



Droplets

Refresh. Renew. Recycle

PROBLEM STATEMENT

The service aims to reduce the wastage associated with drinking water across restaurants, hotels, Govt offices, meeting rooms and all the institutions where the drinking water is served in bottle form. The service aims to reduce the effort of waste management and the menace of excessive use of bottles for basic water. Bottles are delivered in a crate of 12 bottles to the restaurants, and empty bottles with crates are taken back. This is similar to reuse of glass bottles in soft drink business. The soft drink business moved to PET in the last decade, but due to sustainability and environmental concerns the returnable bottles are coming back.

The business is about how you can provide water from your bottling plant to restaurants, hotels etc. The glass bottles that you fill and send to a hotel will be returned to you and re-washed and used again to send water to places in order to reduce wastage and be eco friendly.

MARKET ANALYSIS

of "Bottled water" in India.

India's bottled water market size was valued at \$22.72 billion in 2022 and is expected to reach **\$36.21 billion** by 2030, at a CAGR of 6 per cent from 2023 to 2030, said a report by GreyViews Research released in January 2023

The average volume per person in the Bottled Water segment is expected to amount to **17.05L** in 2023.

India was the **12th largest consumer** of bottled water by value and the 14th biggest by volume in 2021, shows a new United Nations report released ahead of World Water Day

Bisleri, Kinley, and Aquafina are the most popular mineral water brands in India.

In India, bottled water is sold in four main types of SKUs – one-liter bottles, two-liter bottles, 500 milliliter bottles, 250 milliliter bottles, pouches, and barrels of 15-20 liters. Among the different SKUs, **one-liter bottles have acquired the largest market share of ~42%** in 2018, followed by 500 milliliter bottles and 250 milliliter bottles.

Apart from individual sales, market players in India have recently inclined towards **institutional sales** through partnerships with airlines, movie theatres, and hotels.

Source:
www.marketresearch.com
<https://economictimes.indiatimes.com/>
<https://www.livemint.com/>
<https://dcmsme.gov.in/>
<https://www.statista.com/>

MAEKET TRENDS

of "Bottled water" in India.

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The 'Clear' Success Of India's Bottled Water Market

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Himalayan

ENVIRONMENT

The Logical Indian Crew

Drinking Disparities! Billion-Dollar Bottled Water Industry Holds Back Countries From Sustainable Development

Writer: Laxmi Mohan Kumar
Others/World, 28 Mar 2023 6:15 PM
Editor : Ankita Singh | Creatives : Laxmi Mohan Kumar

Despite UN goals to make safe drinking water accessible to all, the bottled water industry has been holding hundreds of countries back from reaching the goal anytime soon. It has exploited groundwater levels, contributed to plastic pollution, and widened the disparity between billions of people who lack access to safe water and those who enjoy water as a luxury.

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Boon partners with ibis India to eradicate plastic waste through sustainable glass water bottles on hotel premises

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From Bisleri to Bilseri: How water became an FMCG product in India

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Number story: India chucks around 3,800 tonnes of PET plastic a day

More than 14 lakh tonnes of PET plastic, in which bottled water is typically packaged, is consumed annually in India. It works out to more than 3,800 tonnes on a single day.

SNEHA MAHALE | JUNE 11, 2023 / 04:27 PM IST

CONCERNS FOUND FROM SURVEYS



"Handling is risky"

"Glass is fragile and so it may easily be broken by either the guests or our staff, at the end of the day we have to bear the cost"

-Street 1522, Bangalore



"Might be too expensive"

"Customers are already reluctant to buy regular bottled water (in PET bottles) as we do charge slightly more for it. If the prices with glass do not differ much then it might work"

-17th Degree, Patna



"Scratches and Hygiene"

"Hygiene is a very important factor for water, the bottles absolutely must be cleaned properly. Also, scratches might come on the bottle during handling which may reduce its appeal in customers"

-The Cook Book Cafe, Patna



"We are part of a chain"

"We are bound by our restaurant chain's contracts and cannot really change any thing from here. The purchasing department decides on the brands and everything"

- Most Restaurants in Bangalore



"Transport and Storage"

"Glass is fragile and so it may easily be broken by either the guests or our staff, at the end of the day we have to bear the cost"

-Forestoparadise, Patna

CONCLUSIONS FROM THE MARKET

- 01** **High Growth Rate:** The Indian bottled water market has experienced significant growth in recent years. Rising health consciousness, increasing disposable incomes, and improved access to clean drinking water have contributed to the surge in demand for packaged water.
- 02** **Diverse Product Range:** The market offers a wide range of bottled water products to cater to different consumer preferences. These include mineral water, packaged drinking water, flavored water, and functional water infused with vitamins or electrolytes.
- 03** **Regional Variations:** The market exhibits regional variations in terms of consumer preferences and brand presence. Local and regional brands often dominate specific markets, while national and international brands compete in urban areas and major cities.
- 04** **Urban Concentration:** The demand for bottled water is primarily concentrated in urban areas, where access to clean drinking water may be a concern. Urbanization, changing lifestyles, and the convenience factor have driven the uptake of bottled water in cities and towns.
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06

Pricing and Affordability: Bottled water is available at various price points, catering to different consumer segments. While premium and imported brands exist, there is also a wide range of affordable options, making bottled water accessible to a larger population.

