



Centre for Social Consulting India

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Ensuring accessible safe drinking water across the underprivileged groups of people at low cost.

The Problem

Arsenic Poisoning:

- **137 million** people in more than 70 countries are affected by **arsenic poisoning from drinking water** and much more exposed.
- **Prolong intake** can lead to: skin, kidney and liver **cancer and death**.

Bacteria Contamination:

- **1.5 million** children die alone from **diarrhea** every year
- **73 million** working days are **lost** due to waterborne disease each year

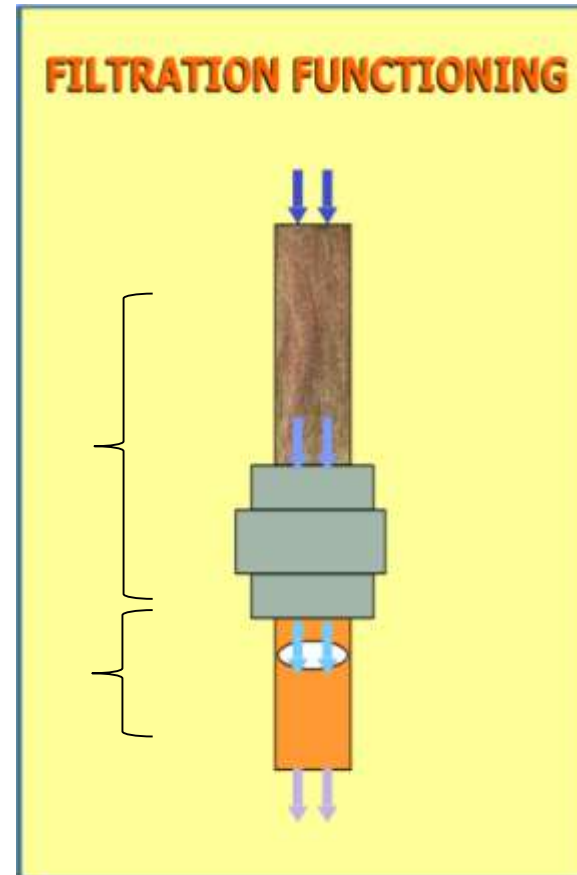


Portable Purifier for Hand-pumps (Prototype-I)

- At Inception, CSC India Team has designed “I” shape purifier for hand-pumps. There are absorbent beds that removes the 99% arsenic from the water and kill the bacteria instantly.

Adsorbent Bed
(Iron coated sand, activated carbon and activated earth)

Disinfectant
(Chlorine tablet)



Portable Purifier for Hand-pumps

(Prototype-2)

Post Pilot Changes

- Product design has been changed due following reason:
 - Uncomfortable to keep the bucket under the attached purifier (P-1)
 - Continuous blockage while taking water from the hand-pumps



Portable Purifier for Hand-pumps (Prototype-3)

Manual Pressure based Arsenic Purifier

How does it work?

- Work on Manual Pressure
- No electricity required



Results:

- Brings contamination level **under permissible limit i.e. 0.01ppm**
- **Removes 99.99% Bacteria and Virus.**
- Removes Turbidity, Color, Odor & TDS



Sophisticated Analytical
Instrument Facility
(RSIC)

Indian Institute of Technology
Powai, Mumbai 400076

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IIT Bombay

Ref: -ICPAES-235
Date: 08/01/2016

Analytical report of the samples submitted by **Mr. Jiten Bhaskar, Centre for Social Consulting India Pvt. Ltd., Deonar, Mumbai-400088**, using Inductively Coupled Plasma Atomic Emission Spectroscopy.

Sample	As
	ppm
DAY-2/30/12/15-AS-SAMPLE-1-UNTEATED	0.14
25 ML-ARSENIC SAMPLE-UNTREATED	0.159
DAY-2/30/12/15-WATER SAMPLE-AS-1	ND
DAY-2-30/12/15-AS-SAMPLE-2-TREATED WATER	ND
DAY-2/30-12-15-AS-SAMPLE-2-UNTREATED SAMPLE-2	0.145
AS-SAMPLE TREATED WATER -1	ND
AS SAMPLE UNTREATED	0.161
25 ML-AS- SAMPLE-TWS-2	ND

ND means less than 0.01 ppm

Note: Content of this report is meant for your information only and should not be quoted as certificate to third party for advertisement, evidence or litigation.

