

## **Availability, Consumption and Water Problem In Budhera And Sadhrana During My Field Experience:**

I am Prithiraj Borah and I have documented my field experience about the peri-urban villages of Gurgaon from May 7<sup>th</sup> to 7<sup>th</sup> July, 2012. I am doing my masters program from IIT Guwahati. I have completed my summer internship with SaciWATERS.

I have worked with my batchmate, Mr. Tanmoy Das on this project. We worked with Pranay Ranjan (Research Associate at SaciWATERS) who briefed us about SaciWATERS and the specific project they have been doing for last 3 years. Since we were just in our first year of Masters, and had not been exposed much in the area of research methodology and qualitative research, SaciWATERS wanted us to help with their household survey and make critical observations during our work in Gurgaon. We started our survey work from 7<sup>th</sup> May. We completed survey in two village of Gurgaon, Budhera and Sadhrana.

Budhera is about 15 kilometres away from main city Gurgaon. It is larger village than the other neighbouring villages (Eg-Sadhrana, Sultanpur). Pranay accompanied us on the first day and introduced us to village Sarpanch. The Sarpanch I found was extremely dedicated to his work, and the results were evident. We started our work a day after and slowly got information on different aspects of water in the village. We came to know soon that in Budhera, the water is saline and therefore sometimes difficult to drink. Many of the household use PHED (Public Health Engineering Department) supplied water. But the supply wholly depends upon electricity, and with regular power cuts, it is difficult to store water for supply to the village households. In Budhera, we found many pockets, where sweet water is also available. But people are not unaware of proper means of water management and use. So, water has always remains a perpetual problem here. Due to the climate change rainfall has reduced substantially, as reported by locals and therefore the underground water level is also going down, another reason is that the ground water is being extracted at very fast rate, and hence the scarcity of pure drinking water. Some areas of the village have sweet drinking water, but the number of borewells in those areas is more.

With the absence of taps, many of the households are wasting large quantities of water being supplied and therefore is also a very severe problem in Budhera. The PHED water supply has 4 pumps for the distribution of water throughout the village, out of which two of them are not working, from the remaining two; water from one pump is saline and the other releases sweet water. The water is stored in cemented tanks called as "double tanki", and then it is supplied to the village. But it still remains slightly saline in some parts of the village.

During our survey we came to know that the water of the village well is very sweet and therefore traditionally prayers were offered to that well. But now, it is become a dustbin where everyone throws their garbage. In Budhera, households are very happy because they don't have to buy water for consumption. 80% of the households in Budhera depending upon PHED water supply. The frequency of water supply in Budhera is comparatively higher than the other neighbouring villages. Water is usually supplied on every day or the second day for average 80-120 minutes.

The access to water is however coupled with the social status. The village mainly consists of scheduled caste households. And the sarpanch of Budhera is also from the same caste (harijan). This seems to be difficult for the upper caste households to accept.

Related to gender problems, during the survey I faced situations where the male head of the household didn't allowed to me to speak to anyone (male or female members of the households), and in those cases, we left the household and moved forward in search of the next. Women in the village are also scared to raise their voices. Keeping in view the population and the size of the village, Budhera extracts more ground water compared to the other villages. The village has a combination of various castes including rajputs, Brahmins, yadavs, luhaars, naais etc. The total number of households in Budhera is 990 spreading across all the castes present in the village and the total number of households surveyed is 101. The most dominant caste in Budhera (in terms of the number of households only) is Harijan apart from other castes that are given in table 1.

Table 1: Total number of households surveyed in Budhera

<b>Castes</b>	<b>Number of households considered</b>	<b>Number of households surveyed</b>
Schedule Caste	533	53
Rajput	150	15
Brahmin	110	11
Yadav	60	6
Luhhar (Blacksmith)	25	3
Jogi	35	4
Jheemar/Kashyap	18	2
Naai (Barber)	25	3
Darji /Cheepiya (Tailor)	20	2
Others	14	2
<b>Total</b>	<b>990</b>	<b>101</b>

In Budhera, education levels were higher and we found students who are pursuing masters and bachelors in several subjects and disciplines cutting across MBA, MA, and BTech etc. Except water, people in Budhera are self-sufficient with their daily needs. The households near the double tanki are satisfied with the water availability. But in certain areas of the village water still is irregular and therefore insufficient for daily use. Though, we found no households in this village purchasing water for drinking or even for agriculture.

At times of crisis people borrow water from their neighbors and even walk to a common stand-post or community hand pump. People help each other by lending water when needed. Government has also been providing some helping hand to the villagers in terms of better provisioning of water, being a lower caste village. During our survey we came to know that a particular colony of the village is very united. So, in times of their crisis, they not only help each

other with water but also food. I usually haven't seen this kind of interaction between people in urban areas.

