

CASE STUDY

August 2020

Women at the forefront in addressing water crisis in Kosi basin





The state of Bihar is rich in rivers; 35 major rivers criss-cross across its land, creating a web of water laden rivers enriching the soil. In ancient times north Bihar was also known as a 'Nadi Matrik Desh.' The reason for these 'river' names is not difficult to comprehend; it is the close connect that the people here have with these rivers, a life in tune with the environment in which they live in, and their deep rooted respect and understanding of a harmonious balance between themselves and nature. What is worth considering here is how in this same state, a defective model of development has emerged that considers these very rivers as a barrier to development due to indiscriminate use of science and lack of local knowledge. After independence, it was only

flood control that became the rallying point for every development plan. There was a rush to build embankments; and in this race to control Kosi river waters two embankments were built. On the eastern bank of the river, from Bhimnagar to Kopriya, a 125 km long embankment was constructed in 1955. And on the western bank, from Bhardah in Nepal to Ghonghepura in Saharsa, a 126 km long embankment was completed in 1963-64. After the construction of these embankments, life began to change for the people living in the Kosi basin.

The greatest impact was felt on the local traditional knowledge, natural resources, the traditional water sources and such like. The Kosi basin began to slowly lose its rich repository of local water expertise, the insight to nature's

rhythm, and pride in its vibrant, varied culture and history. Rivers, ponds and wells, an integral part of the people's life and living, began to disappear from their lives. Even as life started to change drastically, people did their best to adapt to the new situation, keeping the fabric of the knowledge and rules inherited from their forefathers, alive and safe. Here too, it was the women who came ahead to take this forward. Under the allure of modern day "development", for a long time, all this traditional knowhow was labelled old fashioned and out of date, with the misconception that these ideas had lived their time and were simply a spill over of our backwardness and underdevelopment. And, here again it was the women who stood shoulder to shoulder with the men folk to save this

knowledge, and for this they deserve praise. In this context, is the story of a waterlogged village that lies in Supaul district in the Kosi basin.

Supaul district comprises of 11 blocks, of which six fall in the flood zone area. One of these, Kishanpur block, is saddled with both floods and waterlogging. Of the 16 *panchayats* and 44 villages under it, 12 villages are waterlogged. As per the 2011 census, the block has an area of 218.99 sqkm with 34,945 households in its area. Under the Kishanpur south *panchayat*, there fall two revenue villages. The *panchayat* has a total of 11 wards, of which two and a half lie inside the eastern Kosi embankment. As per the information collected from various sources, this *panchayat* has a total of 267 acres of land outside the embankment, which is waterlogged. The population of this *panchayat* is 9343, and the total number of households 2346. As per the 2011 census, the total number of farm labourers here is 1221. Under the same *panchayat*, Ward number 11 of village Phulkaha has a total of 167 households, whose major source of livelihood is farming and cattle rearing. Most of the village land, about 267 acres, is racked by waterlogging every year. During the monsoon, the village virtually turns into an island, surrounded by waterlogged areas. This has led to many problems here, of which sanitation and drinking water take priority. Here, groundwater is the only source of water for drinking, house needs and for the cattle.

Considering waterlogging as the crux of all their problems, the villagers began to sit and discuss these important issues. And here too it was seen that it was the women, and the young girls and children who were the most worried. Women and the young girls resolved to ensure that a toilet was constructed in every home, and along with the support of the *panachayat* representatives took a pledge to make this happen. Community meetings, door to door sensitization of households on the ill-effects of open defecation were undertaken by women to motivate people to build toilets. A ward member of ward no 11, Vinod Kamat recalls, "It was only because of the concern, determination and support of the women, that the ward today boasts of 130 constructed toilets, and without exception all the families that live here use them."

Old Kuan, new beginning

For safe and reliable source of fresh water, the villagers,

especially the women and adolescent girls decided to renew the old, unused wells in the village. As the elders spoke about the lost wells and the glory attached to them, people became more and more sensitised to their need and importance. Around 1925-30, the late Hiro Chaudhary had built wells here and the onus for their revival as a source for drinking water was taken up by the people themselves. The older generation shared their knowledge and soon these wells were revived. Initially, a local organisation, *Gramyasheel*, helped with the technical knowhow and financial aid, but from June 2015 onwards, it is the villagers who ensure that the well is a source of water for the people and their needs. Joola Devi, whose family lives near this well says, "This was a gift from our ancestors that we have been able to revive; I am very proud to be a part of this endeavour. Many families close by draw water from it for their daily



needs. Well water is much better for digestion and we see that a lot of skin infections too have reduced." She feels blessed when she can offer the well water to any guest who comes home. She says determinedly, "I will never let this well disappear again."

