In India, the majority of the population is dependent on agriculture for survival. From 1980 to 2011, there has been a rise of 50% in the number of Indians taking up agriculture and related livelihoods as their main occupation.

However, as the percentage of labour associated with this occupation continues to rise, it is unfortunate that the comparative production percentage has gone down. Climate change and dependence on nature for a living have much to do with it.

Local climate variability, incessant extraction of natural resources, rain-fed farming, and, frequent droughts have resulted in severe land degradation and depletion of water resources. For all those communities that depend on nature for their livelihoods; the coping mechanisms developed by farmers are unable to sustain the effects of climate change.

With time, the weather conditions are expected to get more and more erratic which is likely to have dire consequences on water, food, health and livelihoods.

Considering these problems, a Public - Private - Civil society Partnership (PPCP) has been initiated in the district of Jalna, as a joint effort towards building resilience in the context of climate change, between the Government of Maharashtra, Hindustan Unilever Foundation (HUF) and Watershed Organisation Trust (WOTR).
THE PROJECT OBJECTIVES

1. Harvest a cumulative of 178 Billion litres of run off water over the project period and control soil and water erosion over 25,000 Hectares of agriculture land through soil and water conservation measures.

2. Stabilize and enhance the productive capacity of local ecosystem, the agricultural, and livelihood base of the project villages.

3. Mainstream women and marginal groups in the institutional life of the village, improve the quality of their lives and strengthen the capacities of the village institutions to effectively and accountably manage the projects as well as access locally available resources.

4. Socially uplift the very poor to a higher standard of living and quality of life. 5 % of people from very poor category will get project benefit in terms of employment, land improvement, livelihood opportunity, access to water and will be moved to the next category (poor, average and better off).

5. Weather based information used by farmers making decisions for 30% of net cultivated area.

6. Social equity enhanced as evidenced by the upward movement of the lowest wealth ranked section of the local community.
THE PROJECT ZONE

The division of 76 villages has been carried out cluster wise across Ambad, Jafribad and Bhokardan blocks of Jalna district.

In the year 2012-13, the Maharashtra government declared Jalna as a severely drought affected district.

With more than 970 villages affected by drought, Jalna occupies 161st position as per rain-fed area priority rank among the analysed 499 districts in India by the Planning Commission of India.

The district falls under double exposed category of climate vulnerability index. Existing ground water status of Jalna is 42.76%.

Due to frequent droughts, improper land husbandry, poor cultivation practices, excessive pressure on biotic resources (forests, grasslands, and natural resources) and erratic rainfall, the local habitats and environments have become degraded and fragile.

Analysis of groundwater level from 1998 to 2007 shows that in 23 out of 25 stations of the region, there has been a fall in the groundwater level ranging from 0.05 to 0.52 m/year during pre-monsoon, and from 0.01 to 0.78 m/year in post-monsoon period.

Almost 77% of the land area of the region is under agriculture. The community dependence on agriculture for livelihoods is substantially high.

However, only 7% of the area is irrigated, which indicates the climate sensitivity of agricultural livelihoods. Agriculture is a part of lifestyle than being considered as an economic activity and is based on subsistence cropping system.

There is very low penetration of modern technologies and market access in the agriculture sector in this region. The agricultural productivity of the area is very low due to poor quality of land and little water for irrigation. People have near to no property or reserves for emergencies.

Farmers borrow money from money lenders at very high interest rates, mainly for purchasing of agriculture inputs. Agriculture is also at high risk due to fluctuating markets and weather variations.

Low production and income leads to food scarcity and migration to other places in search of employment.

Under the aforementioned circumstances, it is of extreme significance that these already vulnerable communities be assisted in mitigating the effects of climate change.

The Project seeks to do just that. It aspires to reduce current vulnerabilities, and increase adaptive capacities of the community, thus leading to a resilient future.
This is an interesting project as it invokes a public-private-civil partnership (PPCP) which aims to leverage complementary strengths of these key sectors, namely, the Government, private sector, NGOs and local communities. That is, investment funds from the government (under MGNREGA and other schemes); operational funds and technical support from the private sector (HUF); mobilization, technological and networking skills of NGOs (WOTR); and ownership, implementation and governance resources of the local communities (the NGOs and local communities together constitute the civil sector).

The project aims to increase water and biomass availability as a basis of poverty alleviation through empowerment of the village communities.

