

# Banka BioLoo



## Impact Management Case Study



**Location** India

**Sector** Water, Sanitation & Waste Management

**BOP Stakeholders** Clients

**Total Reach** 200,000



## Business Model

Banka BioLoo is an Indian social enterprise that produces environmentally-friendly bio-toilets, installing them in remote areas where conventional toilets cannot be made available. Banka BioLoo uses bio-digester technology that makes it possible for users to manage waste onsite and reduce dependency on resource-consuming sewage infrastructure, while decreasing the risk of sanitation-related diseases, which particularly impact children under the age of five.

In India, nearly 50 million people lack access to adequate sanitation<sup>1</sup>, increasing the risk of water contamination and diseases for these individuals. Diarrhoea is the third leading cause of childhood mortality in India and is responsible for 13% of all deaths per year in children under five.<sup>2</sup>

Having installed 10,000 bioloos in 22 Indian states over the last eight years, Banka BioLoo contributes to reducing recurrent waterborne diseases. It also contributes to girls' dignity and education opportunities by placing bio-toilets in schools, the company increases school attendance for girls during their menstruation days.

Founded in 2012, this woman-founded business is engaged in promoting and developing innovative, environmentally-friendly products and services for human-waste treatment, generating annual revenue of about US \$7.3 million.<sup>3</sup>

- 1 The National Annual Rural Sanitation Survey 2018-19 reported, as on March 5, that the number of Indians defecating in the open has come down to under 50 million, from 550 million in 2014 <https://pib.gov.in/PressReleaseSelfframePage.aspx?PRID=1567486>
- 2 Lakshminarayanan, S. & Jayalakshmy R. (2015). Diarrheal diseases among children in India: Current scenario and future perspectives, Journal of Natural Science, Biology and Medicine 6(1): 24-28. doi: 10.4103/0976-9668.149073
- 3 Value for April 2019 – March 2020 period - Banka BioLoo Release for 2019-20 financial year: <http://www.bankabio.com/Banka%20BioLoo%20Press%20Release%20H2%20&%20FY2019-20%20Results.pdf>



**10,000**  
bioloos  
installed



**22**  
states



**8**  
years

across

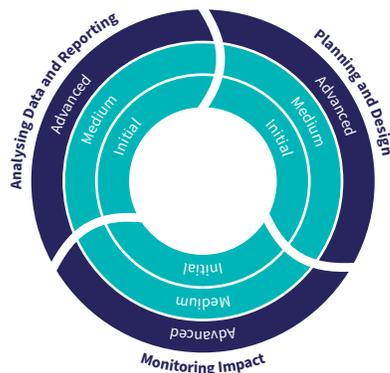
in



## Key Stakeholders

Two-thirds of the population in India lives in rural areas<sup>4</sup> where access to adequate sanitation facilities is largely insufficient. The number of people practicing open defecation decreased by 55% from 767 million to 344 million between 2000 and 2017, but the country still had the largest number of people worldwide in 2017<sup>5</sup>. In the same year, only half of the schools in India were found to have separate toilets for boys and girls, limiting access to adequate sanitation especially for girls during their periods. This is one of the main reasons why 113 million female students leave school when they reach puberty.<sup>6</sup>

4 World Bank Database (2020) Retrieved from <https://data.worldbank.org/indicator/SP.RUR.TOTL?locations=IN>  
 5 WHO/UNICEF Joint Monitoring Program for WASH (2019) Retrieved from <https://blogs.worldbank.org/opendata/open-defecation-nearly-halved-2000-still-practiced-670-million>  
 6 We are Water: Toilets to provide freedom, health and dignity to women (2017) Retrieved from [https://www.wearewater.org/en/toilets-to-provide-freedom-health-and-dignity-to-women\\_285651](https://www.wearewater.org/en/toilets-to-provide-freedom-health-and-dignity-to-women_285651)



Companies can have an initial, medium or advanced level of impact management capacity

## 1. Assessing Readiness and Capacity

Banka BioLoo was interested in gathering concrete data that would prove the social and environmental impact the company was having on the communities it operates in.

Banka BioLoo joined BCTA's **Impact Champions Programme** to understand the impact it was having on its end users, primarily school children. Education is not within the classroom alone; water, sanitation and hygiene (WaSH) facilities (or lack thereof) have a significant contribution to day-to-day learning. Banka BioLoo has been providing WaSH infrastructure in schools for many years and was keen to understand their impact. BCTA's Impact Champions Programme, through a year-long immersion, supported by the Impact Lab, enabled the company to undertake the impact assessment.

