

Folia Water



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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.

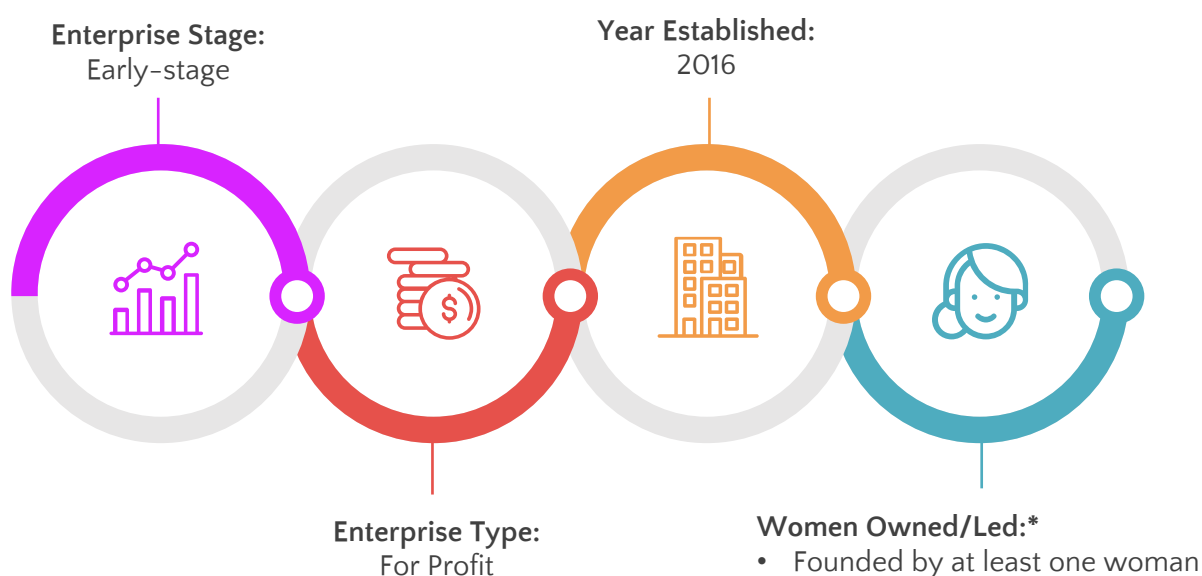
This project is supported by Canada's International Development Research Center, in partnership with the Soros Economic Development Fund at the Open Society Foundations. Building on their track record and commitment to transforming the care economy and mobilizing finance for gender equality, they have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

Executive Summary



Reduce

Folia Water Global Inc. (Folia Water) is a for-profit enterprise that provides affordable and effective water filtration solutions to low-income communities that lack access to clean drinking water. It is currently operating Go-To-Market (GTM) validation projects in Bangladesh. The enterprise's patented silver-infused filter papers kill bacteria and viruses and filter out dirt and larger parasites from contaminated water. These products result in women and girls spending less time purifying drinking water for their households. Founded in 2016, Folia Water has served over 74,000 beneficiaries and has 8 full-time employees in Bangladesh. In 2021, the enterprise had revenue (grants) of US\$ 243,000.



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*According to 2X "women entrepreneurship" and "women leadership" criteria; [2X Challenge Criteria](#)

1. About The Enterprise

1.1 Problem

In Bangladesh, 4.9 million people do not have access to sources of clean drinking water close to home and 73 million people use contaminated water for drinking¹ (44% of the country's population) 90% of water collection² and purification is done by women and children.

Consuming contaminated water leads to diseases such as cholera, diarrhea, dysentery, hepatitis A, and typhoid. 36,000 people are estimated to die each year from diarrhea in Bangladesh as a result of unsafe drinking water, lack of sanitation, and poor hand hygiene³. Women and older girls are the primary carers for ill family members, which places a significant time and labor burden on them⁴. Poor health conditions and the tedious nature of primitive filtration solutions limit women's and other household carers' time for more productive activities. Moreover, health related expenditures can have a profound negative impact on households' economic situations, driving them (deeper) into poverty.

1.2 Solution

Folia Water provides low-income communities in Bangladesh access to clean drinking water by offering an affordable and effective nano silver infused paper based water filter. The enterprise has a Fast Moving Consumer Goods (FMCG) market approach. The paper filter only costs BDT 20 (US\$ 0.22)⁵ making it feasible for low income households to purchase additional filters as needed. Furthermore, the enterprise's pilots show that these low-income households are willing to pay for this clean drinking water solution.