The project is being implemented across 76 villages in 3 blocks of Jalna district in the state of Maharashtra.

The selection of the villages is on the basis of population, water scarcity, low employment level, the geography and physiology of the land.

The Ambad block has a total of 30 villages under the project.

These villages have been subdivided in two clusters: the Rohilagadh and Chinchkhed clusters, each comprising 15 villages, as is displayed in the diagram above.

The Jafrabad Block consists of 16 villages which are subdivided in to 2 clusters, Khasgaon and Mahora, with 8 villages each.

Like Ambad, Bhokardan block is divided in to two clusters, Anwa and Hasanabad clusters, with 15 villages in each cluster.

In all the clusters, the project implementation at the grass root level has been initiated since January 2014.
THE PROJECT COMPONENTS

The project aims to work on the following 5 components:

SOIL AND WATER CONSERVATION (SWC)

As in India, majority of the farmers completely rely on rain-fed farming for survival, short or delayed monsoon leads to thoughtless extraction of groundwater for the timely execution of crop processes.

The problem is further compounded by climate change, thus leading to more erratic rainfall and frequent droughts.

The project realizes its impact on farmers and thus strives to offer guidance and assistance with planning, and implementing of soil and water conservation measures.

Under the project, SWC measures are being undertaken across the catchment area of the micro watersheds as well as in the upper regions of the drainage system.

The treatments will not only be helpful to reduce soil erosion but also harvest and conserve flowing rain water.

Generally, a Ridge to Valley perspective is followed for maximum conservation, harvesting and impoundment of rainwater and soil erosion mitigation. The measures included are mechanical/structural (earthen and masonry) as well as vegetative.

On cultivable lands, the different SWC treatments are undertaken by constructing contour bunds, farm bunds, and spillways for surplusing water. Treatments such as continuous contour trenches, stone bunds, pit plantation, gully plugs and loose boulder structures are also undertaken depending upon the topography and land use.

NARAYAN KADOBA SHINDE,
Vizora village, Anwa cluster, Bhokardan

“I have 4 acres of land on which compartment bunding work has been done. As the work done is clubbed with MGNREGA scheme, my wife and I go to work and earn extra wages. We also have been explained the benefits of such structures and the resultant water percolation. The coming year will show us the results and we hope our water scarcity problems are resolved”.

For area treatment, a target of 26,500 ha has been set, of which 836 ha of area has been covered in the first six months of the project.
ENHANCING IRRIGATION POTENTIAL THROUGH WATER HARVESTING STRUCTURES

To enhance the agriculture production and secure water for agriculture and domestic purposes, drainage line treatments are essential. The project seeks to accomplish this by harvesting rainwater in check dams/weirs along the drainage channels, in farm ponds and dug wells and deploying efficient delivery and application systems that minimize water losses and increase productivity by applying it in a manner that results in the most output per drop of water.

WOMEN EMPOWERMENT AND GENDER MAINSTREAMING

The Women Empowerment and Gender Mainstreaming component has been introduced in the project to facilitate women promotion activities.

With a belief that women are as much responsible and needed to nurture the development processes as are men, the intention here is to bring men and women at par. This is to be achieved by organizing women in to Self Help Groups (SHGs) and engaging them in to discussing, identifying and resolving the problems that they face.

Self Help Groups allow the participant women to borrow money on loan at a mere 2% interest with a breathing space of 3 months to pay off the dues. This money is saved by the members of the SHGs, in order of Rs. 100 each per month. The idea is to make women financially sound at the same time encourage them to step out of their homes, solve their problems and speak their mind.

Eventually, the solidarity group may also introduce activities that address their issues (For example- water storage, water filters, cycling hoes, etc.). The component also involves training, child birth and growth monitoring, maintaining activity record system, etc.

The targeted number of women to be benefited from the project is 30,000. As of now, 1765 women are organized in 156 SHGs of which 23 are new and 133 are existing SHGs.
In ecologically fragile rural India, the vulnerable communities that depend on agriculture suffer the most. They still rely on traditional methods which fail to withstand the weather changes today. Thus, it has become essential to restore local ecosystem's balance for a secured life and livelihood.

Implementation of Soil and Water Conservation Measures is not enough to achieve the project objectives, but it is equally essential to sustain the impact of the efforts put in.