07

Packaging Innovations: Packaging plays a crucial role in the bottled water market. Brands utilize various packaging formats, including PET bottles, glass bottles, pouches, and tetra packs. Packaging innovations, such as lightweight and eco-friendly materials, are gaining traction to address sustainability concerns.

08

Branding and Marketing Strategies: Brands in the Indian bottled water market employ aggressive marketing and branding strategies to differentiate themselves. They emphasize factors like purity, health benefits, source authenticity, and endorsements by celebrities or health experts to build trust and attract consumers.

09

Distribution Channels: Bottled water is distributed through a wide network of channels, including retail outlets, supermarkets, convenience stores, online platforms, and direct delivery to institutions like hotels and offices. The distribution infrastructure plays a crucial role in ensuring product availability and reaching consumers across diverse geographies.

10

Competitive Landscape: The bottled water market in India is highly competitive, with both national and international players vying for market share. Key players include Bisleri, Aquafina, Kinley, Himalayan, and several regional brands. The market dynamics are characterized by constant product innovation, competitive pricing, and marketing strategies to gain a competitive edge.

11

Reusability and Recyclability: Glass bottles have the advantage of being reusable and easily recyclable. This resonates with the growing consumer awareness about sustainability and environmental concerns. The ability to reuse glass bottles in a closed-loop system, similar to the soft drink industry, aligns with the objective of reducing waste associated with drinking water.

SO IS THERE A NEED FOR OUR SERVICE?

Consumer Demand for Sustainable Solutions

In recent years, there has been an increased awareness and demand for sustainable alternatives among consumers in India. The service proposed addresses this demand by providing a solution that reduces plastic waste and promotes sustainable practices.

Environmental & waste Impact

The excessive use of plastic bottles has a negative impact on the environment, including pollution, resource depletion, and contribution to climate change. India faces substantial waste management challenges, particularly with plastic waste. Single-use plastic bottles contribute significantly to this waste.

Government Initiatives & CSIR

The Indian government has been taking steps to address plastic waste through various regulations and initiatives. The service you offer aligns with these efforts and can contribute to the government's objective of reducing plastic waste and promoting a circular economy.



WHAT PROBLEMS WILL THE SERVICE SOLVE?

1

REDUCING LANDFILL WASTE

Glass bottles can reduce landfill waste through reuse and recycling initiatives, as they can be repeatedly refilled and melted down for new bottles without losing quality. Their durability and inert nature make them an environmentally friendly choice, minimizing the release of harmful chemicals into the environment.

3

AESTHETICS AND PRESTIGE

Glass bottles are often associated with a premium and high-quality image. They offer an elegant and sophisticated appearance, making them suitable for upscale events, restaurants, and occasions where presentation matters.

2

SAFETY AND PURITY

Glass is a non-porous material that does not leach chemicals into the water, ensuring that the water remains pure and free from potential contaminants. Plastic bottles, on the other hand, can leach harmful substances like bisphenol A (BPA) and phthalates, which may pose health risks.

TYPES OF GLASS

As one of the primary concerns was related to glass's fragility, and the restaurant would have to bear the cost upon breakage, many were reluctant in wanting to adopt this model. Here are the possibilities of glass that can be used to resolve this issue

SODA LIME GLASS

- most common type of glass bottles produced
- preferred because very cheap
- work best with dry heat sterilization so autoclave process is corrosive to it

Cost : Approx Rs: 10/ 500ml

BOROSILICATE

- most durable
- 10 times more strength than soda-lime glass.
- superior water resistance
- resistant to chemicals
- scratch resistant
- easy to sterilize

Cost : Approx Rs: 300 / 500ml

TREATED SODA LIME GLASS

- soda lime bottles treated with sulfur
- more resistant to water and chemicals
- more resistant to breakage than soda lime bottles

Cost : Approx Rs: 20/ 500ml

Why can't other materials like Aluminum or Stainless Steel be used ?

They require much more energy to both manufacture and recycle. Further, Aluminum reacts with water, altering its taste. These also require more capital to manufacture as well and are a better resource for construction and machinery owing to their strength, hence they aren't suitable

RECYCLING



Almost all the restaurants we spoke to were concerned about bearing the cost if a bottle breaks or cracks and as a result were reluctant to switch.

