

**PPI Project: 4<sup>th</sup> Quarter Progress (June – Aug, 2019)**  
**Cum**  
**1<sup>st</sup> Year Project Completion Report (Sept'18-Aug'19)**

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**“Addressing drinking water quality & health issues through sustainable bio filter technology in rural villages of Morni hills area, Panchkula (Haryana)”**

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**Submitted to:**

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### **A. PPI project : Brief summary of activities implemented till 3<sup>rd</sup> quarter ( Sept'18-May'19) of 1<sup>st</sup> year**

Key aim on ongoing PPI project is to disseminate bio-sand filter technology in water quality affected village of Morni hills area of Panchkula district (Haryana). From Sept'18 onwards, SATHI started implementation of PPI project activities. Total duration of project is 03 years (Sept 2018-Aug 2021). Brief summary of activities implemented by SATHI till 3<sup>rd</sup> quarter (Sept'18- May'19) of 1<sup>st</sup> year of project is elaborate as follows:-

- **Village level meetings:**

First major activity of PPI project was community mobilization & sensitization. During Sept'18 month, SATHI organized village meetings in 1<sup>st</sup> year project villages ( *Raji- Tikkari , Late Batoli, Kainan - Dhaman, Bhudi & Chamla* ). During meeting SATHI educated the community about Bio-sand filters technology, removal of biological - physical contamination from water through BSF, low operation & maintenance cost etc, beneficiaries selection criteria, 20 % cash contribution, educational material; and regular follow up visit of village etc.

- **Awareness cum Training camp**

After village meetings, SATHI conducted “Awareness cum training camps” in 05 project villages of 1<sup>st</sup> Year. Key objective of the same was to educate & practically train project community about Bio-sand filter technology. SATHI developed a plastic prototype of filter & through project community was educated on Bio-sand Filter parts, (Diffuser Plate, Filtration Sand, Separation - Drainage Gravel, Lid, Outlet Tube etc ) . Project beneficiaries were also informed /instructed in details about development, installation and operation & maintenances of filters.

- **Beneficiaries selection & Collection of 20% cash contribution**

Under PPI project, SATHI proposed to develop 55 Bio Sand Water Filters during 1<sup>st</sup> year (Sept'18-Aug'19). During Sept-Oct 18, SATHI team with consultation of local SHG & PRI finalized 1<sup>st</sup> year beneficiaries of PPI project. After final selection, respective PPI project beneficiaries started collection of 20 % cash contribution towards development & installation of filters. Till end of 3<sup>rd</sup> quarter all 55 beneficiaries deposited their cash contribution to SATHI.

- **Filter development & installation**

After final selection of beneficiaries & collection of 20 % cash contribution, SATHI initiated construction process of concrete filter. Due to lack of transportation facilities in project villages, SATHI initiated filter construction at Thakurdwara campus. After construction and testing, filters were transported to project village & installed by SATHI at respective beneficiary's households. Till end of 3<sup>rd</sup> quarter, SATHI distributed total 55 Nos. filters to beneficiaries in 05 project villages (11 no. - 1<sup>st</sup> quarter, 28 no. - 2<sup>nd</sup> quarter & 16 no. - 3<sup>rd</sup> quarter).

- **IEC Material distribution & User information**

After filter installation, SATHI distributed education material (wall poster, stickers) to 55 filter beneficiaries of 1<sup>st</sup> year. In addition to this Beneficiaries are also trained on operation & maintenance of filters. In context of IEC material, details regarding bio-sand filter, its effectiveness, precautions for use of filters, technical aspects of filters etc are highlighted in wall poster. In addition, name of funding agency, implementing agency, filter number, year, technical assistance & contact etc are clearly mentioned on stickers & stick on outer wall of installed filter.

- **Follow up visits**

In addition to filter installation & user education, SATHI team is also carrying out regular follow with beneficiary families. Till end of 3<sup>rd</sup> quarter, SATHI conducted three follow up visits. On dated 19<sup>th</sup>-20<sup>th</sup> Nov'18, SATHI team carried out 1<sup>st</sup> follow up visit of 11 nos. beneficiaries of 1<sup>st</sup> quarter. Likewise, from dated 12<sup>th</sup>-14<sup>th</sup> Jan, 2019 SATHI team carried out 2<sup>nd</sup> follow up visit to 11 nos. beneficiaries of 1<sup>st</sup> quarter. On dated 20<sup>th</sup> - 21<sup>st</sup> March 2019 SATHI team carried another follow up visit to 28 nos. beneficiaries of 2<sup>nd</sup> quarter.