This can be done by increasing a farmer's productive capacity. It is necessary for farmers to adopt scientifically and technologically driven approaches in terms of new and improved crops, cultural practices and improved technologies in order to improve soil fertility, diversify crop production, and mitigate the impacts of climate change.

The plan is to achieve this through the installation of Automated Weather Stations and conduction of Farmers Field Schools.

**ENHANCING AGRICULTURE PRODUCTION SYSTEM**

There are 8 SHGs supported by WOTR in our village. My daughter-in-law, Anita, is Wadhona’s Wasundhara Sevika and I am the Sarpanch. We have gone door to door requesting women to join such groups. The exposure trainings, child growth and birth monitoring, and most importantly financial security are the reasons why SHGs are important. This activity has pushed women to come out of their domestic walls, understand banking and learn to voice their opinions”.

**AUTOMATED WEATHER STATION (AWS)**

The installed AWSs collect data of the local weather conditions. The information in terms of weather forecast, crop treatments, nutrition and health is disseminated via charts and SMSs.

These weather based advisories are specific to the crop and farm conditions. The information package includes practices and measures to facilitate increase in productivity and cost reduction in farm management.

A total of 19 Weather stations have been installed as of now, and 347 farmers are registered for SMS service. Many more farmers are benefitting through advisories displayed at public places.
“35 people have subscribed for agro-advisories through SMS from our village. We receive consistent weather forecasts for the subsequent three days. We also get information about the application of pesticides and fertilizers for our crops, market rates for our crops, information on livestock health and relevant measures, as well as, child health and hygiene. We are buying crop insurance for the first time after we came to know about extended deadline through SMS. Many of us have already bought the policy which is crop specific”.

**FARMER FIELD SCHOOL (FFS)**

Farmers Field Schools are what can be called Schools without walls. They function using a participatory approach wherein the farmers learn on the field through demonstrations.

Demonstration and promotion of water saving devices like sprinklers, drip, bucket–drum kit irrigation systems, etc., are being undertaken. Crop and improved practices demonstrations are being undertaken in farmers' fields on twice a year basis over a three year period.

The idea is to provide the group with facilitation and guidance so that they are efficient enough to take good decisions with reference to their farming practices, procedures and technologies employed.

FFS provides the farmers with information and knowledge about best cropping patterns and techniques, about mitrakitnashak, kshatruktnashak (friendly pesticide, enemy pesticide), new farming methodologies and technologies, health and livestock information.

In-house as well as locally available specialists and service delivery agencies in the government and agricultural service centres will be drawn upon, as required, to provide extension support as well as specialized inputs.

The target number of farmers to be benefited from the project is 15,000. As of now 520 farmers with 60 lead farmers have been organized into 20 Farmers’ groups in 3 blocks across 4 clusters.
NIVRUTI PANDIT
Janefal village, Khasgaon cluster, Jafrabad

“There have been just a few FFS sessions in our village. Yet, they have benefited us a lot. Personally, since 30 years my family relied on traditional methods for farming. In the FFS, I learnt about new farming techniques and the importance of sustainable farming. I understood that the investment is one time but the benefits are long term and hence, I moved to drip irrigation.

We also had a demo on how to make Amrutpani as liquid manure which revitalizes the soil and can be used for all crops as a spray. It can also be mixed along with irrigation water to help increase the growth as well as the yield. How to prepare Nimboli Ark for its use as a pesticide was also taught. Due to its application we are able to save about 50 % of expenditure we otherwise incurred on pesticides “.

SOCIAL CAPACITY FORMATION

For any form of development to take place it is imperative that villagers offer their complete willingness and support and realize the need for change.

The stepping stone to achieve this is to undertake awareness, exposure and capacity building activities. WOTR has achieved this by taking the key villagers to exposure trips, organizing Kalapathak and other awareness programs for the village populace.

Under the component, Community Based Organizations (CBOs) will be formed and capacitated through trainings, exposure visits as well as support through monitoring. Linking the CBOs with government agencies through joint workshops, strengthening the Panchayat Raj Institutions (PRIs) will also be done. Specific focus will be given to establishing links with PRIs, agencies, and departments. The training programs are being conducted to motivate CBOs, that have been formed till date, to address the issues of gender, equity and poorest of the poor.

Comprehensive and integrated development requires support from government departments and additional resources from other institutions such as the banking sector in order to add value and improve the overall quality of life.