To,
Mr. Jiten Bhaskar,
Director,
Centre for Social Consulting India Pvt. Ltd.
Deonar,
Mumbai-400088

- Arsenic Testing Result of the portable purifier.
- This is the IIT Bombay lab testing report.
- Treated water results are “ND” that means less than 0.01 ppm as per standard of WHO.

Market Opportunity

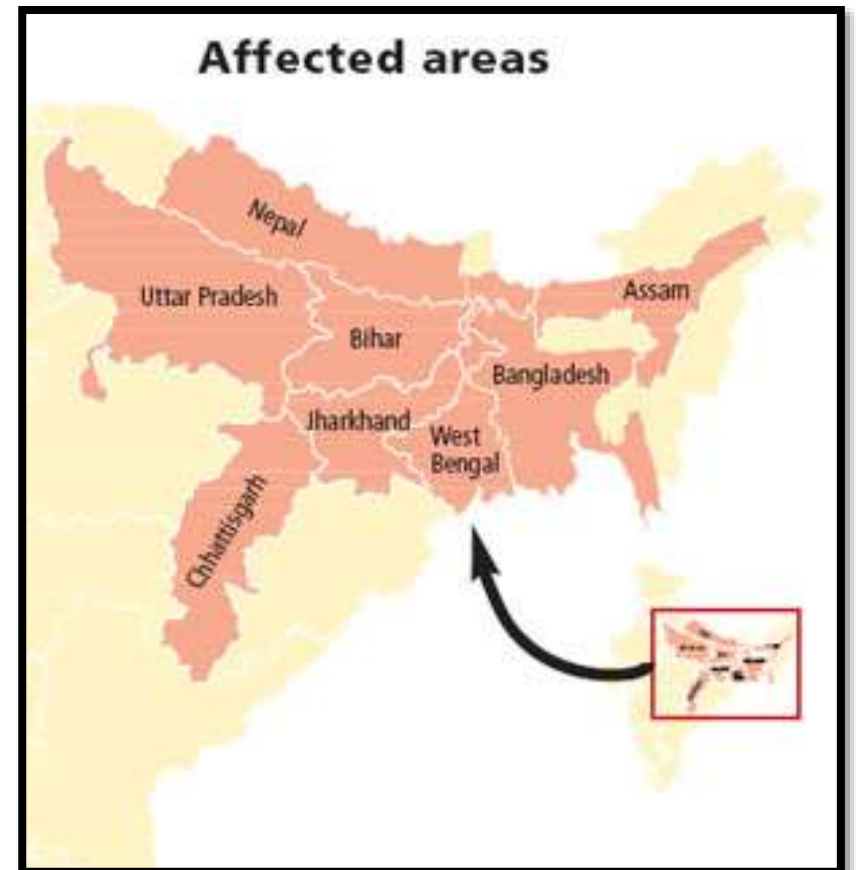
Total Arsenic Affected States: **Six**

(West Bengal, Bihar, Uttar Pradesh, Jharkhand, Chhattisgarh, Assam)

- Total Rural HHs in the above states : **6,15,78,474**
- **Our target is 307,892 HHs** (0.5% of total) i.e., total addressable market size - **INR 30.79 cr.**

In 5 years, we aim to target:

- 1.5 lakh rural HHs
- Total revenue 11.68 cr. (\$1.94 m)