At the start of the Impact Champions Programme, Banka BioLoo was found to have an **advanced capacity** for undertaking impact measurement and management. This is because the company's senior managers are strongly committed to dedicating time and resources to carry out impact management. Moreover, Banka BioLoo had prior experience with using laptops, smartphones and Enterprise Resource Planning software. Lastly, Banka BioLoo's field staff have some experience of collecting and using data for their daily operations; and can allocate some time for impact management.

Banka BioLoo benefits from impact management as it allows them to:

- Build reputation by demonstrating social and environmental impact
- Understand the needs of customers and users
- Design an effective product



## 2. Planning For Impact

### I. Impact Value Chain

The **Impact Value Chain** is a visual map of how an organization's strategy and operations contribute to its business value and the Sustainable Development Goals (SDGs). The Impact Value Chain allows the organization to holistically understand the effects of its inclusive business activities on different groups and the environment.

Children in India's rural areas face serious difficulties in accessing adequate and comfortable sanitation, as only half of the country's schools have separate toilets for girls and boys. At the same time, diarrhoea and open defecation are still prevalent health hazards, since there has been a lack of education around good sanitation and health practices. In turn, many people are unaware of the correlation between good hygiene and health, preventing them from changing their sanitation practices.

Considering this challenge, Banka BioLoo conducts awareness programs on the direct linkage between health and sanitation in the communities they work in. Education is not only limited at the community level, Banka BioLoo also teaches good hygiene practices to children in schools. In order to address the difficulties of school children in accessing adequate sanitation, the company installs environmentally-friendly bio-toilets, called bio-loos, in schools.

As a direct result of the bio-loos, school children have improved access to sustainable sanitation in areas that were not equipped with adequate infrastructure before. Due to Banka BioLoo's education efforts in schools, children are also able to apply good hygiene practices outside of school. This change of behaviour is also incentivized by their parents, who now have an enhanced understanding of the inter-linkage between sanitation and health.

In the mid-term, this increased awareness of the importance of safe sanitation will contribute to a reduction in waterborne diseases amongst the communities Banka BioLoo operates in. The gender-sensitive bio-loos allow female students to better manage their menstrual health, which ultimately leads to a decrease in school absenteeism and drop-outs.

In the long run, Banka BioLoo's efforts lead to an overall increase in access to improved sanitation and hygiene in schools, contributing to better health of school children by reducing waterborne diseases, which are a major factor of mortality among children. The bio-loos also have a direct impact on children's education by improving their dignity and hygiene security, with more students likely to successfully complete their education.

## Banka BioLoo's Impact Value Chain

SDGs



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



Lack of accessible/affordable sanitation in schools in rural areas

Lack of health awareness & education

Lack of understanding of co-relation between safe water & sanitation and good health

Provide products, services and solutions in the form of bioloos (in schools)

Conduct WASH education at schools for children

Conduct awareness programs on linkage between health and sanitation

Improved access to sustainable sanitation in schools in rural areas

Children apply improved sanitation and hygiene practices in school and at home

Enhanced understanding of the inter-linkage of health and WASH

School absenteeism and drop-out decreases

Enhanced access for Menstrual Health Management for female students

Overall access to improved sanitation in schools

Reduced waterborne diseases

Increased awareness on importance of safe sanitation

Increasing access to improved sanitation in schools

Supporting children in completing education

Improving dignity and hygiene security of female students

Reducing child mortality

### Decision-Making Questions

Are families aware of the link between sanitation and health?

What type of sanitation is available for schools in rural areas?

Does WASH education in schools translate into good health practices for children?

How can bioloos better fit children's hygiene needs?

Are children and their families, now, able to relate poor health and hygiene?

How comfortable are customers using the bioloos, are there issues/challenges with bioloos installed in the schools, does the school administration help in resolving (customer experience)?

Have bioloos helped in more attendance of school children, how is it demonstrated?

How have bioloos helped access to improved health and hygiene?

Has school dropout rate for girl children reduced; if so, how do bioloos enhance the security, dignity and health of girl students?

What is the impact of good health practices in reducing waterborne diseases?

Do children have a better chance of completing education?

Do schools have increased access to improved sanitation?

