



All About Change

Dear Friends,

If life is said to be in a constant state of motion, there is no reason why things simply shouldn't keep changing for the better. Tell this to many of the villagers in the most remote rural parts of Maharashtra (or for that matter, any other state in India) and the statement would be looked upon with skepticism. That's because for those who have tried to eke out a living as farm labourers or even worse, life has been nothing more than a saga of survival. This is not to say though that transformations cannot take place. As the many intervention projects of WOTR have shown, it is possible for landless labourers to turn into successful farmers and arid regions to become self-sufficient in water.

This issue of our newsletter provides such real cases. What it also does is to present the findings of a study conducted to see how the employment of machines can impact watershed development as against the use of physical labour. Ultimately, the focus does not have to be on machines replacing human skill but on how a combination of both can lead to fruitful results. Meanwhile, we have also found it very important to study how watershed development affects children because no progress in a village can be called complete if children continue to remain malnourished or suffer from poor health.

Another study has also indicated how the involvement of women in local governance has definitely improved the scenario in many villages. Their voice has helped usher in prosperity along with better utilisation of various resources. And finally, there are always the voices of people that must be heard to know how their lives have been affected by whatever has been done in their villages. Over to them for the real picture.

Editor

A study of two villages in Maharashtra was conducted to consider the impact of labour and machines on watershed development

Largely, watershed development comprises land-based activities such as bunding, trenching, stone and earthen plugging. All these activities require manual labour and/or machines to actualize. This study addressed the key question of how and in what amount do the impacts and benefits differ when manual labour and machines are used to execute watershed works. The two villages chosen for this study were Nandkheda and Asarkheda in Jalna district, where watershed development is being implemented by the Nirman Sanstha and the Marathwada Sheti Sahayya Mandal (MSSM) respectively, both under the aegis of the IGWDP, Maharashtra.

In the former case, all the work was done manually while in the latter about 70 per cent of the treatment was done using machines such as bulldozers, scrapers and tractors. Thus Asarkheda was considered as a 'machine watershed' for the purpose of the present study. The study used data and information from both secondary and primary sources. Tools such as focus group discussions, interviews and observational field monitoring were used to collect the required information.

Within the selected watershed villages, a minimum of ten per cent of the total households were selected for household level interviews. A random sampling method was used to select the households to be interviewed. Concerned community organisations in the selected watershed villages such as Gram Panchayat, Watershed Committee, Women's SHGs and Samyukt Mahila Samiti (SMS) and officials and heads of the implementing organisations were interviewed separately and collectively.

The findings indicated that the baseline situation of a village in a pre-project period is a determinant of the outcomes of the watershed interventions. Nandkheda initiated the watershed project in a situation of heavy debts largely from informal credit sources and people heavily dependent on occupations other than agriculture. The baseline situation of Asarkheda suggests that they were well equipped to undertake progressive farming even at the time of the beginning of the watershed project.

In Nandkheda, watershed intervention generated about 1,06,151 labour days with a total income of Rs 58.48 lakh for the watershed labourers. The pattern of expenditure of money earned by these labourers clearly shows that they have spent most of their income on debt recovery and consumption expenditure leaving a very meagre amount for capital investment.



Water, Our Wealth

Realising that water is a precious resource, Kohane village ushered in a complete change in attitude and implementation

Located in Akole district, our village is located at an angle near two forts, Konjir Qila and Kombade Qila. That is why it is called Kohane. We are dependent on rains for our crops, primarily rice. Most of us in this village are farmers. In 2004, WOTR started a project intervention that addressed the needs of our village. We have a farm pond project that has proved 100 per cent useful for us. The single most important thing that WOTR did for us is to help us understand how water is a precious resource. It made us see the value of water in almost mathematical terms.

Our concept of water now revolves around the following:

- Water – A balance sheet.
- Water is life.
- Budgeting water.
- Give direction to the water that flows, conserve the water that you give direction to, and ensure that the soil holds back the water that you have conserved. Use it as a precious resource.