Competition

Rural Options



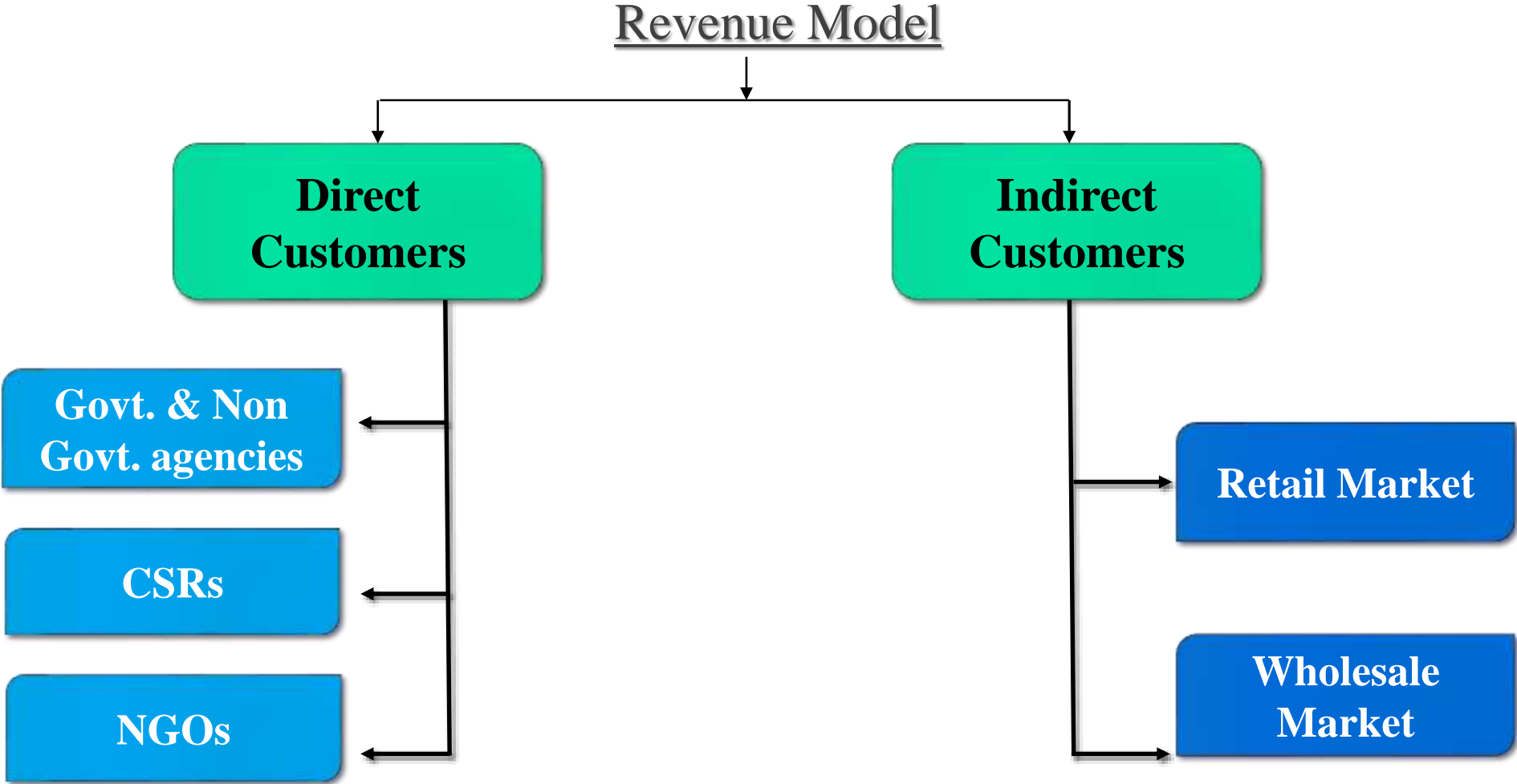
Urban Options



Competitive Advantage:

- Treats Arsenic, Bacteria, Virus, color, odor, etc.
- No Electricity is required.
- Portable, high flow rate
- Low Cost (INR 1,000 – 1,500)

Revenue Model



Financials

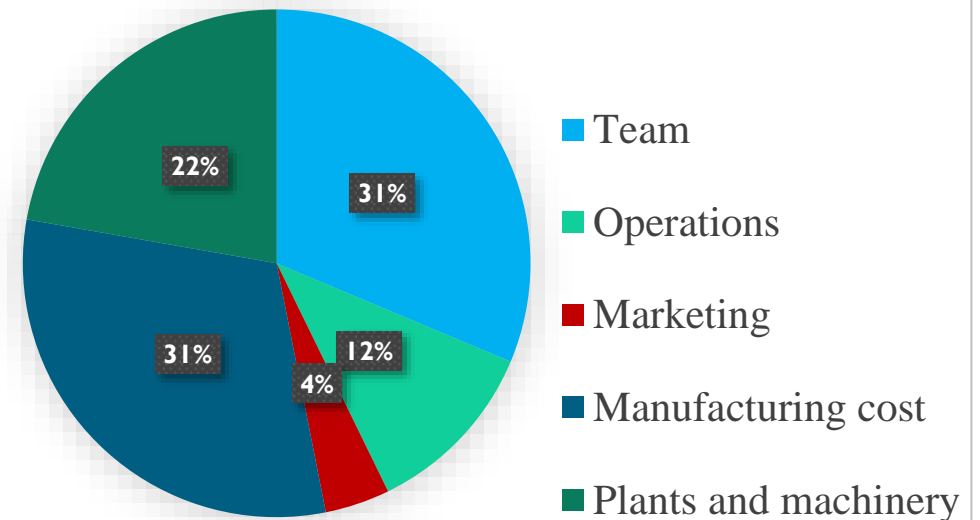
No ofYear		Y-1	Y-2	Y-3	Y-4	Y-5
Total Production Capacity	year wise	10,000	20,000	30,000	40,000	50,000
Filter Bed		10,000	20,000	30,000	40,000	50,000
Total Revenue	INR	1,61,49,918	3,53,11,846	5,84,18,685	8,53,41,632	11,68,78,473
Total Expense	INR	1,41,70,000	1,68,41,000	2,74,45,600	3,05,47,641	3,87,12,417

We will get break even point in **18 months**.