To resolve this issue, the following can be implemented:

- As glass is easily recyclable, restaurants can be asked to return the damaged bottles and charged a small amount for the recycling process only
- Restaurants might also have glass waste from broken utensils and jars, which they can also give during glass collection as this glass can easily be recycled as well. This can be incentivised to promote recycling of glass

THE PROCESS

MANUFACTURING
of bottles

STERILIZATION
of bottles

- 1. Cleaning
- 2. Rinsing
- 3. Sanitising
- 4. Drying

RECYCLING

WATER PURIFICATION

- 1. Sand filter
- 2. Activated carbon filter
- 3. Ultraviolet disinfection
- 4. Ultra filtration
- 5. Reverse Osmosis
- 6. Ozonization.

PACKAGING

TRANSPORTATION
to restaurants and hotels

COLLECTION
of empty bottles

if cracked/broken

OUR RECOMMENDATIONS

1

GREEN PARTNER

These would be borosilicate glass bottles for premium restaurants and hotels, where money is not much of a concern for the customers, but quality is of utmost importance.

2

GREEN BUDDY

These would be treated soda lime glass bottles for regular restaurants and hotels, where the customers are very price sensitive, so the cost would be approximately as that of PET bottled water

FINANCIAL ANALYSIS

FINANCIAL ASPECT

- Fixed Capital

Sl.No	Description	Amount (in Rs)
1.	Land and building	58,00,000/-
2.	Plant and machinery	39,53,070/-
3.	Other fixed assets	7,50,000/-
	Total	1,05,03,070/-

- Working Capital (per annum)

Working capital per month

Sl.No	Description	Amount (in Rs)
1.	Raw material	15,00,000/-
2.	Salaries & wages	1,03,617/-
3.	Utilities	70,000/-
4.	Other contingent expenses	3,88,370/-
	Total	20,61,987/-
		Say 20,62,000/-

Total Capital Investment

Sl.No	Description	Amount (in Rs)
1.	Fixed assets	1,05,03,070/-
2.	Working capital (for 3 months)	61,86,000/-
	Total	1,66,89,070/-
		Say 1,67,00,000/-

FINANCIAL ANALYSIS

a) Cost of Production (per annum)

Sl.No	Description	Amount (in Rs)
1.	Working capital (for 1 year)	2,47,44,000/-
2.	Depreciation on building @ 5% p.a.	2,60,000/-
3.	Depreciation on plant and machinery @ 10%	3,59,370/-
4.	Depreciation on furniture @ 20%	1,60,000/-
5.	Interest in TCI @ 13%	21,71,000/-
	Total	2,76,94,370/-

b) Turnover (per annum)

Sl.No	Description	Amount (in Rs)
1.	By selling 40 lakh liters of water @ Rs. 10 /- bottle	4,00,00,000/-

Cost of producing 1-liter bottled drinking water

Cap cost	Rs.0.50
Bottle Cost	Rs.10.50-Rs.12.50
Treatment Cost	Rs.0.25-0.50
Label cost	Rs.0.25-0.50
Carton Cost	Rs.1.00
Transportation Cost	Rs.0.25-0.50
Others	Rs.0.50
Recycling of bottle	Rs. 1.00
The total cost of just water	Rs 3.50
Total Cost (excluding labor, marketing and tax)	Rs.-14.00-15.00 per bottle
Selling cost by the manufacturer	Rs.25/- per bottle
Selling price for every liter of water	Rs 10

c) Net Profit (per annum)

Sl.No	Description	Amount (in Rs)
1.	Profit = Turnover - Cost of production ie; 4,00,00,000 - 2,76,94,370	1,23,05,630/-

d) Net Profit Ratio

Sl.No	Description	Value (in %)
1.	Net Profit ratio = Profit x 100 / Turnover ie; 1,23,05,630 x 100 / 4,00,00,000	30.76

e) Rate of Return

Sl.No	Description	Value (in %)
1.	Rate of return = Profit x 100 / Total capital investment ie; 1,23,05,630 x 100 / 1,67,00,000	73.68

f) Fixed Cost

Sl.No	Description	Amount (in Rs)
1.	Depreciation on building @ 5% p.a.	2,60,000/-
2.	Depreciation on plant and machinery @10%	3,59,370/-
3.	Depreciation on furniture @20%	1,60,000/-
4.	40% of salary and wages	4,97,361/-
5.	40% utilities and other expenses	22,00,176/-
6.	Total interest	21,71,000/-
7.	Tax and insurance	60,000/-
	Total	57,07,907/-

Break-even Point

Sl.No	Description	Value (in %)
1.	Break-Even point = Fixed cost x 100 / Fixed cost + Profit ie; 57,07,907 x 100 / 57,07,907+ 1,23,05,630 = 57,07,90,700 / 1,00,13,537/-	31.68

THANK YOU!



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