### **B. PPI project : Activities implemented during 4<sup>th</sup> quarter ( Jan-Aug'19 ) of 1<sup>st</sup> year**

Under PPI project, during 1<sup>st</sup> year (Sept'18- Aug' 19) SATHI proposed to develop & distribute total 55 Nos. Bio-sand Filters in 05 villages of project region. Besides filter installation, SATHI organized awareness camps on user education with beneficiaries & conduct regular follow up at village level . **Till end of 3<sup>rd</sup> quarter of 1<sup>st</sup> year of project, SATHI distributed total 55 Nos. filters to beneficiaries in 05 project villages. Out of total 55, 11 families were covered in 1<sup>st</sup> quarter (Sept-Nov'18); 28 during 2<sup>nd</sup> quarter (Dec'18-Feb'19) & 16 during 3<sup>rd</sup> quarter (Mar - May'19).** All beneficiaries & their family members have been trained by SATHI in filter use, operation & maintenance. If some technical problems regarding filter use persist, it is rectified by SATHI team.

**During 4<sup>th</sup> quarter (Jun-Aug' 19) of 1<sup>st</sup> year of PPI project, following activities were accomplished by SATHI:-**

- (i) **Village level meetings :**

During 4<sup>th</sup> quarter (Jun-Aug'19), SATHI tem conducted village level meetings in all 1<sup>st</sup> year villages of PPI project (Haryana). Key objective of the same was to encourage the project community for regular use of filters. Community has been informed that during lean period (May-June) most families fetch water from far distant open –contaminated water sources. With the help of bio-sand filter, they can 100 % purify fetched water and thus minimize risk of water borne illness. During village meetings, community is also encouraged to maintain personal hygiene & sanitation.

## (ii) Follow-up visit

During first week of June and August 2019), SATHI team carried out follow up visit to all 55 beneficiaries of 1<sup>st</sup> year of PPI project. Overall, it was 4<sup>th</sup> follow up visit during 1<sup>st</sup> year of PPI project implementation. Data of follow up visit tabulated in Multi Follow-Up Visit Monitoring Form, which is as follows:-

**Bio-sand Filter  
Multi Follow - Up Visit Monitoring Form**

✓ If acceptable  
X If unacceptable

Date of Follow-Up: 2<sup>nd</sup> -7<sup>th</sup> August 2019

Filter Number	HH/Beneficiary Name	Flow rate (ml/min)	Flow Rate less than 400 ml/min	Diffuser OK	Surface of sand is flat & level	Standing water depth 4 to 6 cm	Water poured into filter is not too dirty	Filter used every day	Filter & outlet spout clean	Safe storage
1	Virender	410 ml/m	✓	✓	✓	✓	✓	✓	✓	✓
2	Ashwani	400 ml/m	✓	✓	✓	✓	✓	✓	X	✓
3	Baljeet	420 ml/m	X	✓	✓	✓	✓	✓	X	✓
4	Paras Ram	400 ml/m	✓	✓	✓	X	✓	✓	X	✓
5	Ravinder	400 ml/m	✓	✓	✓	✓	✓	✓	✓	✓
6	Kripal	400 ml/m	✓	✓	X	✓	✓	✓	✓	✓
7	Kaushal Kumar	400 ml/m	✓	✓	✓	✓	✓	✓	✓	✓
8	Ajeet Kumar	280 ml/m	X	✓	✓	X	✓	X	✓	X
9	Suresh Pal	410 ml/m	✓	✓	✓	✓	✓	✓	✓	✓
10	Naresh	420 ml/m	✓	✓	✓	✓	✓	✓	✓	✓
11	Joginder	400 ml/m	✓	✓	✓	✓	✓	✓	✓	X
12	Purushotam Singh	350 ml/m	✓	✓	✓	✓	X	✓	✓	X
13	Ved Prakash	400 ml/m	✓	✓	✓	✓	✓	✓	X	✓
14	Rattan Singh	250 ml/m	X	✓	X	X	✓	X	✓	X
15	Prem Singh	410 ml/m	✓	✓	✓	✓	✓	✓	✓	✓
16	Krishan Singh	400 ml/m	✓	✓	✓	✓	✓	✓	✓	X
17	Lakshmi	390 ml/m	X	✓	✓	✓	✓	✓	✓	✓
18	Tek Singh	430 ml/m	✓	✓	✓	✓	✓	✓	✓	✓
19	Om Prakash	200 ml/m	X	✓	X	X	✓	X	X	X
20	Bharat Singh	390 ml/m	✓	✓	X	X	✓	X	✓	✓
21	Khem Raj	300 ml/m	X	✓	X	X	✓	X	X	X
22	Tota Ram	260 ml/m	X	✓	X	X	✓	X	✓	X
23	Ashok Kumar	410 ml/m	✓	✓	✓	✓	✓	✓	✓	✓
24	Khem Raj	390 ml/m	✓	✓	✓	✓	✓	✓	✓	✓
25	Jagat Ram	200 ml/m	X	✓	X	X	✓	X	X	X