Funding requirement for next 1 year:

INR 1,41,70,000

Financial Bifurcation



Team



MSE, TISS (2014), 3 Yrs.
Exp. in Development &
Social Marketing



MSW, TISS (2010), 5 Yrs.
Exp. in Development,
Social Research and
Product Designing.



MSW, TISS (2014), 1
Yr. Exp. In Operations
& Research



PhD. in Che. Engg. ICT Wadala,
having expertise in industrial
water management, and evaluated
many corporate research projects

Thank you

Financials

No of Year	Y-1	Y-2	Y-3	Y-4	Y-5
Total Production Capacity year wise	10,000	20,000	30,000	40,000	50,000
Filter Bed	10,000	20,000	30,000	40,000	50,000

Profit and Loss Statement						
		Y-1	Y-2	Y-3	Y-4	Y-5
Purifier	INR	11,304,943	24,718,292	40,893,079	59,739,142	81,814,931
Purifier filter bed	INR	4,844,975	10,593,554	17,525,605	25,602,490	35,063,542
Total Revenue	INR	16,149,918	35,311,846	58,418,685	85,341,632	116,878,473
HR Cost	INR	4,440,000	4,884,000	7,232,400	8,255,640	9,081,204
Operational Expenses	INR	1,620,000	1,782,000	1,960,200	2,156,220	2,371,842
Website and brand building Cost	INR	585,000	550,000	665,500	885,781	1,296,871
Raw Matarials for Purifier	INR	2,420,000	5,324,000	7,986,000	10,648,000	13,310,000
Raw Matarials for filter bed	INR	1,955,000	4,301,000	6,451,500	8,602,000	10,752,500
Infrastructure and mechnery	INR	3,150,000	-	3,150,000	-	1,900,000
Total Operational Expenses	INR	14,170,000	16,841,000	27,445,600	30,547,641	38,712,417

Investment

		Y-1	Y-2	Y-3	Y-4	Y-5
Earning Before Interest, Depreciation, Taxes and Amortization (EBITDA)	INR	1,979,918	18,470,846	30,973,085	54,793,991	78,166,056
Depreciation	INR	452,500	386,625	782,931	669,112	857,003
Amortization	INR	200,800	210,800	221,800	233,900	247,210
Earning Before Interest and Taxes (EBIT)	INR	1,326,618	17,873,421	29,968,353	53,890,980	77,061,843
Interest Expense	INR	1,630,200	1,373,591	1,086,188	764,297	403,780
Earning Before Taxes (EBT)	INR	(303,582)	16,499,830	28,882,165	53,126,682	76,658,063
Tax		-	5,353,370	9,370,819	17,236,952	24,871,709
Earning After Taxes (EAT)	INR	(303,582)	11,146,460	19,511,347	35,889,730	51,786,355
Deffered Tax Liability	INR	(169,900)	(112,671)	(240,032)	(151,557)	(181,414)
Profit (loss) carried to Balance Sheet	INR	(133,682)	11,259,131	19,751,379	36,041,287	51,967,769