### Indicators

Number of people reporting correlation between sanitation and good health

Number of schools with accessible sanitation

Percentage of households with access to sanitation facility at home

Number of bioloos installed in schools

Number of WASH education sessions in schools

Number of low-income individuals reached by product/service

Number of low-income individuals who use the product/service on a daily basis

Percentage of children practicing effective sanitation and hygiene in school and at home

Percentage of users who understand/recall effective co-relation between health and sanitation-hygiene

School Attendance

Drop-out record

Number of female students reporting enhanced menstrual hygiene management

Number of waterborne diseases reported

Number of children completing education

Number of female students reporting enhanced dignity and security

Number of schools reporting increased access to improved sanitation

Percentage of customers who would recommend bioloos to other schools

## II. Understanding and Describing Impact

The Impact Management Project (IMP) is a forum for building global consensus on how to measure and manage impact. Through a series of consultations and convenings across the world, thousands of practitioners, IMP has developed, shared fundamentals on how to describe and understand through the lens of the five dimensions of impact. These five dimensions are: WHAT, WHO, HOW MUCH, CONTRIBUTION and RISK.

	tells us what outcomes the enterprise is contributing to and how important the outcomes are to stakeholders.
<b>What</b>	
	tells us which stakeholders are experiencing the outcome and how underserved they were prior to the enterprise's effect.
<b>Who</b>	
	tells us how many stakeholders experienced the outcome, what degree of change they experienced, and for how long they experienced the outcome.
<b>How Much</b>	
	tells us whether an enterprise's and/or investor's efforts resulted in outcomes that were likely better than what would have occurred otherwise.
<b>Contribution</b>	
	tells us the likelihood that impact will be different than expected.
<b>Risk</b>	

Business Call to Action integrates IMP's shared logic in the Impact Lab to help companies plan for impact measurement and management starting with assessing their outcomes considering the five dimensions described above.

Banka BioLoo is contributing to four distinct outcomes: **(1) Increasing access to improved sanitation in schools, (2) Supporting children in completing education, (3) Improving dignity and hygiene security of female students, and (4) Reducing child mortality.**

Banka BioLoo mapped each goal against the five dimensions of impact to understand better its significance and to be able to better manage and communicate its impact.

### Goal 1: Increasing access to improved sanitation in schools



#### □ What

What is the importance of your goal to your stakeholders?



#### ○ Who

How underserved are your stakeholders in relation to the SDGs?



#### + Contribution

How does the impact compare to what is likely to occur anyway?



#### ≡ How Much

How significant is the impact that occurs in the time period?



#### △ Risk

What is the risk that the impact is not achieved due to external or internal factors?



## Goal 2: Supporting children in completing education



### What

What is the importance of your goal to your stakeholders?



### Who

How underserved are your stakeholders in relation to the SDGs?



### + Contribution

How does the impact compare to what is likely to occur anyway?



### How Much

How significant is the impact that occurs in the time period?



Duration: Do the outcomes last for a long time?



Depth: Is your organization a deep driver of the outcome for these stakeholders?



### △ Risk

What is the risk that the impact is not achieved due to external or internal factors?



## Goal 3: Improving dignity and hygiene security of female students



### What

What is the importance of your goal to your stakeholders?



### Who

How underserved are your stakeholders in relation to the SDGs?



### + Contribution

How does the impact compare to what is likely to occur anyway?



### How Much

How significant is the impact that occurs in the time period?



Duration: Do the outcomes last for a long time?



Depth: Is your organization a deep driver of the outcome for these stakeholders?



### △ Risk

What is the risk that the impact is not achieved due to external or internal factors?



## Goal 4: Reducing child mortality



### What

What is the importance of your goal to your stakeholders?



### Who

How underserved are your stakeholders in relation to the SDGs?



### + Contribution

How does the impact compare to what is likely to occur anyway?



### How Much

How significant is the impact that occurs in the time period?



Duration: Do the outcomes last for a long time?



Depth: Is your organization a deep driver of the outcome for these stakeholders?



### △ Risk

What is the risk that the impact is not achieved due to external or internal factors?



### 3. Monitoring Performance

Banka BioLoo surveyed 57 girls and 57 boys across schools in Alwar district of Rajasthan, a state in northern India, over three months. The bioloos in these schools are installed within the corporate social responsibility (CSR) program of Havells India Limited, one of the largest electrical equipment companies in India. Havells has its largest plant in the district, and the company is committed to supporting the communities in the district by encouraging holistic education. Havells had been providing nutritious mid-day meals in over 700 schools in the district since 2011, and in 2015 they initiated the school sanitation program.

