

blueEnergy

2022 Global Report

working for a more equitable, sustainable world





To our blueEnergy community



In 2022, the blueEnergy team faced head-on the challenges presented by the socio-political landscapes of Nicaragua and Ethiopia, resulting in significant community impact. Examples of this impact in 2022 include the implementation of solar energy systems for schools, the establishment of food-producing home gardens with agroecology training for frontline groups, and the development of water infrastructure for remote communities. These initiatives were carried out both at our headquarters in Nicaragua and through our local partner in Ethiopia.

Guided by the foundational principles of extending human energy beyond traditional boundaries and grounding impact in local leadership, blueEnergy, with almost 20 years of operation, understands the importance of persistence and determination alongside technology. This approach has allowed us to venture into areas others may not, collaborating closely with local communities to bring about enduring change in some of the world's most isolated regions.

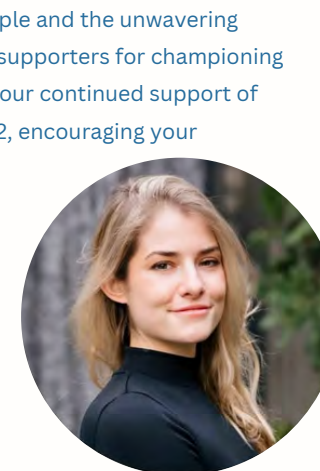
With the covid pandemic easing somewhat in 2022, we saw the ability to return to some of our core community activities. We strengthened our leadership structure, with our local team now entirely led by women. Our team comprises of 21 full time staff in Nicaragua, all hailing from the country they serve, alongside 4 international staff including myself who focus on Fundraising and Finance, reflecting our commitment to diverse leadership anchored locally. We are excited to welcome Nouma Khaznawi to the blueEnergy staff as our Communications and Development Coordinator in France, leading efforts to secure financing for programs in Nicaragua and projects in Ethiopia.

In 2022, we took significant steps to anchor blueEnergy to the future, including the purchase of two main buildings at blueEnergy's campus in Nicaragua, with the help of the Mycorrhizal Fund. We trained our women leaders in fundamental program elements and improved our local team's capacities in agroecology and solar engineering. In Ethiopia, we installed a solar-powered water pumping system benefiting a remote village of over 1,500 inhabitants, and we renewed our longstanding local partnership with MCMDO (Mothers & Children Multisectoral Development) for another 5 years.

The remarkable achievements of blueEnergy are a testament to the dedication of its people and the unwavering support of individuals like you. I express my immense gratitude to our boards, staff, and supporters for championing these positive changes and entrusting me to help lead us into the future. Thank you for your continued support of blueEnergy, and we invite you to delve into the journey we collectively undertook in 2022, encouraging your consideration for supporting our next chapter.



Madeleine C. Bouton, US Executive Director





Our Approach

Local Leadership We are locally lead in Nicaragua and partner with in-country institutions in Ethiopia and Burkina Faso, and solutions are designed, developed, and implemented in partnership with the population concerned and with the agreement and support of local institutions.

Women Empowerment We consider the central and dynamic role of women by focusing on women’s needs and requests, empowering them to improve their lives.

Capacity Building We then further train, within the community, people who relay and promote good practices and chosen solutions. We provide skills and organizational strengthening with the aim of increasing autonomy and self-sufficiency so that people can lead their own development and disseminate what they’ve learned to their community.

Impact Expansion We scale our impact through sharing at the local, national, and international level through our Open Source Impact Model, designed by blueEnergy.

2022: Your Impact in Numbers

1,610

people with increased water, sanitation, and hygiene access

1,957

people with improved food and nutritional security

1,800

people with affordable, renewable electricity

1,404

people trained in entrepreneurship, agroecology and the biointensive method, and other capacity-building.

Our mission is to improve the quality of life of those living at the margins of globalization by empowering families and communities with food security, clean water, and renewable energy.

Our vision is a world of sustainable living and opportunity for all.



over 181,743 people reached since 2004

blueEnergy empowers families and communities through a holistic development model that leverages local knowledge and resources to achieve long term, sustainable impact. blueEnergy works across the three inter-related areas of: Water, Hygiene, and Sanitation (WASH); Renewable Energy; and Food Security within the context of a changing climate. By employing an ecosystem approach, emphasis is placed on relationships and the transfer of knowledge and skills to the people we serve to build long-term healthy ecosystems and secure livelihoods.