Market Opportunity

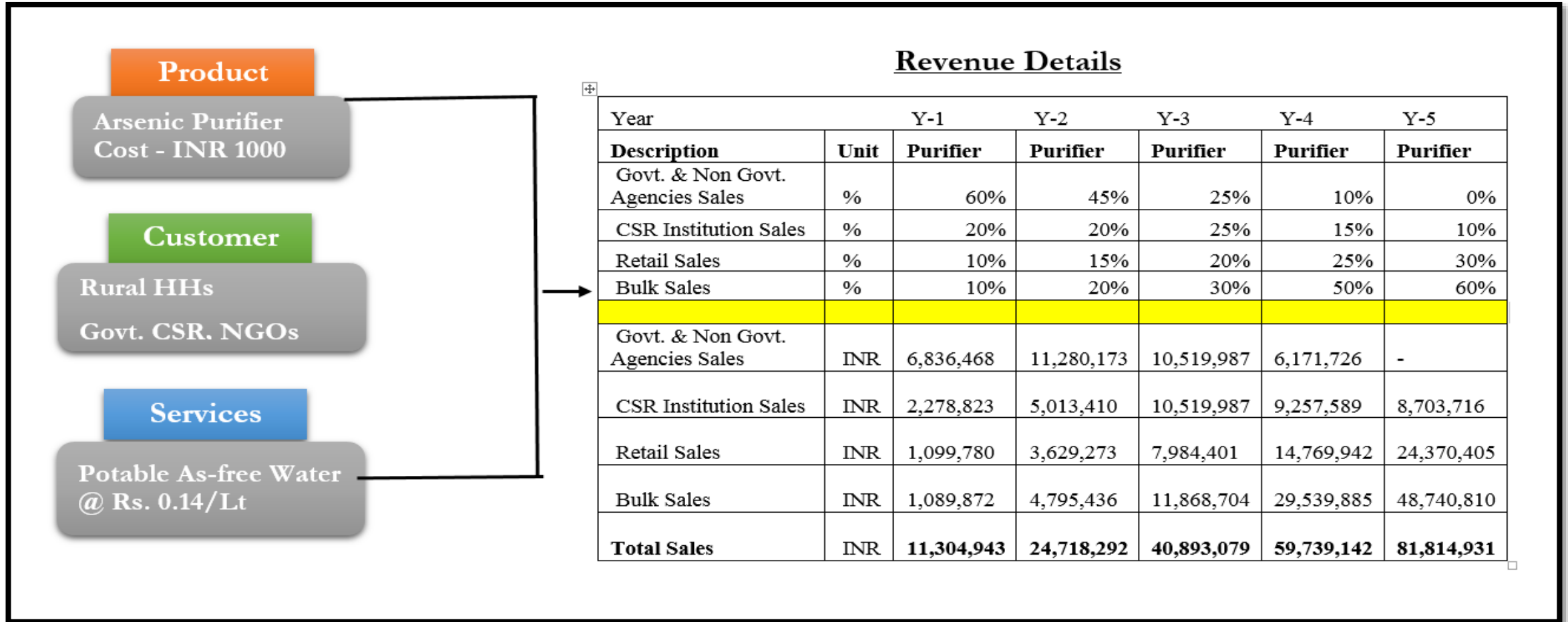
#	State	Rural Population	Total no of HHs in Rural Areas	Urban Population	Arsenic Level (ppm)
1	Uttar Pradesh	131,658,339	26,331,668	34,539,582	>0.05
2	West Bengal	57,748,946	11,549,789	22,427,251	0.05-3.20
3	Bihar	74,316,709	14,863,342	8,681,800	0.05-1.80
4	Jharkhand	20,952,088	4,190,418	5,993,741	0.05 -2.0
5	Assam	23,216,288	4,643,258	3,439,240	>0.05
	Total	307,892,370	61,578,474	75,081,614	

Total Number of rural households in four state is approx. 61 lakh however, if we capture 0.5% of total rural market. It approximately covers 307,892 HHs.

Total market size shall be INR 307,892,370.00 (\$ 5.1 million) however we have planned to sell 10,000 purifiers and filter bed in first year, and total turnover would be INR 16,149,918 (\$ 0.27 million) in first year.

In the next five year, we shall cover 1.5 lakh rural HHs, and total revenue turns into INR 11,68,78,473.00 (\$1.94 M)

Revenue Model



Advisors



Prof. Satyajit Majumdar Chairperson of Centre for Social Entrepreneurship, SMLS, TISS, Mumbai. He has expertise in teaching Entrepreneurship & Strategy Management. He has walked the journey with us from the day one as an advisor and played strategy thinking role in the organization. He was also engaged with Coal India Ltd. Indian Statistical Institute, Confederation of Indian Industry (CII), UNICIEF.

Prof. Aniruddha B. Pandit, UGC Scientist C (Professor Grade) Chemical Engineering Department, Institute of Chemical Technology, Mumbai. He is an Advisory Board and provide technical assistance to promote the technology innovation. He developed many novel design gas liquid contractors, new impeller designs and proposed hydrodynamic cavitation as an alternative means for physico-chemical and biological transformation.



Dr. Bhaskar Mitra, Associate Director at Tata Cornel agriculture and Nutrition Initiative, TISS, Mumbai. He is in advisory board and provides his assistance in designing our programme models. He was also engaged with Sir Dorabji Tata Trust and Allied Trust (SDTT), International Centre for Community Forestry (ICCF) , IIFM Bhopal and research scientist at Peoples' Sciences Institute (PSI), Dehra Doon.