When we came to an understanding that water is an equitable resource that everybody has a right to, we resolved a lot of differences. We became a more just society. The essence of the intervention has been taken forward to complete 56 farm ponds. This was done through shramdaan (voluntary work). We utilised funds worth Rs. 4,16,050 for this good cause. The size of each of the farm ponds is 10x12x10. They are square-shaped ponds. Now other than rice we grow Rabi crops like millet, wheat, gram, garlic etc. This program has benefited all classes of the village. It has made us all prosperous.

Sri Ram Gram Vikas Samiti/Maid Chimaji

This possibly has not led to the expected cascading effect on household income. The study reveals that providing wages to the watershed community does not automatically ensure the creation of employment or livelihood opportunities on a long term basis.

Asarkheda's decision of employing machines in place of labourers seems justified. This is by way of looking at the significant changes in the household income, crop productivity and water availability. Most of the farming households make use of machinery for ploughing in Asarkheda and threshing in Nandkheda. Labour-replacing technologies such as an increased number of tractors, threshing machines in the post-watershed phase are also playing a role in reduced labour opportunities.

Participation and ownership of the local community in any intervention is very crucial so as to sustain the outputs and outcomes of the interventions. The watershed project brought practically everybody in Nandkheda on-board by way of collective participation. The people also put in their labour as shramdaan leading to more transparency in the project. The reason for conflicting opinions of villagers seen among the people of Asarkheda might have roots in their exclusion and inclusion in the process of implementation. It also reflects in lesser participation in the common meetings by Asarkheda people as compared to Nandkheda. Hence it is necessary to have an all-inclusive policy for the overall success and sustainability of the project.

Applicability of policy framework provided for use of machines in a watershed development programme depends mainly on the situation of the local community at the time of inception of the project. The pre-project situation of the village needs to be established by understanding 1) the socio-physical situation from diverse perspectives such as socio-economic, political, cropping pattern, income and debt patterns, migration and infrastructure, communication and available extension facilities and 2) level of awareness and knowledge in the community about sustainable management of natural and human resources and long term goals of their own development.

Sandeep Jadhav/Dnyandev Talule

A study now measures the impact of watershed development on the nutritional status and health of children

Watershed development is recognised as a significant contributor for holistic rural development, especially in rain-fed areas. Its most tangible direct impacts are on land (soil) and water. With enhanced land productivity there is an increase in agriculture yields as also on livestock development. Here, the most significant impact is also on the lives of people, particularly those living in rain-fed and dry land areas. Field experience exemplifies the benefits of watershed development to the rural farming community in the following ways - bringing additional area of the village under agriculture, increased irrigation, increased production of crops, plantations of horticulture, floriculture, diversified cropping pattern, increased fodder and milk production, additional availability of income opportunities etc.

Efforts are being made to systematically assess the impact of watershed development, but this is mainly from its direct impacts on soil and water related issues and from the gender and institutional aspects. A number of studies have been conducted over the past decade indicating results in terms of economic (benefit and cost ratio) and environmental impacts (changes occurred in cropping pattern, run-off, crop yield) and discuss the methodological challenges involved.

Since watershed development brings about improvement in the resource base, changes in the environment, socio-economic conditions, education status, and health status are expected due to these development inputs. As huge investments and efforts are poured into natural resources regeneration (NRM) and integrated watershed development programs across the country, a systematic documentation of the related but indirect effects of watershed development that can guide research, policy and development decisions is necessary so as to harvest even greater benefits at the national and grass root levels.

In this context, studies that assess the other impacts (indirect and hidden) of watershed development assume greater importance. The Indo-German Bilateral Project 'Watershed Management' has compiled a tool kit to assist practitioners concerned with monitoring and evaluating watershed management projects that look at various other possible benefits.

Impact on Child Health

Although never explicitly mentioned, health is an underlying concern that always surfaces in developmental efforts, especially when women are involved. Given today's scenario, with 53 per cent of our rural children suffering from malnutrition, it is necessary that one looks at the various opportunities to address it. And integrated watershed development is one such opportunity that should be capitalised.