Water, Sanitation, Hygiene (WASH)

In the South Caribbean Coast of Nicaragua, more than 90% of the population does not have access to clean water. Since 2008, blueEnergy has been building and installing water filters, deep wells, latrines and other hygiene infrastructure to improve access to water and sanitation in the region through our WASH program.



Renewable Energy

In the South Caribbean Coast of Nicaragua, more than 75% of the population does not have access to energy, and without energy they are left isolated and literally in the dark. Since 2004, blueEnergy has installed solar micro-grids, home solar systems, and portable solar to increase energy access. In Ethiopia, blueEnergy has been installing solar-powered water pumping systems for rural communities since 2014 in partnership with MCMDO.



Food Security & Agroecology

The South Caribbean Coast of Nicaragua is particularly affected by malnutrition due to poverty and lack of dietary diversity. Since 2014, blueEnergy has aimed to ensure that families have sufficient, varied, and good quality food by disseminating agroecology practices; including strengthening seed banks to share with beneficiaries, agroecology training, and accompanying beneficiaries in building food-producing home gardens,

Climate Change Resilience

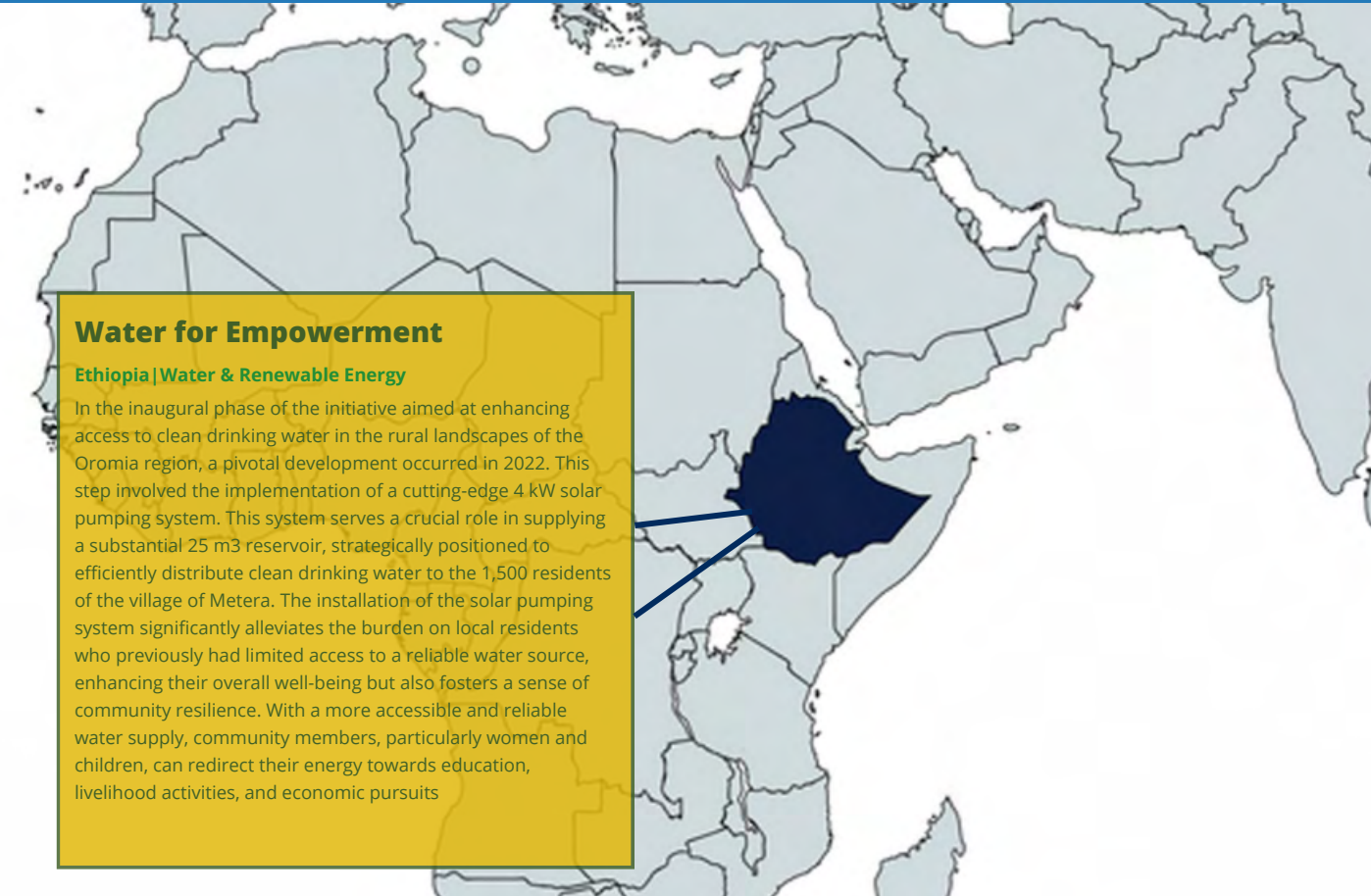
The countries where blueEnergy works are extremely vulnerable to climate change due to the increase in frequency and intensity of extreme climate events, including hurricanes, floods, landslides, drought, and rising sea levels. Extreme weather events can exacerbate and increase poverty, gender-based violence, food insecurity, and the inability to access clean water, hygiene, and sanitation. Because climate change intersects with all of these different issues, blueEnergy's climate change resilience initiative in Nicaragua aims to address them through an intersectional, integrative lens. The initiative is transversal across all three programs of Food Security and Agroecology, WASH, and Renewable Energy.