Folia Water filters reduce the time women and girls spend purifying drinking water and also reduce the incidence of water borne diseases and the associated care and economic burden that comes with water-borne diseases.

¹ (2017). *Bangladesh – Facts and Statistics* / WaterAid Bangladesh. Wateraid. <https://www.wateraid.org/bd/bangladesh-facts-and-statistics>

² Livani, T., Ahmed, R., Ahmed, S. O., (2021, July 27). *Enhancing women's access to water, sanitation, and hygiene in Bangladesh*. World Bank Blogs. <https://blogs.worldbank.org/endpovertyinsouthasia/enhancing-womens-access-water-sanitation-and-hygiene-bangladesh>

³ (2020). *Top 10 causes of death in Bangladesh for both sexes all ages 2020*. The Global Health Observatory – WHO. <https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>

⁴ Livani, T., Ahmed, R., Ahmed, S. O., (2021, July 27). *Enhancing women's access to water, sanitation, and hygiene in Bangladesh*. World Bank Blogs. <https://blogs.worldbank.org/endpovertyinsouthasia/enhancing-womens-access-water-sanitation-and-hygiene-bangladesh>

⁵ For reference, a SIM card costs around US\$ 1 –5, a bottle of shampoo costs nearly US\$ 1-10, and a bar of soap costs around US\$ 1-1.3.

1.3 Customer Segment

Customer Segment	Product / Service Provided	Paid / Unpaid
Low-income households	Folia Water's primary market is low-income households, those earning between US\$ 2-10 a day. The water filtration product consists of a funnel and silver-infused filter papers. Folia's anti-microbial filter papers use silver nanoparticles to render pathogens found in water inactive. Each Folia Filter paper is designed to treat 20 liters of contaminated water. These filter papers can be used in a regular plastic funnel or in Folia's Keystone Funnel, which has been designed for easy setup and can be used with any bottle up to 5 liters.	Paid: Households purchase the water funnel and filter papers from retailers / door-to-door sales agents.

1.4 Team And Governance Structure

Folia Water Global (FWG) is registered in the United States. Folia Bangladesh (FBD) was incorporated in 2020 to create a market for water treatment in Bangladesh and is wholly owned by FWG. There are 8 full-time employees, 25% of whom are women. Personnel include three senior members – the CEO, Sales Lead and Senior Manager for planning and market development. Other full-time staff members include two field sales agents, one staff member for market development, one for accounts, and one for communication. The team in Bangladesh is supported by a product development domain director, based in the United States. One of the four members on its board of advisors is a woman.

1.5 Enterprise Policies

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

2. Impact

2.1 Mission Statement

Folia Water's mission is to provide access to clean drinking water to low-income households.

2.2 Intended Impact

Folia Water **reduces** the time spent by women and girls on household water purification by providing access to a simple and effective water filtration process. Furthermore, access to clean drinking water reduces the time spent by women and girls in taking care of family members that are unwell due to consumption of unclean drinking water.

2.3 Monitoring And Measurement

Folia Water measures its product's reach and quality.

- Product sales data is tracked on a weekly basis. Key indicators are:
 - Number of funnels sold
 - Number of filter papers sold
 - Product feedback (if any)
- The enterprise has conducted retail pilots for its water filter. As part of these pilots, the enterprise tracked data for a number of indicators, such as:
 - Number of households educated as a part of the pre-launch pilot project
 - Weekly feedback from retail outlets and consumers who participated in the enterprise's pilot projects
 - Over the course of the first 19-month pilot project, the enterprise used a three-line survey method, (baseline, midline and endline surveys which involves surveying the same individuals with the same set of questions, three times at regular intervals, to monitor changes in their answers). The aim was to measure people's thoughts and behavior change on contaminated water, its usage and its safety.

2.4 Results To Date

Through its pilots, Folia Water has achieved the following results:

- Number of funnels sold: 13,438
- Number of filter papers sold: 29,018
- Number of direct beneficiaries that now have clean drinking water after either purchasing the filter directly or a member of a household that purchased one: 74,147 ⁶
- Number of liters of clean drinking water provided to intended beneficiaries: 663,800
- The midline and endline surveys results from the pilot show the intended behavior change.
 - 30% of the households responded that they completely stopped drinking unfiltered tube well water after using the Folia Water products.
 - More than half of the repeat purchasers claimed that the frequency of family illnesses – and hence the time required for care – decreased.
 - 51% of the households responded that it was important to purify the tube well with water during the COVID pandemic.