An old timer, Lakshman Mandal, explains further, "Before 1964, the village was solely dependent upon this well. Then in 1964 the government installed 3 handpumps and promoted that its water was cleaner and better than well water. But, within a short span of time, stomach related problems began to increase upon the intake of the handpump water." Another old lady, Parvati Devi adds, "Wells are tied to the history of Mithilapur. It has an important

place in our society and culture, and is a living proof of social equality in the village. For the women it has always been more than a source of water; it was a meeting place where women could share their pain and happiness with each other. But handpumps took away even this simple joy from us." Rambha Devi and Shashita say that the government can revive these wells with very little cost, and must try and do both, revival of unused wells and construction of new ones for clean, potable drinking water. Not only will this make the villages self-reliant, but the money saved from this can then be used for other important schemes. Many daughters of the village, Rupa, Poonam, Pratibha and others add that they were thrilled to see a well and drink the fresh, cool water from it. An

open well in a well aired, sunlit area, makes the water free from iron and other chemicals. This knowledge makes them appreciate the importance of a well in their village. The *Mukhiya*, Kishanpur south *panchayat*, Shri Indradev Sah says, "Today the government talks of reviving traditional water sources like wells and ponds under the *Jal Jeevan Hariyali* scheme¹. We revived our well in Phoolkaha many years prior, and the credit to keep it alive goes to the villagers, especially the women. A well is useful even in disasters such as fires. The government can revive all the 96 wells that lie in this *panchayat*, as a permanent solution for safe drinking water here. The *Panchayat Samiti Pramukh* of Kishanapur block, Vijay Yadav comments, "Our block is in dire



¹ <http://www.jaljeevanhariyali.bih.nic.in/JalJeevanHaryali/Default.aspx#>

need of draining water from 1000 acres of land and the revival of wells in the 16 *panchayats* under us can offer an alternative drinking water supply for a permanent solution.”

Well construction, revival and protection measures

Today, there are very few experienced and specialised masons left who can build wells. But still, the type of soil and how deep one needs to dig to find water is common knowledge amongst the village people. The technique too is known to the villagers and this knowledge needs to be preserved. Today, one can take technical help from experts, and the wells made modern, convenient, permanent, safe and improved.

Water in the wells naturally falls to the existing groundwater level in the area. Thus, it is essential that there are no houses, cattle sheds near it, no soak pits or latrine tanks, no trees or shrubs, ditches or open pits, nor should there be any water stagnant near the well. A well that is 25-30 feet deep, is well aired and sun lit, and hence the water is both free from iron and arsenic, chemicals that pollute drinking water. And if basic precautions are catered to, there is no bacterial growth in the water too.

And that is why in Phulkaha Ward No 11, residents have come together to create a well protection protocol, which they adhere to strictly, so that their well stays secure. The well must be cleaned every year both before and after the monsoons. The water must be removed and the well bottom scraped and



cleaned off its accumulated dirt and filth. 24 hours after the cleaning it is essential to add *choona* (slaked lime), bleaching powder and *phitkari* (alum) to the well. The water is fit for drinking 48 hours after this whole cleaning process. The area round the well must be bricked or cemented, and its mouth covered with a bamboo or metal net. The older generation of Phulkaha village talk that if these basic precautions are taken, the well can be a permanent, cheap and safe drinking water source.

Women contribution in every step of this whole process is truly commendable.

Challenges and potential

North Bihar districts, 18-22 of them, are flood prone. In fact, in the Kosi basin, floods and waterlogging situation is terrifying. When floods occur, people face unprecedented challenges. They move to higher ground, are displaced from their homes, face sanitation and health issues, even safe drinking

water becomes problematic. Surrounded by dirty water, they often use this same water for drinking and cooking. Inside the embankment the water sources are submerged, and outside the embankment the area is waterlogged by rainwater and seepage of the river water, or the water pollution problem continues. This often gives rise to many diseases and epidemics. People earning minimum wages spend a major amount of their money on doctors and medicines, to treat illness. In Supaul district, the water sources both inside and outside the embankment are polluted due to the presence of various chemicals. Even the government agencies accept the presence of iron, fluoride and bacteria in these water sources. The occurrence of dangerous chemical, arsenic too cannot be ignored in the Kosi basin. In such a situation, conservation of traditional sources of water as source of safe drinking water, especially the well, becomes even more critical.

A survey of existing wells in urban and rural areas of the Kosi basin, and their repair must be carried out along with the addition of new wells to improve access and availability of permanent, cheap and safe drinking water. The *Jal Jeevan Hariyali* mission of the Govt of Bihar is aiming towards revival of traditional wells which is a very welcome step towards ensuring safe and reliable drinking water for the communities. The government of Bihar has taken a positive step through the *Jal Jeevan Hariyali Mission*² to revive traditional water sources, including wells, but the initiative needs a full-fledged campaign to take it whole heartedly forward for greater impact.

² <http://www.jaljeevanhariyali.bih.nic.in/JalJeevanHariyali/Default.aspx>