In 2022, our local team and partner organizations reached over **5,367** people in Nicaragua and Ethiopia, delivering critical food security, water infrastructure, renewable energy, and training and capacity building to the world's most isolated regions. When our team and partners succeed, people are empowered with life-changing basic resources and increased climate resilience.



Opportunity through Resilience
 Nicaragua | Food Security & Agroecology

In 2022, blueEnergy launched a multi-year campaign to empower the elderly, disabled, caretakers of those with disabilities, and women heads-of-household. In partnership with the Nicaraguan Association of the Elderly and The Committee for those with Disabilities (COMUDISC), blueEnergy delivered agroecology training and inputs to facilitate food-producing home gardens for beneficiaries. These groups—often locked out of traditional job opportunities—are able to grow their own nutritionally rich food in their homes, providing for themselves, their families, and their communities. Beneficiaries were also accompanied in creating micro-business plans to generate income from their home gardens.



Water for Empowerment
 Ethiopia | Water & Renewable Energy

In the inaugural phase of the initiative aimed at enhancing access to clean drinking water in the rural landscapes of the Oromia region, a pivotal development occurred in 2022. This step involved the implementation of a cutting-edge 4 kW solar pumping system. This system serves a crucial role in supplying a substantial 25 m³ reservoir, strategically positioned to efficiently distribute clean drinking water to the 1,500 residents of the village of Metera. The installation of the solar pumping system significantly alleviates the burden on local residents who previously had limited access to a reliable water source, enhancing their overall well-being but also fosters a sense of community resilience. With a more accessible and reliable water supply, community members, particularly women and children, can redirect their energy towards education, livelihood activities, and economic pursuits.

Going Where Others Do Not

By specifically focusing on these isolated regions of the world, blueEnergy addresses the unique challenges faced by residents, offering tailored solutions designed to meet community needs and enhance local capacity. We bridge the gap between isolation and connectivity, delivering not just energy, water, and food, but the essential building blocks for climate change resilience. In these remote settings, where access to basic resources is often limited, blueEnergy's holistic approach creates a ripple effect of positive change by empowering communities to harness their own resources.



Access to clean water ensures a healthier community, reducing the prevalence of waterborne diseases and improving overall well-being, especially for women, who bear the brunt of water collection. Sanitation facilities contribute to environmental sustainability and women's health, while hygiene practices promote personal and community health. The integration of effective WASH infrastructure enhances quality of life and creates a more resilient and sustainable future for the schools and communities we serve.