⁶ Please note that the number of direct beneficiaries is an imputed value. The enterprise surveyed the average number of household members, in the districts in which it conducted its pilot. The number of direct beneficiaries is arrived at by multiplying the number of people who purchased Folia's products by the average number of household members..

- The enterprise's water filtration product has also resulted in indirect benefits for the communities that have been served so far.
 - Over 23,500 beneficiaries received information on safe water (increased awareness) without purchasing the water filtration product.
 - 906 beneficiaries have been engaged for door-to-door sales and product awareness activities. This resulted in increased income and improved livelihoods for these beneficiaries.

Folia Water's work is aligned with the following Sustainable Development Goals (SDGs):

⁷

⁷ This is as the multiple-use product, the filter paper is biodegradable after consumption.

3. Financials

3.1 Financial Status

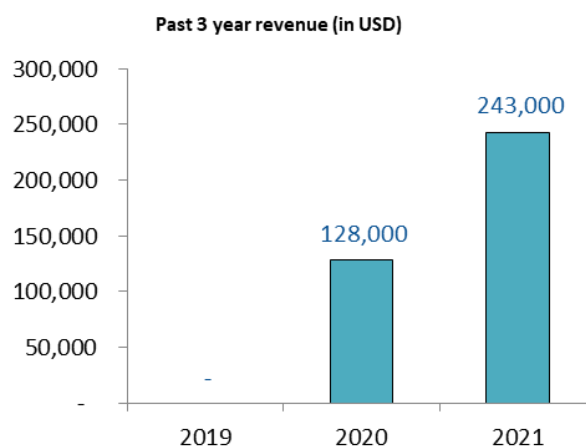
The enterprise aims to be financially profitable in the next three years

<i>(Amounts in USD)</i>	FY 2019	FY 2020	FY 2021
Total Revenue *		128,000	243,000
Total Expenses		204,000	317,000
EBITDA OR Profit/ Loss	N/A	(76,000)	(74,000)
EBITDA Margin	N/A	(59.38)	(30.45)

* The listed total revenue includes grants to conduct multiple projects for customer validation and the initial Go-To-Market (GTM) validation. More detail on the grant revenue sources can be found in section 3.2.

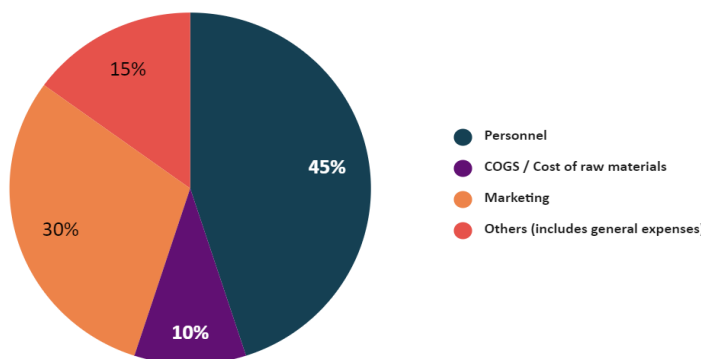
3.1.1 Revenue Streams

The enterprise has been in its pre-launch phase for the last two years. During this period, almost all of the enterprise's revenue came from grants and less than 1% of revenue came from product sales.



3.1.2 Expenses

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



3.2 External Funding Sources (Past and Current)

The enterprise has received grants from various institutions to finance its past and existing operations.

- The enterprise received funding from the UK's FCDO and Unilever's joint initiative, TRANSFORM, to fund its first consumer pilot project. US\$ 400,000 was received over a period of 48 months (2019-2022). The funding was used to conduct a consumer product market fit, and to carry out activities such as surveys, product marketing in local communities, and to cover administrative expenses.
- Over a period of 12 months, the enterprise received US\$ 230,000 from Aqua for All, which was used for retail store based sales and the initial Go-To-Market (GTM) validation.
- The enterprise received matching funds from USAID's Feed the Future Bangladesh Nutrition Activity Program. The funding was used for a sales pilot and to expand to another district which is facing a drinking water crisis. The total funding received was US\$ 80,000 over a period of 12 months.

