APRIL 2019

PHASE ONE: UTTAR PRADESH

Toilet and Hygiene Project for the girl child - Supported by Google

www.toilets-sewausa.org
Need Analysis: Phase one

We initiated our project in Uttar Pradesh in the year 2016. Since then, we have built over 140 toilets in four Districts of Uttar Pradesh - Mirzapur, Varanasi, Agra, and Lucknow.

We have felt a significant change in the communities where we have built toilets over the past two years. The number of enrolment in schools has increased, the percentage of communicable diseases has reduced, we can observe a healthy and hygienic environment in the villages and much more.

This year, we have identified 13 new schools/colleges in need of sanitation facilities. (See Table 1) The schools/colleges are selected based on the Sewa criteria for identification of schools. In the second week of March, our team visited the schools to conduct the need analysis.

Picture 1: Jwala Prasad Inter college, Bangla Devriya, Chunar - Mirzapur District, Uttar Pradesh
Table 1: List of schools/colleges in Mirzapur District with the number of beneficiaries and the bio-toilet installation progress status

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>School Name</th>
<th>Address</th>
<th>No. of Boys</th>
<th>No. of Girls</th>
<th>Total</th>
<th>No. of Toilets</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Aditi Convent School</td>
<td>Babhani, Adalahat Mirzapur (28 kms from Varanasi)</td>
<td>101</td>
<td>49</td>
<td>150</td>
<td>02</td>
</tr>
<tr>
<td>02</td>
<td>Dukhairam Singh Inter Collage</td>
<td>Udit Nagar, Chunar Mirzapur (35 kms from Varanasi)</td>
<td>485</td>
<td>454</td>
<td>939</td>
<td>02</td>
</tr>
<tr>
<td>03</td>
<td>Jwala Prasad Inter College</td>
<td>Bangla Devriya Chunar Mirzapur (22 kms from Varanasi)</td>
<td>460</td>
<td>685</td>
<td>1145</td>
<td>02</td>
</tr>
<tr>
<td>04</td>
<td>Litil Star Public School</td>
<td>Sultanpur, Adalpura, Mirzapur (25 kms from Varanasi)</td>
<td>175</td>
<td>139</td>
<td>314</td>
<td>02</td>
</tr>
<tr>
<td>05</td>
<td>Pt. Jwala Prasad Inter Collage</td>
<td>Khoradih, Rajgarh, Mirzapur (60 kms from Varanasi)</td>
<td>339</td>
<td>343</td>
<td>682</td>
<td>02</td>
</tr>
<tr>
<td>06</td>
<td>Ravi Gyan Deep Academy</td>
<td>Rajupur, Narayanpur, Mirzapur (15 kms from Varanasi)</td>
<td>126</td>
<td>114</td>
<td>240</td>
<td>02</td>
</tr>
<tr>
<td>07</td>
<td>Shree Devaki U.M.V.</td>
<td>Karahat, Chunar, Mirzapur (18 kms from Varanasi)</td>
<td>132</td>
<td>114</td>
<td>246</td>
<td>02</td>
</tr>
<tr>
<td>08</td>
<td>Shree Parshuram Model School</td>
<td>Gogahara, Jamalpur, Mirzapur (18 kms from Varanasi)</td>
<td>236</td>
<td>152</td>
<td>388</td>
<td>02</td>
</tr>
<tr>
<td>09</td>
<td>Shree Ramnaresh Singh Shishu Mandir</td>
<td>Purushottampur, Chunar, Mirzapur (15 kms from Varanasi)</td>
<td>116</td>
<td>96</td>
<td>212</td>
<td>01</td>
</tr>
<tr>
<td>10</td>
<td>Tapeshwari Bal Mandir</td>
<td>Kolana, Chunar, Mirzapur (20 kms from Varanasi)</td>
<td>117</td>
<td>73</td>
<td>190</td>
<td>02</td>
</tr>
<tr>
<td>11</td>
<td>Vashnavi Convent School</td>
<td>Khemaiwari, Hariharpur, Mirzapur (10 kms from Varanasi)</td>
<td>184</td>
<td>124</td>
<td>308</td>
<td>02</td>
</tr>
<tr>
<td>12</td>
<td>Vijay Pal U.M.V.</td>
<td>Gogodara, Lahaura, Rajgarh, Mirzapur (50 kms from Varanasi)</td>
<td>292</td>
<td>229</td>
<td>521</td>
<td>02</td>
</tr>
<tr>
<td>13</td>
<td>Vijay Narayan Public School</td>
<td>Jalalpur, Chunar, Mirzapur (22 kms from Varanasi)</td>
<td>127</td>
<td>86</td>
<td>213</td>
<td>02</td>
</tr>
</tbody>
</table>
Project Location