In 2022, more than **1,610** people directly benefited from blueEnergy's projects to develop access to drinking water, sanitation and hygiene, as well as the construction, installation and maintenance of more than 40 systems and 500 new hygiene kits. Families received water filters, schools received critical sanitation and hygiene infrastructure, and eco-baños were constructed for safer, healthier homes.



1,274 Water Filters installed

700 Hygiene & Cleaning Kits delivered

123 Community Wells established

83 Handwashing Stations built

113 Eco-Baños built

71 Gray water Treatment System built

37 Water and Sanitation Committees Formed

6 Water and Rain Capture Systems built

Over the Program's History in Nicaragua

Strengthened Schools

blueEnergy's "Climate Smart Schools" initiative integrates water, sanitation, and hygiene and critical infrastructure to increase resilience in participating schools in the Southern Caribbean Coast and Pacific region of Nicaragua. These schools double as nationally-recognized disaster refuge centers, fostering climate change resilience in the students, families, and surrounding communities. In 2022, 4 new Drinking Water and Sanitation Committees were created within the four Climate Smart Schools, and 2022 saw the installation of 2 hand-washing facilities, 1 rainwater collection system and 1 solid waste collection station, as well as infrastructure work. These same schools benefited from a total of 14 training workshops and 10 awareness-raising events on the themes of water, hygiene and sanitation.



Delivery of equipment to families in the el Paraíso sector, 19 de julio district, Bluefields, October 25, 2022.



"There was no comfort, and sometimes when it rained the water would come through. There was no way to go out and be able to do our needs safely, but now thanks to God I have an eco-baño. It is a more comfortable space for my grandmother too, where before she felt very insecure. It is a very advanced technology."

Marlon Oporta, beneficiary, EcoBaño

Healthier Families

At the family level, 17 new families were equipped with water filters and hand-washing facilities in the 19 de Julio Sector of Bluefields. Here, families have limited access to clean water, where water sources are often contaminated with grey water or from flooded latrines. Often, single women-head-of-households bear the brunt of securing water for the family, often having to travel long distances for clean water.

Families were supplied with filters and hand-washing stations with liquid soap and trained in their use. 2 eco-baños were built, benefitting households with safer, more hygienic latrines. And at the community level, 500 new hygiene kits were distributed to Taxi Drivers in the city as part of the "Clean Taxi" Initiative launched in 2020 in response to the COVID-19 pandemic.

Agroecology is a people-led movement aimed at addressing food insecurity while building autonomy and self-sufficiency in beneficiary groups, all in the context of the climate crisis. Permaculture aims to strengthen living systems to ensure quality, varied, and nutritious food while also aiming to restore the soil for a biodiverse, resilient, and climate-prepared community. Combined with biointensive agriculture, blueEnergy's food security program aims to create a ripple effect of impact and small-scale farming movement in the Southern Caribbean Coast.

In 2022, blueEnergy's Food Security and Agroecology program directly benefited **1,957** people. While it's the most recently developed program at blueEnergy, forming in 2014, it is also the most rapidly expanding. Training packages on agroecology and biointensive farming were delivered, garden plans were established for home gardens, agricultural tool kits were created and delivered, and families have food-producing gardens in their homes. Small-scale living ecosystems were improved, and women leaders were trained in best practices to act as examples and promote agroecology in their own communities.



Women Leaders

blueEnergy's "Promoter Women" are highly motivated women who are taught the foundational blueEnergy program elements, then becoming promoters in their neighborhoods and receive continued support from blueEnergy. In order to inspire their neighbors to get involved, their initiatives include sharing the drinkable water they produce, hygiene practices they learn, and vegetables they grow with nutrition guidance, to name a few. This promoter women approach is specifically adapted to marginalized communities in partnership with associations for elderly and disabled people.



This year, 20 women promoters confirmed their commitment to disseminating the methods and training their neighbors, and 17 new families were integrated into the program's activities. 467 people - students and teachers from the 4 Climate Smart Schools, members of women's, seniors' and disabled people's associations and committees and their carers, as well as the 17 new beneficiary families - benefited from 13 training courses in permaculture, biointensive methods, nutrition and cooking. 25 biointensive agroecological vegetable gardens were created, including 21 family vegetable gardens and 3 community vegetable gardens: at Cristiano Verbo College (Bluefields), Divino Niño College (Rivas), and Camino a Emaús School (Managua), and the terraced vegetable garden at blueEnergy's Noda Model Center (Bluefields).