WOTR, together with its sister organisation the Sampada Trust, has been involved in growth monitoring of children of age 0-5 years since 2005 in different districts of the state. This project is conducted in coordination with the village anganwadis. To obtain the cooperation of the local inhabitants, women health promoters - *Mahila Pravartaks* - are trained for the measurement of height and weight of children and promote a balanced diet, monitor the growth of the children each month and inform the mothers about the nutritional status of their children. They guide the mothers to adopt



strategies to improve the nutritional status and weight of the child.

In the development sector, this provides an example where participatory watershed development (which contributes to improving crop yield) can be associated with a community health project, that is, growth monitoring of children for improvement of the nutritional status so as to obtain enhanced benefits. Can watershed development be made to work towards improving the nutritional status of our rural children?

The Methodology

The study primarily focuses on examining the nutritional status of children in the age group of zero to five years (pre-school children) based on simple anthropometric measurements and diet survey of the children. Anthropometry includes measurements in terms of parameters like weight, height, chest circumference, head circumference and mid-upper arm circumference of the children. The diet survey includes 24 hours' diet recall, feeding schedules and the food consumption pattern of these children. In order to relate the data to watershed development the study involves a detailed household level survey to understand the watershed development related changes in the socio-economic status of the household, the mother's and the children's profile.

Case Study

Food security is a critical variable for understanding the nutritional status of low income populations. The vulnerability of a particular group of population is based upon its access to food. Here, watershed development plays a significant and discrete role and is an important policy instrument for rural food security. It plays a potential role in enhancing the livelihood opportunities of the people belonging to rain-fed and dry land areas. Livelihood includes not only income but also food. Watershed development impacts on the rural livelihoods through increased production of crops. This leaves room to think of the association between watershed development, food security and nutritional status of families and children.

A watershed village, Jamkhel from Dhule district, serves as an example of the combined



effects of assured food security coupled with growth inputs in terms of enhanced nutritional status of children 0-5 years. The data on growth monitoring indicates that in January 2006, the total percentage of undernourished children was 88 which came down to 28 per cent in December 2007. The percentage of malnourished girl children was 93.3 in January 2006 which came down to 33.3 per cent in December 2007.

Jamkhel Village is situated at the north western side of Sakri tehsil, occupied by about 134 families. This village belongs to the Bhil and Kokani communities (ST). The village has been suffering from severe problems like migration and irrigation water facilities. The Jamkhel watershed project was started by WOTR's regional office Nandurbar in April 2005. An area of around 274 ha was treated for soil and water conservation. Initially, rice was the main crop for the Kharif season and nearly 50 per cent area was under paddy while 25 per cent of the area was sown with the nagali crop. The remaining area was under jowar, bajra and vegetables.

During the project period, growth monitoring was implemented with the help of Sampada Trust. A training program for women health pravartaks was organised at Pimpalner. This was to orient them into measuring the height and weight of children below five years of age.

Shirasgaon has applied to the government for the Nirman Puraskar award since it is now a role model in terms of self-sufficiency and governance

We at Shirasgaon have recently applied to the central government as a model village for the Nirman Puraskar. We have reached this far due to our unity and the work we have done with WOTR. Located in the west of Sangamner district, we, the residents, are either occupied as farmers or farm labourers. Our village population is 653. Of this there are 317 men and 336 women, making for a total of 114 households. With our simple thatched roof abodes our village looks picture-perfect. We are implementing all the five essentials that WOTR suggests for soil and water conservation.

These include 'Charaibandi', 'Kulhadbandi', Shramdaan, 'Nashabandi' and 'Our Village Our Governance'. We have put into place all the technicalities to conserve water such as CCTs, gully plugs and loose bunding. We have planted trees like custard apple, Indian gooseberry, and many indigenous species over 317 hectares of forest land. We have no alcoholics in our village because of total prohibition. We have seven self help groups. Some of them are exclusively for men and some for women. These help in various ways. We have received an Entrepreneur Awareness Training Program to generate income. WOTR has given us credit in accordance with our wealth ranking for starting out small businesses. Due to this, migration from the village has significantly reduced.

