2022

Nazava Water Filters

global.nazava.com

The Care Economy Knowledge Hub

the-care-economy-knowledge-hub.org

Profiling Businesses in the Care Economy

The care economy consists of paid and unpaid labor and services that support caregiving in all its forms. In Africa, Asia and Latin America, women spend between three to five times as many hours on unpaid care and domestic work as men. This represents 80 percent of a household's total hours devoted to unpaid care work.

Care economy businesses can help recognize, redistribute, reduce and reward – also known as the 4 Rs – unpaid and paid care and domestic work in the following ways:

Recognize: Initiatives that increase visibility and recognition of paid and unpaid care and domestic activity as "productive" work that creates real value and contributes to economies and societies.

Redistribute: Services and initiatives that redistribute care work from individuals to public and private sector entities, and redistribute care and domestic work within the household.

Reduce: Products and initiatives that reduce the time spent on and burden of unpaid care and domestic work.

Reward: Products, services and initiatives that ensure that care and domestic workers are paid fairly and have professional growth potential. This provides them with financial reward and security.

The Care Economy Knowledge Hub aims to address the knowledge gap around care businesses by showcasing various business models and creating a resource base for relevant stakeholders. It also aims to raise awareness and increase knowledge of the state of impact-driven care economy business models and attract a broad range of funders to invest in care economy solutions by showcasing opportunities. These business profiles are intended to showcase said potential investment opportunities. They have been created from information and data provided by the business itself.

This project is supported by Canada's International Development Research Center, in partnership with the Soros Economic Development Fund at the Open Society Foundations. Building on their track record and commitment to transforming the care economy and mobilizing finance for gender equality, they have jointly launched this action research program to help transform the care economy through impact business and investment.

Executive Summary

Reduce

Nazava Water Filters is a for-profit enterprise that manufactures and sells gravity-based ceramic water filters in communities throughout Indonesia and Kenya. Nazava filters require no electricity, as well as replace the need to boil water by using fuels such as wood, charcoal, or liquified petroleum gas. Water purified through Nazava Filters is 3x cheaper than boiled water and 9x cheaper than water bought from kiosks (shops). Through the use of Nazava filters, women save up to 160 minutes per week (approximately 139 hours per year).[1] This time would have traditionally been spent collecting fuel, boiling water, or traveling long distances to purchase safe drinking water from shops. In addition, women may also elect to sell Nazava purified water within their communities and earn, on average, US$ 26 per month.[2] The enterprise also exports its products to over 30 countries, including Ethiopia and Mozambique. Nazava currently has 42 full-time employees and has served over 600,000 people. In 2021, Nazava earned revenue of US$ 353,640.

Enterprise Stage:
Growth stage

Year Established:
2009

Enterprise Type:
For-profit Enterprise

Women Owned/Led:*

- Founded by at least one woman
- At least 30% women in senior leadership positions

Company Contact guido@nazava.com
Founder's Contact
Guido van Hofwegen,
Co-founder and Director, Indonesia and Kenya LinkedIn Profile

*According to 2X "women entrepreneurship" and "women leadership" criteria; 2X Challenge Criteria

[1] Meghan, C. Katie, W. (2016). Nazava Impact Report. *Miller Center Fellowship* http://www.millersocent.org/wp-content/uploads/2020/01/NazavaMarketingReport.pdf

[2] Nazava Water Filters-Social Impact Assessment. (2017, July/August) https://www.nazava.com/wp-content/uploads/2019/04/NAZAVA-MISSION-REPORT-31-Aug.pdf

1. About The Enterprise

1.1 Problem

Globally, 8 out of 10 people residing in rural areas lack access to safe drinking water sources.[3] Furthermore, 2.2 billion people lack access to clean, safe, and reliable drinking water in their homes. This is most often attributed to a lack of purification solutions available to rural and peri-urban households.[4] Research also shows that 80% of households do not have access to tap water at their premises. In many countries, women and girls are disproportionately responsible for water collection.[5] Consequently, they spend significant time collecting water or fuel (firewood, charcoal, etc.) to boil water, rather than on productive or leisure activities.