*The aerial distance from New Delhi to Varanasi is 676 km while the road distance between New Delhi to Varanasi is 803 km.

*Varanasi to Mirzapur - Road Distance

1 h 50 min (64.1 km) via Varanasi - Allahabad Rd, NH19 and SH 5
Bio-toilet Model

Before opting for this model, in the past, we have tried FRP, Galvanised aluminum, and Galvanised steel portable toilet models.

After several trial and errors, we felt this is the most economical and best solution for open defecation. Once it is built, it needs only once a year inspection.

Bio-toilet features:

- Zero Underground water pollution
- Pathogen-free water output
- Minimum usage of Water
- Low Maintenance Portable unit.
- Cost-effective model

These bio-toilets can be installed anywhere without needing a big septic tank or a sewage facility.

The dimension of the toilet unit: 4ft breadth, 6ft height, and 3.5ft length.
The dimensions of the pit: 6ft depth, 4ft length, and 5ft breadth
(It takes about 2 days to construct a bio-digester pit)

At first, a 1.5-meter triangular pit is dug which has a depth of 1 meter. At the bottom of the pit, a radius of 1 meter in cauldron shape which is 37 cm in depth and 2 meters of a platform is constructed with concrete materials of 7 cm. Again, over the radius, construction is done with a brick in a dome shape. Over the cauldron shape radius after the construction of 62 cm, an outlet is made. According to the outlet, the inlet (main pipeline of the toilet) is set. At the end of the dome (in the upper part) 0.75 inch the gateway for gas pipeline is attached.

In the construction of Bio Toilet, gas is produced in the gas chamber once the outlet is filled and exit through the outlet of purified water. During this process, due to rotten stool, only methane gas and water remains. This gas is released into the atmosphere and the water is left in the fields so that it can be used in irrigation. The methane gas can be stored to use in the Kitchen stove or used in the methane generator to produce the electricity.
Toilet and Hygiene Project for the Girl Child

Picture 2: Aditi Convent school (left), Dukhai Ram Singh Inter college (right) - Mirzapur, Uttar Pradesh

Picture 3: Little star public school - Mirzapur, Uttar Pradesh

Picture 4: Vaishnavi convent school (left), Shree Ram Naresh singh Shishu Mandir (right) - Mirzapur, Uttar Pradesh

Picture 5: Shree Devaki U.M.V - Mirzapur, Uttar Pradesh
Sewa Criteria for Identification of Schools:

1. Schools constructed on government legal land and the school authorities should provide up to date school construction documents.
2. No objection certificate issued by the governing authorities for toilet installations.
3. Unavailability of functional toilets in the school premises.
4. A higher ratio of girl students in the school.
5. Total strength of the school to be a minimum of 50.
6. Support from school authorities and local government/municipal bodies during construction and long term maintenance of the toilets.
7. Provision for water supply for the newly installed toilets or support from school/government/local bodies/individuals for making such a provision.
8. Provision for the sewage system.
9. Availability of space within the school campus for the installation of toilets.

Region-specific Consultants will be hired part-time for the project execution. The consultant will coordinate with the local authorities for survey and licensing. The consultant will work with the vendors for material procurement and installation. Sewa field supervisors will closely work with these consultants for supervision and monitoring.

Project execution updates will be shared in our next report.

Thank You for supporting us,
Sewa T&H Team