Hence, early on during implementation, efforts will be made to link the proposed village to the formal developmental network or intensify existing relationships through regular interactions, conducting of local workshops and availing of governmental schemes.

Capacity building work has been initiated in 67 villages. There have been a total of 24 exposure trips and training programs for diverse stakeholders: Villagers, Self Help Group members, SMS members, Wasundhara Sevaks and Village Development Committee (VDC). The project aims to organize a total of 120 exposure trips and 255 training programs.

As the project is on the onset, not all the components have been introduced in all the clusters. In Ambad block, considerate work has been done on social capital formation, while Bhokardan and Jafrabad happen to be the clusters where Farmers Field Schools have been widely initiated.
AWARENESS PROGRAM IN MARDI VILLAGE, AMBAD AND EXPOSURE VISIT TO HIWARE BAZAR
SANDEEP SHAMRAO MAGARE  
Chinchkhed village and cluster, Ambad

“As a part of our exposure trip, we were taken to Hiware Bazaar. We got an idea of an ideal village; people’s positive attitude, unity, their idea about cleanliness. We saw that they had won many awards for such beautiful development of their village.

What surprised me the most was that even when the village location was at the top of the mountain, some 200 ft. from the ground, their ground water level was high, and they used hand pumps for easily drawing water from the ground.

Our next visit was to Kasare village. That trip taught us the significance of crop rotation. Despite of being a small village, its production was twice as that of our entire village.

We also had an awareness and capacity building program by Niranjan Bhakare. He spoke about how an ideal village should be. Also, he gave us an insight on the significance of women’s involvement and role in any form of development process giving the example of a women run village, Patoda in Aurangabad.

The trainings gave us information on how to revive trees, what techniques to use to rejuvenate water availability in the ecosystem and how to save water drop by drop”.

THE YOUTH MOBILIZATION

The project has reached out not only to the expected stakeholders, but also has managed to stir up a movement among the unexpected, the youth community. The young farmers are considering the project as a platform and a tool to bring about change in the respective villages, more so in Ambad block.
As the 27 year old JADHAV NANDKUMAR PRAHLAD, a teacher by profession and who also handles his family farming business, quotes:

“We want the young of the village to come together and form an action group. The focus of our group will be that of mediation and leadership. We will have discussions with organizations and knowledge driven individuals like you, and try and implement your suggestions in our village development activities.

I think youth involvement is important for any new change and development activity. We will build 25 farmer groups and proceed under your guidance”.

A SUCCESS STORY
AN SMS A DAY, KEEPS THE AGRI-STRESS AWAY

The locale and crop specific weather based advisories disseminated under the project make things easier for farmers.

These advisories have successfully played an important role in reducing community vulnerability and build their adaptive capacities to climate variability, thus enhancing their agricultural production and encouraging them to advance to organic and modern farming techniques and methodologies.

The advisories have succeeded in causing a positive impact in the lives of farmers. One of such beneficiaries is Ram Bhanudas Jadhav.

RAM BHANUDAS JADHAV NARRATES:
Chinchkhed village, Ambad

“WOTR marked its presence in our village, Chinchkhed, in January, 2014. My village folks informed me about WOTR’s role as a guide to farmers, helping them comprehend modern, timely and effective agricultural practices.

Eventually, I was introduced to the WOTR team, and it did not take more than one meeting to realize the organization’s genuine willingness to better our conditions. I was assured of instant and constant guidance and became more confident in investing my time and energy in pursuing agriculture.

My father had been doing farming traditionally, but I was quite alien to the techniques and processes pertaining to agriculture.

As a result, a few years ago I had set up a humble hair cutting salon. Yet, I chose to acknowledge my familial obligations, thus, overlooking father’s six acre farm.

With WOTR, I learnt the mechanics of farming and knowledge that even experienced farmers in my family were unaware of. For the first time we conducted soil analysis to understand our land and accordingly directed the work.
In Kharif, I sowed my cotton seeds. Shortly after that, WOTR field staff organized a meeting with farmers and installed a locale specific weather station in Pimparkhed.

This Automated Weather Station (AWS) provides farmers in the vicinity with crop specific agro-advisories which are disseminated through SMSs.

We were informed that those willing to subscribe were to pay Rs.100 for one crop for a season. Accordingly, I subscribed for cotton and began receiving messages.