In Indonesia, about 18 million people lacked access to safe drinking water in 2022.[6] Consumption of contaminated water increases the risk of contracting waterborne diseases such as cholera, diarrhea, typhoid, dysentery, and Hepatitis A. This leads to over 60,000 deaths (annually) in the country.[7] Beyond households, this issue likewise persists in schools. Schools do not have access to clean drinking water due to inaccessible water sources, contamination of available water sources and or expensive purification processes. It is estimated that 79% of the schools in Indonesia lack access to clean drinking water[8] and are not able to provide clean drinking water to their students.[9]

In Kenya, it is estimated that only 58% of the population has access to drinking water from sources that require less than a 30-minute round trip. In addition, only 30% of the population has access to basic sanitation.[10] Traditionally in Kenya, it is largely the responsibility of women

[3] World Health Organization-*1-3 people globally do not have access to safe drinking water-UNICEF,WHO.* (2019,June 18) https://www.who.int/news/item/18-06-2019-1-in-3-people-globally-do-not-have-access-to-safe-drinking-waterunicefwho#:~:text=Some%202.2%20billion%20people%20around,lack%20basic**%20handwashing%20facilities

[4] Center of Disease Control and prevention-*Access to Clean water Sanitation and Hygiene.* (2022, May 31) https://www.cdc.gov/healthywater/global/wash_statistics.html

[5] World Health Organization-*Progress on Drinking Water, Sanitation and Hygiene.*(2017) https://washdata.org/report/jmp-2017-report-final

[6] Water Organization- *Indonesia's Water crisis.* (2022) https://water.org/our-impact/where-we-work/indonesia/

[7] Indonesia ranked fourth in pollution-related deaths-*Indonesia has the fourth-highest number of premature pollution-related deaths in the world, according to a report by the Global Alliance on Health and Pollution. (2020, January 02)* https://en.vietnamplus.vn/indonesia-ranks-fourth-in-pollutionrelated-deaths/166510.vnp

[8] The State of Children in Indonesia. (2020, May 30). The State of Children in Indonesia | UNICEF Indonesia. Retrieved from https://www.unicef.org/indonesia/media/5041/file/The%20State%20of%20Children%20in%20Indonesia.pdf

[9] Mahessa.(2018,Jan 26). Project Child to expand its drinking water program to Eastern parts of Indonesia. https://projectchild.ngo/blog/2018/01/26/project-child-to-expand-its-drinking-water-program-to-eastern-part-of indonesia/#:~:text=According%20to%20the%20Ministry%20of,access%20to%20clean%20drinking%20water.

[10] Ishaq, J. (2021, January 01). The Standard-*Kenya has no access to Clean Water and Sanitation.* https://www.standardmedia.co.ke/business/national/article/2001427862/kenyans-have-no-access-to-clean-water-and-sanitation

and girls to procure water for their households. This task not only increases domestic drudgery for women and girls, but also increases their exposure to risks such as physical and sexual assaults (many must travel long distances, or through isolated areas, in order to access water and/or sanitation facilities).[11] [12] Furthermore, in some areas of Kenya, girls are expected to forfeit attending school, to instead support water collection activities for their families.[13]

With increased drought conditions and water scarcity, women and girls in rural areas often have to walk long distances to obtain water. A recent report indicated that in rural areas of Kenya, water collection activities may take up to 8 hours per day.[14] Research also highlights that women experience severe health issues due to repeatedly carrying heavy water jugs.[15] Finally, time spent on water collection activities severely limits the time available to undertake income-generating and leisure activities.

1.2 Solution

Nazava Water Filters provides affordable, gravity-based, ceramic water filters that can purify rain, well, and groundwater. The enterprise targets low-income households that earn less than US$ 7 a day, in peri-urban and rural areas. The aim of Nazava Water Filters is to enable women to save time spent on water collection and purification and to reduce the amount of money households spend on buying purified water from refill kiosks. Water purified through Nazava filters is 3x cheaper than boiled water and 9x cheaper than water bought from kiosks (shops). In addition, the water filters contribute to the reduction of waterborne diseases contracted within households.

