleagues note, "the largest contribution came from agriculture and land use/land-use change activities (71%), with the remaining were from supply chain activities: retail, transport, consumption, fuel production, waste management, industrial processes and packaging" (2021, sn).

Climate change, in addition to the increase in global temperature, represents a series of risks for food production, such as the intensification of extreme climatic events, droughts, frosts, heat waves, floods-, alteration of rainfall cycles, increase in sea level, loss of glaciers, impact on freshwater sources, amongst others (IPCC 2015, 2021).

The production and quality of food, livelihoods, and public health in Latin America are especially vulnerable to the impacts of climate change (IPCC 2014). Similarly, the global south countries are increasingly exporting better quality calories at low cost and importing expensive poorer calories, which have hurt the diet quality of the most vulnerable Ecuadorian households (Falconí 2002) and have influenced the persistence of distributive conflicts and inequity.

The organization encourages sustainable food production, promoting local, ecological, circular, and healthy production and consumption through the education and distribution of organic seeds. This, if

replicated on a larger scale, would increase the energy efficiency of the agricultural output and reduce GHG emissions resulting from the agri-food system production chain.

It is also relevant that the recovery of native plant seeds has a more efficient production, and also protects the diversity of Andean plant species and favors wild pollinator's reproduction. Since the species are adapted to local climates and realities, less energy is invested in their production, and the consumption of resources, such as water, fertilizers, and pesticides, is reduced.

What are the main objectives? What are the fundamental values?

Isabel (personal comments, 2021) states that Vida y Semilla has the following aims:

- Rescue native seeds together with ancestral knowledge and agricultural practices that entail their management and reproduction;
- Educate people and groups about circular economies, 0 km production, food sovereignty, nutrition, among other related topics;
- Work with children, understanding their potential and the need to adapt to the potential challenges of the future ecological and climatic crises that lie ahead;
- Motivate people to produce their own food and consume locally, efficiently and responsibly.

What is the timeline? Are there any visible effects already?

In 2008 Vida y Semilla was born commercially. In 2010 the initiative joined the Red de Guardianes de Semillas (Seed Guardians Network), a group of organizations that aim to protect agrobiodiversity and promote regenerative life systems in Ecuador, emphasizing the social and educational part of food production. In 2017 Isabel was the winner of the "Successful Entrepreneurship" Program promoted by ConQuito (Quito Informa 2017). With this, the association expanded to include 12 people who seek, in addition to the production of seeds, to educate and train new guardians.

Currently, the association continues to work with more than a hundred native species of organic seeds for food production, ecosystem recovery and reforestation, diffusion of plant species for pollinators, production of seeds for sprouts, citizen education and training processes, amongst other actions that has become their alternative of life and economic sustenance. Additionally, it should be remarked that they protect 80 types of cultivated native seeds (Sánchez, interview, 2021).

What advocates are involved? What is their background?

The key stakeholder in this initiative is Isabel Sánchez, who, as a child, helped her grandmother, Isabel Calderón, in the collection, classification, and handling of seeds for agriculture. Her grandmother instilled this interest and transmitted the traditional knowledge orally, as a part of everyday life, to her family.

Later, the organization's founder studied biology and continued to work in seed production, establishing a dialogue between ancestral and formal-academic knowledge. Her family members participate in the initiative, with exceptional support from her husband, Ricardo Cabezas, and her cousin, Natalia Lascano.

The work has slowly spread and gained the recognition of entities such as the Municipality of the Metropolitan District of Quito and ConQuito. Due to the restrictions placed under the COVID 19 Pandemic, many people in the city of Quito and surrounding valleys realized the importance of local food production, which has driven the work of the last year and has expanded its influence in urban areas (Sánchez, interview, 2021).

What limiting factors (institutional, physical, social, etc.) does it encounter? · Are any shortcomings or critical points highlighted? What other problematic issues can arise from its implementation?

Isabel would say that the toughest challenge is to compete in the market with hybrid and transgenic seeds, whose production costs are lower, in a socioeconomic reality where the price can make local and responsible projects challenging to access for the most vulnerable communities.

The reduced number of opportunities for the commercialization and exchange of this type of products and little space for the socialization of these initiatives, which bring producers and consumers closer together, is also precise.

Finally, there is evidence of a lack of education and recognition that prevents more significant support and dissemination of the principles that move Vida y Semilla.

How could it conceivably be reproduced in other settings?

The initiative can be replicated at different scales and geographic spaces. It is considered of particular relevance in those places where there is traditional agricultural knowledge that must be recovered and transmitted to future generations. Similarly, it could be replicated in those places where the cultivation of native species is being lost due to the use of GM seeds.

Education is a fundamental pillar for the construction and dissemination of alternative models of local production and consumption by being more energy-efficient, which in turn reduces pollution throughout the production chain.

Another way to replicate the proposal is through the creation of networks, not only at the local level but also regionally and even globally, where experiences and knowledge can be shared, actions made visible, external funds can be obtained to potentiate ventures and thus counter the agroindustrial model that is outcompeting small producers.

Is this initiative conducive to broader changes (law, institutional arrangements, long-term sustainability or community preparedness, etc.)? If yes, which?

By achieving a greater scale and dissemination, this initiative proposes giving rise to a more sustainable food production and consumption model. In countries like Ecuador, which, due to their biophysical characteristics, allow a rich and varied local production, the risk posed by climate change for food sovereignty and security could be mitigated, improving nutrition and quality of diet.

The consumption of local products and even the organization and mobilization in favor of urban cultivation would also help reduce GHG emissions associated with the very high levels of energy consumption required by industrial food production and the great distances they travel to consumer tables.



Image 1: Vida y Semilla Logo, by Isabel Sánchez.



Image 2: Isabel Sánchez and her husband, Ricardo Cabezas, by Isabel Sánchez.





Image 3: Native maize varieties, by Isabel Sánchez.

References

Crippa, Monica, Efisio Solazzo, Diego Guizzardi, Fabio Monforti, Francesco Tubiello, Adrian Leip. 2021. "Food systems are responsible for a third of global anthropogenic GHG emissions." *Nature Food* 2: 1-12. Doi: 10.1038/s43016-021-00225-9.

Falconí, Fander. 2002. *Economía y Desarrollo Sostenible ¿Matrimonio feliz o divorcio anunciado? El caso de Ecuador*. Quito: FLACSO Ecuador.

IPCC, Grupo Intergubernamental de Expertos sobre el Cambio Climático. 2014. *El Quinto Reporte de Evaluación del IPCC ¿Qué implica para Latinoamérica?* Resumen Ejecutivo. Alianza Clima y Desarrollo.

IPCC, Grupo Intergubernamental de Expertos sobre el Cambio Climático. 2021. *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf

Mediavilla, Margarita. 2013. "¿Cómo ha de producirse la transición a un modelo energético sostenible?". *Documentación social* 167: 191-211.

Quito Informa. 2017. *Emprendedores en la agenda internacional: A un año de Hábitat III*. Disponible en: <http://www.quitoinforma.gob.ec/2017/10/20/emprendedores-en-la-agenda-internacional-a-un-ano-de-habitat-iii/>. Consultado el: 3 de junio de 2021.

Sánchez, Isabel. 21 de junio de 2021. *Entrevista virtual*. [Plataforma Google Meets]. Quito.

Social Networks:

Facebook: <https://www.facebook.com/Vida-y-Semilla-253067625121807>

Instagram: https://www.instagram.com/viday_semilla/?hl=es