I have never been the one to use my mobile that often, or message anyone. However, after the few SMSs sent by WOTR, I began to await messages from the organization regarding cotton crop and pest management, market prices and agriculture related government schemes, livestock assistance, health and hygiene.

The villagers pursuing farming have witnessed the benefits I have gained as a result of WOTR’s guidance. They follow the methodologies and practices I employ in my field, and indirectly implement the crop and pest management techniques endorsed by the organization.

When I began farming, I did not have the slightest idea about the names of pesticides and fertilizers to be sprayed. The advisories helped me get an idea of what to spray. I started visiting Krishi Seva Kendra to buy prescribed material for spraying.

The information on how to prepare Nimboli Ark proved to be of great assistance. Majorly so, because it is a safe botanical pesticide; it does not kill insects that are beneficial for the plant and only kills pests.

Though advisories informed us about the ingredients to be used and methodology to be employed for preparing Nimboli Ark, due to the paucity of time, I was unable to prepare Nimboli Ark at home.

However, I bought Nimboli Ark directly from market and sprayed it in the field as per the organization’s advice which turned out to be extremely beneficial.

Currently, my cotton crop is about 4 – 5 ft. high with 30 to 40 well developed cotton boll per plant. I am expecting an increase in my income.

I am looking forward to devote a considerable amount of my time in farming as now I understand its nitty-gritties, and the yields are looking good."
CHALLENGES FACED IN IMPLEMENTATION

The Project has 67 new villages under its umbrella. The rest 8 have witnessed WOTR’s presence for a few years now. This has imposed many challenges in the initial implementation of the project.

COMMUNITY MOBILIZATION

Any effort at development is incomplete and futile without the community involvement. To make the community understand our intentions and to earn their trust proved to be an extremely demanding and a time consuming task.

GOVERNMENT ACCEPTANCE

While in Bhokardan and Jafrabad the project plan acceptance was quick, in Ambad it took time due to the change of governance, however it was efficiently tackled by WOTR’s Ambad team. In Ambad, the challenge was on two levels: first, recognition from the local administration in Panchayat Samiti, and second, acceptance from community. It was quite difficult to explain them why we do what we do.

WOMEN INVOLVEMENT

India is a patriarchal nation. In rural India, the practice of patriarchy has a tighter stronghold than the urban societies. This has imposed difficulties on the implementation process of women oriented activities. To alter the mind-sets of the village men, and to help them see that without women involvement there can be no change, has been a difficult task. Also, the number of defunct SHGs is high; its reformation is a dire task.

PROJECT MAGNITUDE

As the project is being implemented across 76 villages, it has been tedious to perform within time constraints. To start working on so many villages and doing awareness building across has been very challenging. Bringing the entire community together in such a short span of time was the real test.

NATURAL CAUSES

This year, the monsoon arrived late; as a result water scarcity was a major issue. The villagers were busy dealing with their personal and farm issues which made it difficult for them to devote time for our awareness activities, and exposure trips. It was a struggle to accomplish it. Also, when the rains arrived, the construction work that was approved for area treatments took a halt.

Overcoming the challenges, sufficient work has been completed under various components as mentioned before. Proposals for 2218 ha area have been submitted to execute soil and water conservation activities, of which proposals for 1042 ha area have been sanctioned.

The area covered post the sanction is 836 ha. The project further aims to increase the cumulative agricultural productivity by 20 % over the baseline of the year 2013.
On the road to achieve a goal, there are bound to be challenges. These challenges are imperative, as they nurture our determination and motivate us to try harder.

Despite the hurdles, the PPCP project continues to proceed efficiently. The project works by the Wasundhara approach. The appointment of VDCs, wealth ranking of the village, formation of SHGs, appointing of Wasundhara-Sevak and Sevika (village implementation supervisors) to ensure timely implementation of work, is still in process.

The project is a joint effort of various stakeholders. However, our objective is to adopt a participatory approach and proceed through interventions making our beneficiaries a part of the process, at the same time capable of self-development in the future.

With the recently announced budget strongly underlying the need for such partnerships to drive India’s growth, this collaboration between the Government of Maharashtra, Hindustan Unilever Foundation, WOTR, the local administration and local communities is timely and will help develop and validate a model and pedagogy that can facilitate up-scaling of such synergistic developmental collaborations in the country.

This newsletter is a part of our initiative - Public Private Civil Society Partnership - Towards Securing Water and Livelihoods in Changing Climate Through Community Led Watershed Development.

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