Furthermore, using Nazava water filters reduces the carbon emissions that would have resulted from boiling water using charcoal or wood. A Nazava water filter consists of a ceramic filter-candle and 2 durable, food-grade, plastic (PP) containers (one of which is equipped with a tap). The water filters have a storage capacity of 16 liters, which is enough to provide safe drinking water to at least 5 people per day.

The enterprise also engages women as sales agents, giving them an opportunity to earn an income. Women earn a commission by selling Nazava water filters to other households in their communities. Some women report earning an income of US$ 26 a month.

[11] Ouma, V. Nyakundi, W. Malisa, S. Kiome,E. Malik, S (2020, July). SEX FOR WATER PROJRCT- Promoting Safe Space for Girls and Young women in Kibera Project https://www.susana.org/_resources/documents/default/3-3965-270-1606746371.pdf

[12] United Nations-Kenya: UN steps up protection for drought-hit women and girls. (2022, October 23) https://news.un.org/en/sto ry/2022/10/1129747

[13] Varalakshmi, V. Ward, J. (2018, September). *Kenya Development Response to Displacement Impact Projet-Understanding and Addressing Gender-Based Violence* https://documents1.worldbank.org/curated/zh/102451537203164341/pdf/129961-WP-P161067-KDRDIP-GBV-Composite-Note.pdf

[14] Water Integrity Network- *The role of women in Kenya's Rural Water Sector: Win in Conservation with Caritas Switzerland*. (2019, May 28). https://www.waterintegritynetwork.net/2019/05/28/partner-feature-caritas-switzerland/

[15] Panthea, P. Nidhi, N. Michela, M. (2020, April 15). *A Systematic Review of Water and Gender Interlinkages: Assessing the Intersection with Health.* https://www.frontiersin.org/articles/10.3389/frwa.2020.00006/full

The enterprise also improves access to clean drinking water for school-going children in Indonesia. The enterprise has partnered with local governments and corporations (under their corporate social responsibility (CSR) programs) in order to provide schools in Indonesia with water filters. The filters enhance the quality of water consumed and therefore reduce the risk of children contracting waterborne diseases.

The enterprise also partners with non-governmental organizations to donate filters to communities impacted by natural disasters.

1.3 Customer Segment

Customer Segment	Product / Service Provided	Paid / Unpaid
Households (low and middle-income households that earn less than US$ 7 per day)	The water filters are sold either directly to households, or indirectly via microfinance institutions and resellers.	**Paid** Households pay for the water filter in installments. The water filter is not offered at a subsidized price.
Schools in low-income areas of Indonesia	Regular and community format water filters	**Paid/Unpaid** CSR partners pay the enterprise to provide water filters to schools at a reduced cost. Revenue from the sale of carbon credits is used to provide free maintenance and replacement services.
Non-governmental organizations	The enterprise partners with NGOs seeking to provide water filters as a donation and/or humanitarian relief package to impacted communities.	**Paid** NGOs pay for water filters before they are delivered to communities.
Corporations	Nazava Water Filters sells carbon credits to businesses interested in reducing their carbon footprint. These carbon credits are certified by the Gold Standard and issued by Nexus for Development.	**Paid** Each credit is sold for about US$ 12 (varies according to deal).

1.4 Team And Governance Structure

Nazava Water Filters has 42 full-time employees, 32% of whom are women. There are 26 and 14 employees in Indonesia and Kenya, respectively. The 2 co-founders (1 man and 1 woman) serve as Directors for each of the countries. In Indonesia, there is 1 operational manager, 1 partnership manager, 7 sales personnel, 10 personnel in production and logistics, 4 marketing personnel, and 3 personnel in administration. In Kenya, the team consists of 1 country director, 1 customer service officer and 12 sales representatives. Two of the 4 board members are women.