In Budhera, during surveys, we visited households and introduced ourselves as students working with SaciWATERS, and were trying to understand water related issues. We usually received a warm welcome as they perceived that we were there to solve their water crisis. But when we explained our purpose and objectives of the project, and requested to speak to a female and male member of the same family our efforts often went in vain. But gradually when we became familiar with the villagers, situation became easier. The village uses the canal water for irrigation. There are some common stand posts nearby the canal which releases sweet water. There are two canals flowing nearby the village, one which carries the dirty water for from the city of Gurgaon and the other canal which carries the treated water to the city. So villagers have to suffer from the dirty canal water. So in agricultural sector the village has to suffer because the productivity is decreasing. The lack of rainfall accentuates the problem further. Climate plays an important role in the regularity and the quality of the water. Some part of the population informed us that the heat in the summer months and the cold in winter seasons have increased compared to earlier days, but some section of people informed us that the climate is now moderate. Less rainfall causes the groundwater level to go down and is likely to become a huge problem in this village. Rainfall is seen as festive in Budhera, because now, rainfall has reduced drastically with the years passing by and when it happens, it brings relief to the people. Older sections of people usually recall the heavy rainfall of 1977. According to them in 1977 it rained so heavily that place was flooded for a couple of days, for transportation they had to use small boats. After the flood in 1977 rainfall is seen as a festival here.

A new water treatment plant is being constructed as urbanization is growing rapidly, and hence a lot of land has also been acquired by the govt. for the same. People are drinking canal water, which is mostly dirty and is used for growing vegetables, but is not consumed by the growers themselves, but is sent to the nearby markets. The dhani of Budhera is called Om Nagar. "Dhani" is the place where the villagers who are farmers live for it becomes easy for them to access the fields. In Om Nagar we found the rich section of population (surveyed about 10 households here) where the pipelines are present but water very rarely reaches there. Hence, they have their own arrangements for watering their fields, i.e. using own submersible or tube wells. The PHED supplied water is rarely available but their own borewells seem more than sufficient. The people in dhani mostly depend upon agriculture so they are using their own submersible and tube wells.

After completing our survey in Budhera we continued our journey to the next village named Sadhrana. We had to survey about 50 households here. Sadhrana is about 16.5 kilometers away from Gurgaon city. It is not bigger than Budhera but also suffers from severe water problems. This village is basically known as '*pandaton ka gaon*' (village of the Brahmins - upper caste). The Brahmin households are located right at the beginning of the village. The village also consists of Rajput, harijan, yadav, luhaar and naai households. There are 4 borewells in the village (which supply PHED water) of which only 2 are currently working, one has failed and another one is being installed and the work is in progress (near the graveyard). The borewells that are working are located near the Bhabani Mandir and near People for Animals' office. There are three johads in the village but all of them are now dry. Households suffer from acute water problem due to erratic electricity problem. The village area where the main settlement is based is located on an elevated surface due to natural topography. The water supply does not usually

reach households in the elevated terrain and this constitutes SC households. So they have to face perpetual water crisis at all times. We surveyed 50 households in Sadhrana from different cast groups as shown in table 2.

Table 2: Households surveyed in Sadhrana

<i>Caste</i>	Sc	Rajput	Bhrahmin	Yadav	Luhar	Naai
<i>No. of Households</i>	16	9	10	10	3	2

For irrigation the farmers have installed their own borewells. They also use submersibles and tube wells to extract ground water. This village is mainly agriculture depended. And because of less rainfall, the productivity is going down. Like Budhera, this village too has witnessed a flood in 1977. The ground water level is decreasing every year. When we started our survey in Budhera and Shadhrana we selected the households randomly after taking information about the distribution of castes in the different locations.

In these two months of field survey in Budhera and Sadhrana I had a great learning experience, not only with regard to knowing the basic issues around water in the two peri-urban villages, but the different interactions between physical, social and economic factors that work together, when it comes to understanding the issues of access. The issues of water in peri -urban areas can be seen from aspects of vulnerability that arise out of the mixup of the factors noted. I have learnt how water crisis affects the crop productivity; salinity of water is negatively correlated to production of vegetables. Though production of rice was uncommon, the little that grew was cultivated using urban waste water. The different social and cultural barriers that prevented me from speaking to women in some households, gave the perspective that during surveys, one needs to give critical importance to local values and traditions, and nothing should be forced upon.

If I compare with my home state Assam, the water problems are very different from Haryana. In Assam water creates problem of floods every year to the villagers, rendering thousands of people homeless. Flood washes away the crops and food security for many households are at stake . Many diseases follow suit because of floods, like cholera, malaria etc. but in Sadhrana and Budhera the problem is more due to water shortage, caused due to mismanagement and impact of social superiority, by caste and economic condition. The irregularity or scarcity of monsoon rains is the main reason for low productivity of monsoon crops. The ground water level is at 80-90 mts.

**Prithiraj Borah**  
**IIT Guwahati**  
**Student Intern**  
**SaciWATERS**