We are a dignified village. We do not use open spaces for toilet purposes. Now we have private toilets for every house. We have 114 toilets. We have a clean village. There is no litter on the village streets. Our health has improved. In the past four to five years no contagious disease has occurred here. We collect leaves etc to make organic fertilisers using vermi-culture. We have 29 such units. About 90 households have bought solar units to light up the village. Here, I would

like to borrow a line of poetry from a famous Marathi saint: "Dohi Ana Anandachanda Tarang" (My Sea Of Bliss, Every Wave Of Bliss).

The water tank that was created by government resources was no good because it was shared by seven villages. But with the cooperation of WOTR and the regulations suggested by them as well as collective participation, things changed. We dug up our own water wells. We collected the water to be pumped into the village water tank. We made stand posts along the way for water to reach every household. We also created water absorption trenches as well as gully plugs and loose bunding. Farm ponds were created. The village tank had been constructed around 400 years ago. We put it back into shape to utilise it. We also took up other mechanisms of water saving technology such as drip irrigation and small dams. We also planted fruit trees.

If we aspire and act systematically to reach out for our dream, we can definitely achieve the impossible. We have proven it. Our hard work has given us results. I acknowledge the contribution of our village Sarpanch Gode Ramnath, Deputy Sarpanch Bhojne Gopinath, Adarsh Gram Sevak Shri Nikam and all our villagers.

**Indra Vikas Pani Samiti Shrisgaon/
Jijamata Mahila Vikas Samiti/
Gram Panchyat, Shrisgaon**



Life Stories

Dreams Realised

A landless labourer has now turned into a successful farmer

“At 55, I, Shripatraoji Manuji Aahake, a landless labourer in Nandora, expected little to change in my life. I lived and worked in remote rural India near a forest area, a family of five people, including three children, on a daily wage of Rs 60. When watershed development work started, we got employment. We were now earning more than Rs 250 a day. When I received my first payment I was overjoyed. I had never received so much money in my life. The next big thing that happened at the same time was that I became a member of a self help group. I learned to save. I was also trained to manage a nursery. The Village Working Committee gave me a loan of Rs 10,000 to raise plants in the nursery. All of us in the SHG managed to grow two lakh plants.

The plants were to find an assured market. VWC of Nandora and WOTR bought these plants at an appropriate rate. The money we received was enough to refund our respective loans. We even made a profit. This profit was equally distributed among us members. We had each made Rs 8,000. No one in our poor scheduled caste majority village had made such a big amount in so short a time. Excited beyond bounds, people decided

to make the most of the money. Some bought television sets, clothes etc.

I decided to buy land from that money. My savings were not so much as to afford the five acres of land that I wanted. My hard work at the watershed as well as my being grounded with my money earned me tremendous goodwill. My relatives and my community were very impressed by this. They came forward to offer loans. It was a great turning point in my life. By the time the watershed program ended, I had refunded all my debts. Now, I make Rs 30,000 per month from my land. We have more than 150 trees. We also have 20 ‘palas’ trees. These are valued at about Rs 3 lakhs. My happiness emerges from the fact that my children are now receiving education. Watershed has changed things for all of us.”

Hopes Revived

An account of how a watershed project changed the fortunes of the Khandekar family

“My name is Bhimrao Khandekar. My wife Shakuntala and I had been working as farm labourers for the past 36 years in the same village. If the watershed development program had not been initiated our lives would have been the same. It was a very difficult life, all



the more because work was tough to find. Two of our grown sons had moved away with their families. We have a son who is physically challenged and unable to do farm work. In 1995, when watershed came to our village, we started making up to Rs 400 a day and then joined a self help group. We made additional money from planting trees.

Now that we had a saving of Rs 8,000, we were encouraged to invest the money wisely. We thought things over and considered two options – one was rearing livestock and another was to set up a flour mill. Our village did not have a flour mill and so we chose the second option and also bought two cows and two buffaloes. Both ventures were a success.

We have 10 buffaloes and 10 calves as also four cows and our milk production goes up to 70 litres per day which provides an income of Rs 1,050. Now we have learned to work hard and realise our dreams. Watershed program taught us how to live a good social life as well. We are happy today. My handicapped son manages the flour mill and I and my youngest son rear cattle and look after them.

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