1.5 Enterprise Policies

Policy	Yes / No
Overall HR Policy	Yes
Equal pay for equivalent work policy	Yes
Non-discrimination / Equal employment opportunity / Diversity and inclusion policy (gender, LGBTQ, PWD, etc.)	Yes
Anti bullying and sexual harassment policy / Respectful workplaces	Yes
Whistleblower policy / Employee grievance mechanism	Yes
Maternity / Paternity leave policy	Yes
Safeguarding policies for vulnerable groups (children, elderly, PWDs)	Yes
Safeguarding policies for the environment or to reduce detrimental impact on the environment (covers reducing carbon footprint, reduced water consumption etc.)	Yes

2. Impact

2.1 Mission Statement

Everyone, everywhere, should have access to safe and affordable drinking water. The enterprise's mission is to be the world's premier water filter company, offering safe and affordable water filters. The company focuses on marketing the best available water filters (for the lowest possible price), especially targeting the base of the income pyramid.

2.2 Intended Impact

Nazava Water Filters **reduce** the time women and girls spend collecting safe water from far distances, as well as the time spent boiling unsafe water for household consumption.

2.3 Monitoring And Measurement

Nazava Water Filters annually measures the reach of its products through the following indicators:

- Number of filters sold
- Number of households with access to safe drinking water
- Number of schools supplied with water filters
- Increased disposable time
- Increased disposable income
- Reduced carbon dioxide emissions
- Number of microfinance partners
- Customer satisfaction surveys in each country of operation

2.4 Results To Date

This section provides an overview of the enterprise's results as of December 2021. In addition, this section provides information from 4 research studies assessing impact. Results are as follows:

- Number of water filters sold: 200,000
- Number of households that have access to safe drinking water: 119,229
- Number of people with access to safe drinking water, either by buying Nazava Water Filters directly, or through being a member of purchasing household: 534,145
- Number of schools with access to clean drinking water: 600
- Increased disposable income for households repeatedly using Nazava water filters (instead of buying or boiling water): US$ 2,300,000
- Increased disposable time (for individuals who walk long distances to fetch clean water, or collecting wood for boiling water): 2 hours and 40 minutes per week, which translates to approximately 139 hours saved (per filter, per year)[16]

[16] This is calculated. As part of the Santa Clara study, an analysis was conducted on the time spent in obtaining water. This study found that filter users save (on average) 139 hours per year, which equals .07 full time equivalent (FTE) per filter saved per year. One full time equivalent is the number of hours in a full time labor contract (40 hours). This study surveyed 46 users. Nazava's impact report for 2021 can be viewed here.

- The use of Nazava Water Filters has resulted in positive health impacts for consumers, as there are reduced chances of contracting waterborne diseases. Results from 1 of the social impact assessments commissioned by the enterprise show a significant difference was found between users and non-users: 8% of Nazava users reported the occurrence of diarrhea within the past 6 months, versus 21% of non-users.[17]
- Nazava Water Filters eliminate the need for burning unsustainable sources of fuel to boil water (wood, charcoal, etc.). In 2021 the enterprise contributed to reducing CO2 emissions by 177,000 tons.[18]
- Nazava Water Filters have additional positive benefits for consumers and communities in the following ways:
    - **Education**: The enterprise has a school program in Indonesia, through which children learn about the importance of access to safe drinking water. The enterprise also improves awareness in local communities about the benefits of consuming safe drinking water.
    - **Women's economic empowerment:** So far, there are over 100 women water retailers who use Nazava filters to sell purified water. They earn an average of US$ 26 per month.[19]

Nazava Water Filters' work is aligned with the following Sustainable Development Goals (SDGs):

[17] NAZAVA WATER FILTERS SOCIAL IMPACT ASSESSMENT. (2017, July). Retrieved from https://www.nazava.com/wp-content/uploads/2019/04/NAZAVA-MISSION-REPORT-31-Aug.pdf

[18] This is calculated based on 0.29t CO2 per filter per year, by the Gold Standard methodology (verified by Bureau Veritas). Nazava's impact report for 2021 can be viewed here and the Bureau's report can be viewed here.