- 72 food-producing home gardens established
- 34 garden kits and agricultural inputs delivered
- 35 Model Families established
- 2 Community Gardens established
- 1 Online Learning Platform created
- 1 Community seed bank established

"In the trainings, we have learned things we didn't know before. Because everything is very expensive, we don't have money to buy healthy food. Now, what we harvest at home, we don't have to go to buy. I have seen changes, the kids are happy, because even though we don't have land to plant, we have pots (vertical vegetable garden) and they love it. They water the plants, they are happy."

Susana Zamoran, Project beneficiary, representative of the Committee of Women with Disabilities.



Capacity Building is integral to all blueEnergy programs. Marielo Torrez and Noe Castillo, blueEnergy Agroecology Technicians, are now certified instructors in the biointensive method, enabling them to train others. Additionally, eight students enrolled in the agroforestry engineering course at URACCAN regional university are undergoing certification. Women promoters received advanced training in agroecology, disseminating methods and assisting 48 families in setting up home gardens.

The "Academia Green Coast" online platform, developed by blueEnergy, provides accessible capacity building. Recognized by the Ministry of Education, Bluefields Indian and Caribbean University, and partner schools, it offers interactive learning on food security, health, hygiene, sanitation, and renewable energies. With a user-friendly design, it empowers individuals to apply techniques suited to local conditions, enhancing their quality of life.

Furthermore, 67 follow-up visits were conducted with families and Biointensive Agriculture Centers (CAB) nationwide. Sixteen action days in four schools, alongside a public awareness campaign, were organized. blueEnergy's Noda Model Center, an authorized CAB, hosted various training courses in biointensive agriculture.

Training for the Community



Renewable energy systems provide communities with cost-effective, sustainable energy—a vital element for fostering community development. Amidst escalating climate impacts, these solutions enhance resilience against extreme weather events. As the world grapples with the intensifying impacts of climate change, these solutions not only mitigate environmental stress but also bolster community resilience. With renewable energy systems, communities are not just securing a reliable power source; they are also fortifying their capacity to adapt and withstand the adverse effects of a changing climate.

In 2022, blueEnergy's renewable energy program directly benefitted over **1,800** people with improved access to safe, and sustainable energy with multiple new renewable energy systems at the Climate Smart Schools: an expanded renewable energy at the Camino A Emaus School and an expanded hybrid solar system at the Cristiano Verbo School; and, a solar powered water pumping system in Ethiopia. blueEnergy has also distributed efficient cookstoves, lowering emissions of harmful pollutants that negatively affect both human health and the environment.



Energy for a Sustainable Future

Seventeen new families have been empowered with upgraded stoves, resulting in a remarkable 50% reduction in fuel consumption and a significant decrease in harmful smoke emissions—a transformation not only enhancing the health of these families but also contributing to environmental well-being. Moreover, a total of 58 individuals, encompassing the newly equipped families and residents from peri-urban and urban areas, underwent comprehensive training on the proper utilization of these life-improving stoves.

The 170 students at Camino a Emaus school in Managua now benefit from enhanced learning conditions following the revitalization of the grid-connected electrical system. This upgrade facilitated the connection of the school's left pavilion, where energy-efficient lamps with improved lighting capacity were installed, promoting overall energy efficiency. Meanwhile, at Cristiano Verbo College in Bluefields, the official commencement of the solar energy project signals a step towards a sustainable energy future. The project aims to extend the grid to power essential components like the water pumping system, snack sales point for children, and key premises such as the computer room, classrooms, staff room, canteen, and guest house.

In the newly established Rama Mainland community, formed to accommodate families from the overpopulated Rama Cay island, the completion of feasibility studies marks a significant milestone for the "Community Development through Renewable Energy in Rama Mainland, Nicaragua" project. This initiative promises to bring positive change and sustainable development to the community.



"I am very grateful for the support, to be able to have the solar panels, it is a blessing for us. It is a great help in the educational field, both for teachers and students, parents. It helps us to reduce electricity costs and to develop a quality education. Last year when the hurricane came, the entire community of the neighborhood and all of Bluefields was without energy, but not here at the school, so we opened the doors to the community to have access to energy to charge phones and flashlights, this has been possible thanks to you."