#### □ What

- Of the girls, **97%** use a bioloo every day, whereas the same applies to **91%** of boys
- Both, boys and girls ranked five out of five the importance of hygiene practices to their health
- On average, schools installed eight bioloos in their premises
- On average, bioloo was ranked **five out of five** by schools for all the criteria surveyed: usability, customer acceptance, after-installation support, contribution to school atmosphere and alternative to previous sanitation-hygiene solutions

#### ○ Who

- On average, one household has six members
- **93%** of girls and boys have access to sanitation and hygiene facilities at home
- In both the boys and girls school the female head mistress's highest level of education is middle school
- The average of boys and girls is 13 years old

#### ≡ How Much

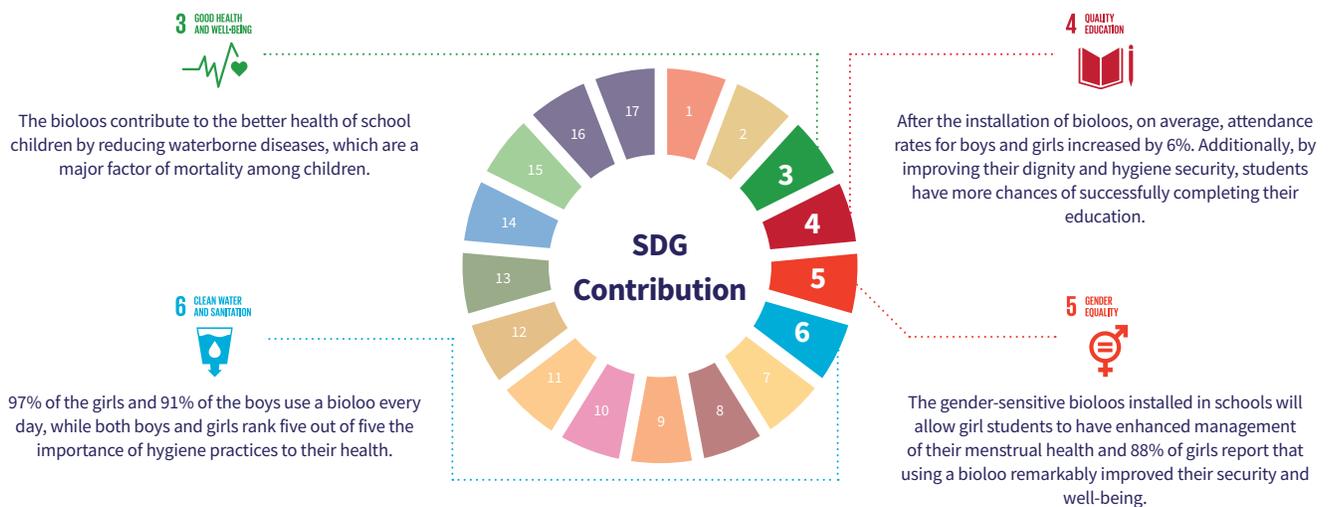
- After the installation of bioloos, on average, the student attendance rate for both boys and girls increased by **6%**
- **97%** of boys report that using a bioloo remarkably improved their security and well-being
- **88%** of girls report that using a bioloo remarkably improved their security and well-being

#### + Contribution

- In the first year after the installation of bioloos, there was no significant change in students' drop-out rates
- On average, the bioloo was ranked five out of five, both by **girls and boys** in terms of contribution to their security, dignity, health, willingness to go to school and overall well-being

#### △ Risk

- A significant part of Banka BioLoo's impact relies on behaviour change, which is a long-term process. Therefore, the social enterprise faces a relatively high endurance risk as the bioloos might not influence immediately children's education and require a longer period to determine the impact of outcome
- There is also evidence risk as children's education and health are affected by several factors, which might not be directly attributed to bioloo usage, raising concerns of the direct impact Banka BioLoo has across all stakeholders
- Low stakeholder participation risk should still be considered, as the effectiveness of bioloos also depends on schools, which are responsible for the implementation



## Lessons Learned

1. Even though tracking behaviour change is a long-term process, the bioloos installed by the company have already shown potential for impacting the education of children as attendance rates increased by 6% since bioloos were installed.
2. The bioloos have proved to be an extremely valuable service for students and schools, as both ranked five out of five for all the parameters surveyed on the bioloos.
3. Banka BioLoo is progressing in its mission of reducing recurrent waterborne diseases and contributing to girls' dignity as 88% of girls surveyed reported that using a bioloo remarkably improved their security and well-being.
4. The bioloos have served as a good medium for understanding the importance of sanitation, as well as relating to health. Additionally, the students act as ambassadors of health and hygiene at homes and in their communities.

## Way Forward / Next Steps

This impact measurement exercise reaffirmed the company's belief in the potential of the bioloo, serving not only as sanitation infrastructure, but also as a "talking point" for sanitation, hygiene and health – in schools, at homes and within communities. The responses of the students and school administration have further encouraged the Banka BioLoo team to continue this sanitation journey with more rigor.

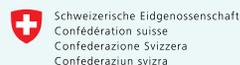
The evidence generated in this study with the support of the Impact Lab has paved the way for Banka BioLoo to undertake more surveys with other user groups such as household members, employees and other stakeholders.



Contact the Business Call to Action

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