[19] Nazava Impact 2021 https://www.nazava.com/wp-content/uploads/2019/05/Nazava-Impact-Matrix.pdf

3. Financials

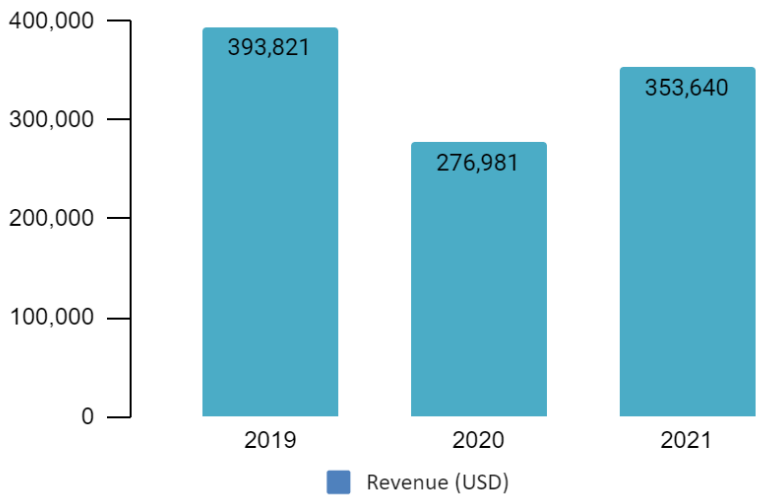
3.1 Financial Status

The enterprise's operations have been adversely impacted due to COVID-19. In Indonesia, operations were profitable in 2021. However, the enterprise reported an overall loss, as it had made investments to commence operations in Kenya in 2021. The enterprise aims to be profitable in Kenya in the next 2-3 years.

Particular (Amounts in USD)	FY2019	FY2020	FY2021
Total Revenue	393,821	276,981	353,640
Total Expenses	373,796	239,962	442,371
EBITDA OR Profit/Loss	20,025	37,019	-88,731
EBITDA Margin	5.08%	13.37%	-25.09%

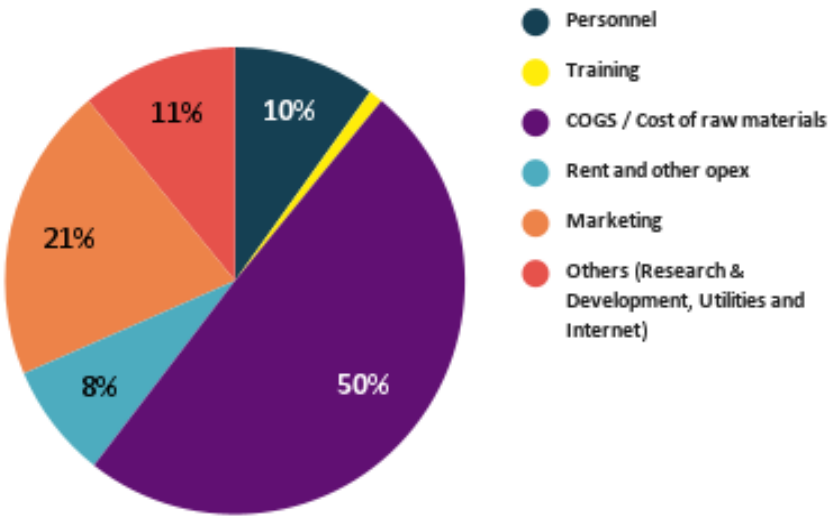
3.1.1 Revenue Streams

Nazava Water Filters obtains revenue from the sale of products and carbon credits. 81% of revenue comes from the sale of water filters. The water filters are sold directly to consumers, or through microfinance institutions, NGOs, and resellers. The remaining 19% of revenue comes from sales of carbon credits to corporations seeking to reduce their carbon footprint.