3.3 Challenges Faced In Accessing Capital

Lack of interest from private investors:

Raising capital for water solutions in Bangladesh and in other South and Southeast Asian countries is challenging since investing in water leads to limited return on investment, compared to other industries. Consequently, the enterprise has had to focus its fundraising efforts on impact investors rather than traditional, mainstream investors.

4. Path To Scalability

4.1 Potential Avenues For Growth

Folia Water has developed a plan to grow its operations in the next 3–5 years.

- **Geographic expansion within Bangladesh:** In 2022–23, the enterprise will expand its operations to five districts in Bangladesh. It intends to distribute its product through 10,000 retail stores and reach over 20,000 households. By the end of 2025, the enterprise aims to be in 40,000 retail stores and serve over 117,000 households.
- **Geographic expansion beyond Bangladesh:** In 2024–25, the enterprise intends to launch its product in other South and Southeast Asian countries.

4.2 Risks And Challenges

- **Financial challenges**
 - **Limited options for external financing:** Raising external equity capital is a challenge for the enterprise due to limited private equity interest in social enterprises that have relatively lower ROI compared to other projects.
 - **Exchange rate fluctuations:** Exchange rate fluctuations can increase Folia's expenses. This is because its revenue is generated in Bangladesh, in BDT, and all the R&D and product development expenses are incurred in the United States, in USD. This also impacts freight costs as well as COGS.
 - **Financial resources to ensure customer retention:** The unavailability of funds affected sales operation teams, marketing support and behavior change communications, which in turn affected recurring sales at retail stores and the ability to retain existing customers. Retailers will not promote an unsupported new product. Establishing brand positioning and creating trust in a new product in a targeted marketplace requires uninterrupted advertisement & promotion investments. Initial and sporadic sales support is not enough, especially if the product requires behavior change.
- **Operational challenges (customers)**
 - **High cost of customer acquisition and retention:** To acquire customers and build a sustainable customer base, the enterprise needs to run extensive campaigns to drive behavior change and product uptake, which results in high costs and requires collaboration with WASH experts and market system development partners/facilitators.
 - **Inconsistent use:** The enterprise noted that there were fewer repeated sales when the product was purchased from retailers compared to door-to-door sales.

- **Social Norms**

- **Gendered market:** Women are the main product users, and in door-to-door sales women are the main consumers. Due to social norms, women are not the main buyers at retail stores and marketplaces. Especially in rural areas, women infrequently visit marketplaces due to the prevalent norm of males being the main earners.

4.3 COVID-19 Impact On The Enterprise

Pandemic related restrictions made it difficult for the enterprise to conduct product awareness and marketing activities to increase product uptake. COVID-19 also negatively impacted low-income households' finances and affected their consumption patterns. Consequently, it was challenging to create a market for a product targeted at low-income families. The enterprise also experienced international product shipment and packaging delays which resulted in insufficient inventory for some time during the pandemic.

To recover from these impacts, the enterprise began to use digital marketing and television advertisements, and partnered with a domestic packaging enterprise in Bangladesh to decrease the final production time. It has also started using a 6-month sales forecast for its production to ensure sufficient inventory.

4.4 Support Received To Date

The enterprise has received some technical support. iDE provided technical assistance to develop Folia Water's marketing campaigns based on behavior change communication, and rural market systems in Bangladesh. In 2022, the enterprise was selected to participate in the Miller Center Fellowship Program, which helped the enterprise to design its business value chain and improve its financial modeling capabilities to enable delivery at scale.

4.5 Inputs Required For Growth

The enterprise needs both financial and non-financial support in the coming decade.

Financial:

- The enterprise aims to raise US\$ 2 million to scale its operations to multiple districts in Bangladesh. The enterprise seeks US\$ 1 million in equity and US\$ 1 million in grants to reach 10,000 retail stores in five districts covering 2 million low-income households in the next two years.

Non-Financial:

- The enterprise needs support to develop its impact management system, to conduct more rigorous studies and randomized control trials to accurately understand the product's impact.
- The enterprise is seeking assistance for fund raising activities, including support to conduct commercial financial modeling. It also needs access to opportunities to showcase its work to investors.
- The enterprise needs support to develop networks and partnerships with B2B value chain partners in manufacturing, sales and distribution in Bangladesh.