Auxiliadora Medina

Director of Colegio Cristiano Verbo



MCMDO Local Partnership

Phase 1 of the program to improve access to drinking water in rural areas of the Oromia region saw the installation in 2022 of a 4 kW solar pumping system to supply a 25 m3 reservoir, which will distribute drinking water to 4 standpipes in the village of Metera (1,500 inhabitants).

Another village in this region will be equipped with a solar pumping system in the first half of 2023 as part of this program carried out in partnership with the Regional Water and Energy Office.

The partnership agreement between blueEnergy and local NGO MCMDO* has been renewed for a period of 5 years, with the aim of continuing the program to improve access to drinking water in rural areas and implementing new solar electricity access projects for community centers.

*MCMDO - Mothers & Children Multisectoral Development



241 Individual and Community Solar Systems built

298 Solar Lanterns delivered

19 Solar Powered Water Pumping System

231 Efficient Cookstoves built

2 Biodigesters built

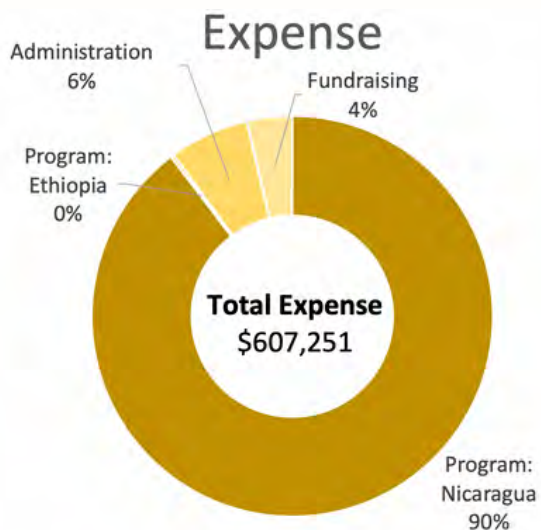
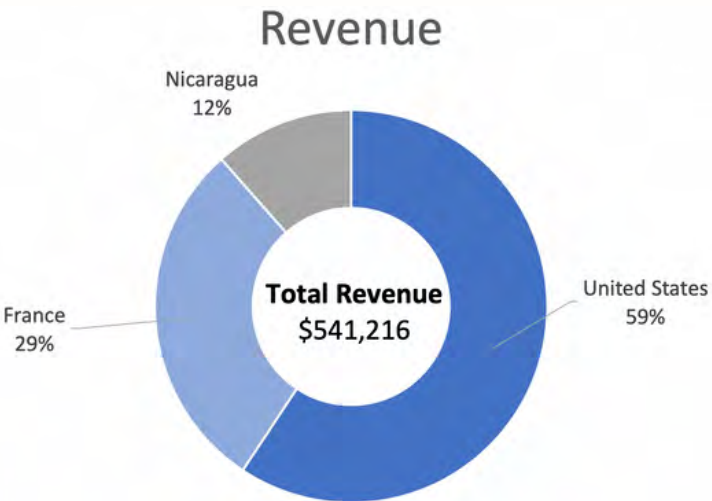
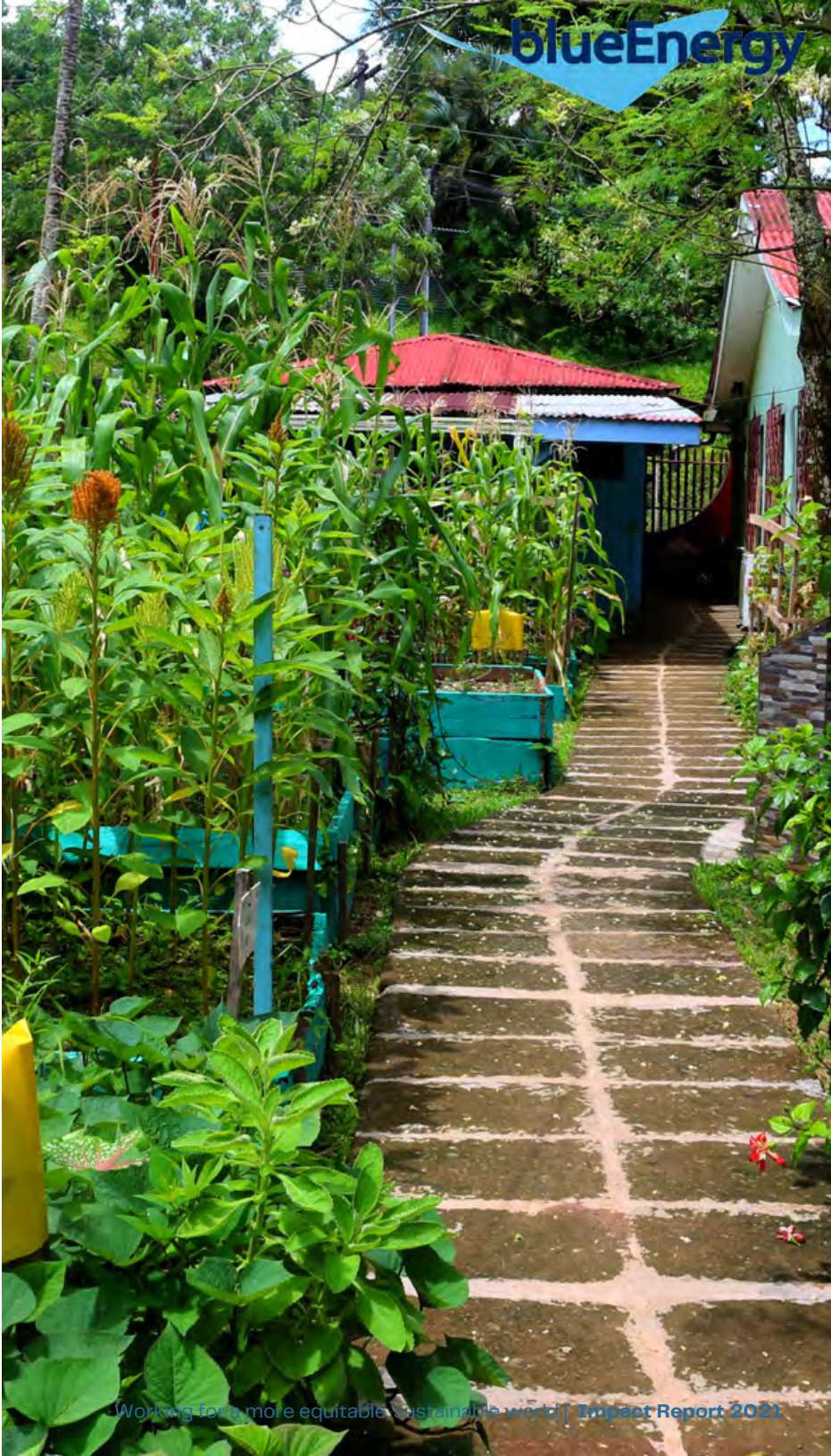
Over the program's history in Nicaragua and Ethiopia



FINANCE & KEY INSTITUTIONAL PARTNERS



Sense Foundation Brussels



* Financial figures presented in this report will vary from publicly available records in the United States, namely the IRS 990 form. This is due to the inclusion of cash revenue and cash expenses in France and Ethiopia, which are not included in government filings in the United States due to our legal structure. All revenue and expenses in France and Ethiopia are processed through blueEnergy France, a separate legal entity registered in France. As a result, these figures are not reported to the US government. However, global consolidated figures for blueEnergy presented here include cash figures from all segments of the organization and the percentage divisions are based on the consolidation of the two segments' financial reports.



GOVERNANCE & LEADERSHIP

As part of blueEnergy's commitment to gender equality and our prioritization of a gender lens in our work, we are proud to announce that over half of our leadership roles are held by women. Globally, blueEnergy's operational team is over 70% women-led, and our Board of Directors is 50% women.

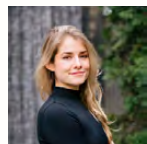
Board of Directors



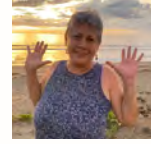
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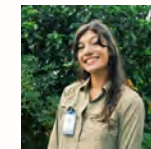
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