3.1.2 Expenses

The following pie-chart provides details of key expenditures for 2021.



3.2 External Funding Sources (Past and Current)

The enterprise has received funds from various sources. Details on recent funds are as follows:

- The enterprise received a loan of US$ 250,000 from Danone Communities. These funds were used for up-scaling Indonesia's online sales, organizational strengthening, and as working capital (2021).
- The enterprise received a loan of US$ 80,000 from VOX to expand operations in Kenya (2021).
- The enterprise received a shareholder loan of US$ 50,000, which was used to expand operations in Kenya (2021).
- The enterprise received a KIVA COVID loan of US$ 75,000, which was used for purchasing inventory. The loan is to be repaid in 18 months (2020).
- The enterprise received a KIVA Direct Social Enterprise loan of US $50,000 (2019).
- The enterprise received a loan from Beneficial Returns for US$ 50,000 (2019).
- The enterprise received a grant of US$ 25,000 from Crevisse, which was used to set up a direct sales channel (2017).
- The enterprise received an award of US$ 33,000 from the Ashden Award. The funds were used to conduct sales training and to make actual sales (2016).
- The enterprise received undisclosed equity funds from the Netherlands Investment Cooperative, which were used for production, marketing, and inventory (2016).

- The enterprise received US$ 75,000 as part of the Tech Award, which was used for sales and investment in production (2013).
- The enterprise obtained a loan of US$ 373,000, which was used to help resellers purchase filters on credit (2013).
- The enterprise obtained a loan of US$ 22,000 from the Social Capital Foundation, which was used for inventory (2012).
- The enterprise received a loan of US$ 100,000 from LCEF, for inventory and marketing purposes (2012).
- The enterprise received a shareholder loan of US$ 35,000, which was used for inventory (2011).
- The enterprise received undisclosed equity funding from angel investors, which enabled the company to break even (2011).

3.3 Challenges Faced In Accessing Capital

- **High cost of capital**: The enterprise has not been able to obtain capital from mainstream financiers (such as banks) in either Indonesia or Kenya. This is because the enterprise does not have collateral, and therefore the loans are offered at high interest rates.

4. Path To Scalability

4.1 Potential Avenues For Growth

- **Expand customer base**: By 2030, the enterprise plans to provide 13 million people with access to safe drinking water, which is an increase from 500,000 in 2022. The enterprise also aims to expand the provision of drinking water in primary schools. By 2027, it intends to reach at least 50,000 schools in Indonesia and East Africa, up from 600 in 2022.
- **Expand sales and distribution network:** The enterprise intends to build a network of at least 200 direct-consumer sales agents in Kenya. It also aims to establish partnerships with microfinance institutions and solar lamp distribution networks, in order to expand its geographical coverage in Kenya.
- **Increase production capacity**: The enterprise aims to increase its production capacity through the establishment of a local facility in Kenya in 2024. Currently, the enterprise's production facility is based in Indonesia and therefore the products are shipped to Kenya, in order to be exported to other African countries. A local (Kenyan) production facility will enable the enterprise to further reduce the price paid by customers to purchase Nazava water filters.

4.2 Risks And Challenges

Nazava Water Filters has identified the following risks and challenges:

- **Financial:** The enterprise is facing challenges in accessing funding to up-scale its operations. This is because the available capital in the water sector is mostly channeled to establishing and maintaining large infrastructure projects.
- **Operational (customers):** To acquire customers and build a sustainable customer base, the enterprise needs to run extensive customer awareness campaigns to drive behavior change and product uptake. This results in high marketing costs.
- **Operational (production):** The enterprise is facing challenges in enhancing its production capacity in Kenya. This is largely due to the lack of a well-developed industrial ecosystem that supports local manufacturing.
- **Operational (partnerships):** The enterprise faces challenges in establishing partnerships with NGOs, in order to reach customers more efficiently in Indonesia. The enterprise has attempted to partner with NGOs that have WASH-focused programs, to either sell filters directly to the NGOs, or to their beneficiaries. The enterprise has observed that there is resistance amongst some NGOs to establish partnerships, as these organizations do not want to showcase products for sale from a single enterprise. This results in higher costs for sourcing and acquiring customers.
- **Competition:** The enterprise faces competition from other drinking water purification solutions, such as boiled or purified/bottled water.
- **Regulatory**: The enterprise is facing a few regulatory challenges that impede its operations in Indonesia. It cannot currently certify its filters, as there are no government agencies (or private agencies) that have accreditation to certify water filters in the country. In addition, the enterprise faces challenges in importing some materials for the production of water filters, which increases the cost of production.

4.3 COVID-19 Impact On The Enterprise

Due to COVID-19 restrictions, the enterprise's distribution of products through microfinance institutions (MFIs) and sale agents was halted. Therefore, the enterprise transitioned to online training during this period, in order to provide sales agents and MFI distributors with the required product knowledge and sales training. The enterprise trained its resellers (vendors) on how to pitch the filter, as well as on online sales techniques. The enterprise also focused on expanding its digital marketing and online sales initiatives. Through these initiatives, the enterprise was able to quadruple its online sales during the pandemic.

4.4 Support Received To Date

The enterprise has received support from the following institutions:

- The enterprise has received incubation support from the Miller Center for Social Entrepreneurship in California, United States of America (2021). It continues to receive mentorship support from the Miller Center in 2023. For the last 2 years, the Miller Center has also provided interns to help the enterprise with impact measurement.
- The enterprise received a Social Impact Excellence Award in 2022.
- In Indonesia, the enterprise received support from the Angels of Impact in 2018. This support was used to improve the business model of the enterprise.
- The enterprise participated in the Impact HUB 2030 acceleration program in 2018-2019.
- The enterprise has received technical and financial support from Danone to conduct a pilot school project in 2021.
- In 2021, the enterprise participated in the Kenya Climate Innovation Center (KCIC) Green Business Accelerator.
- The enterprise was a part of the WASH Accelerator Kenya (WA-KE UP), organized by CEWAS for water-related enterprises in 2021. The programme aimed to deliver personalized and long-term support for WASH & Water Resource Management businesses that intended to become investment-ready. The support provided includes technical assistance from sector-smart business development experts, networking, matchmaking opportunities, as well as access to seed capital grants to implement business development projects.
- In 2022, the enterprise participated in the PrivABoo programme with GIZ. The program facilitates peer-learning between participants and supports building a network of partners to mobilize additional investments for climate change adaptation.

4.5 Inputs Required For Growth

Financial

- The enterprise is seeking US$ 1.5 million in funding (in Kenya) to up-scale the business. The funds will be used to establish local manufacturing, develop carbon credits, as well as to expand marketing and sales. This funding will enable the enterprise to generate nearly US$ 2 million in profit by 2027.
- The enterprise is seeking a 5-year grant (of US$ 12 million) to subsidize the cost of providing water filters to schools in Indonesia. The funding will be used to reach 7.5 million children (across 50,000 schools) in the next 5 years.

Non-financial

- **Human Resources**: The enterprise seeks support to build and manage a team of 200 direct-sales agents. The enterprise also seeks to hire an in-house expert for data analysis, to improve the company's operations.
- **Marketing**: In Kenya, the enterprise seeks to promote the adoption of the Nazava Water Filters by providing sales collateral for agents, conducting market activation, and prompting online and physical advertisements of the products.

  In Indonesia, the enterprise is seeking support to influence and gain more trust with the customer segment, to prompt the uptake and sales of the water filters.
- **Partnership development:** The enterprise is seeking partners (MFIs, distribution networks, etc.) in order to to increase its reach to customers in Kenya and other target countries.
- **Production capacity:** The enterprise seeks to on-board personnel and mentorship support, to enhance its production capacity in both Indonesia and Kenya.