26	Madan Pal	400 ml/m	√	√	√	√	√	√	√	√
27	Jai Krishan	410 ml/m	√	√	√	√	√	√	√	√
28	Rajnish	395ml/m	√	√	√	√	√	√	√	√
29	Pawan Kumar	400 ml/m	√	√	√	√	√	√	√	√
30	Som Nath	410 ml/m	X	√	√	√	X	√	√	√
31	Hoshiyar Singh	400 ml/m	√	√	√	√	√	√	√	√
32	Mukesh Sharma	420 ml/m	√	√	√	√	√	√	√	√
33	Dharam Pal	430 ml/m	√	√	√	√	√	√	√	√
34	Mahender Pal	370 ml/m	X	√	√	√	√	√	√	√
35	Om Prakash	420 ml/m	√	√	√	√	√	√	√	√
36	Rikhi Ram	400 ml/m	√	√	√	√	√	√	√	√
37	Man Mohan	410 ml/m	√	√	√	√	√	√	√	√
38	Tika Singh	400 ml/m	√	√	√	√	√	√	√	√
39	Lekh Raj	400 ml/m	√	√	√	√	√	√	√	√
40	K.K.Kaushaik	430 ml/m	√	√	√	√	√	√	√	√
41	Prem Dutt	380 ml/m	X	√	√	√	√	√	X	√
42	Babu Ram	400 ml/m	√	√	√	√	√	√	√	√
43	Rampal	450 ml/m	√	√	√	√	√	√	√	√
44	Mahender Pal	400 ml/m	√	√	X	√	√	√	√	√
45	Sanjay Kaushik	420 ml/m	√	√	√	√	√	√	√	√
46	Krishan Kaushik	400 ml/m	√	√	√	√	√	√	X	√
47	Rakesh Kumar	430 ml/m	√	√	√	√	√	√	√	√
48	Mukesh Kumar	400 ml/m	√	√	√	√	√	√	√	√
49	Dharam Pal	390 ml/m	√	√	X	√	√	√	√	√
50	Vandana Kaushik	400 ml/m	√	√	√	√	√	√	√	√
51	Ramesh Singh	370 ml/m	X	√	X	√	√	√	√	√
52	Som Dutt	410 ml/m	√	√	√	√	√	√	√	√
53	Shri Krishan	400 ml/m	√	√	√	√	√	√	√	√
54	Nek Ram	430 ml/m	√	√	√	√	√	√	√	√
55	Jagdish	385 ml/m	X	√	√	√	√	X	X	√
TOTAL √			42	55	45	47	53	47	45	46
TOTAL X			13	0	10	8	2	8	10	9

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In 2<sup>nd</sup> to 7<sup>th</sup> Aug 2019 SATHI team carried out another follow up visit to all 55 beneficiaries of 1<sup>st</sup> year of PPI project (Haryana) . Overall it was 4<sup>th</sup> follow up visit conducted during 1st year of PPI project (Haryana). **During follow up visit, it was observed by SATHI team that out of 55 families ( which were covered under follow up visit), 47 families are using filter regularly. All these 47 families are very satisfied with quality & taste of water & majority of them are using filtered water for drinking as well as for cooking purposes. Some families have also reported about reduction in water borne illness & general health improvement after regular use of bio-sand filter water.**

**During follow up visits, it was found that 08 families/ beneficiaries were not using the filter. SATHI team informed these 08 families about health benefit of safe water & motivated them to use filter regularly. In addition to user follow-up, SATHI technical team also reviewed physical status of each concrete filter and found minor technical issues (lower flow rate of water, sand level not flat etc) in 5-6 filters. These minor issues were rectified by SATHI team at spot. Over all, about 85-86 % families are using filter regularly.**

### C. Concluding Remark

Major objective of ongoing PPI project is to address poor drinking water quality issue in some remote pockets of Morni hills area of Panchkula district of Haryana state. Total duration of project is 03 years. During 1<sup>st</sup> Year of project ( Sept'18-Aug'19), SATHI firstly conducted community mobilization activities & thereafter developed & installed 55 no. concrete bio-sand filters in 05 villages of Morni region. Users are also trained on O&M of filters.

To analysis the effectiveness of program, SATHI also conducted regular follow up with user. During 1<sup>st</sup> year of project SATHI conducted total 04 follow up visits of project villages. On the basis of user follow up data, about 85-86 % (47 out of 55) of PPI beneficiaries are using filter regularly. Remaining families are also educated & motivated to use filter regularly. During upcoming year (2nd year of project), SATHI will cover other water quality affected villages of Morni region (Haryana) under bio-sand filter programme.

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