

Activities under the PUSH-PULL-POLICY

PUSH: Capacity building of farmers on WETs and WS, cultivation methods using WET.

Formation of strong and competent Water and Environment Groups (WEGs).

PULL: Incentives developed to encourage farmers to adopt WETs in their farms. One incentive being, paying an additional Rs 1 /kg of basmati rice to farmers who improve water efficiency by adopting WETs.

POLICY: Through demonstrations and data, policy level dialogues initiated with Gram Panchayat and line departments to adopt WET in departmental plans and adopt WS approach.

The main components under the WAPRO project are WET, WS, WEG and the Jalsakhi and they are briefly explained below.

WET Adopted: System of Rice Intensification (SRI); Alternate Wetting and Drying (AWD); Composting; Intercropping; Crop Rotation & Irrigation practices (Drips, Sprinklers, Furrow irrigation etc.)

WS Concept: Promote sustainable water use, achieved through a stakeholder-inclusive process involving site and catchment based actions

WEG Structure: WEG is an important decision making and support body at the local level, that gives space for the community to voice concerns related to water access and management. They are able to plan and execute corrective measures, collectively.



WEG Meeting in Progress

WEG members: Can include all villagers

Executive committee: Only rice project members

Elected officials: President, Vice President, Secretary and Treasurer

Women in group & executive committee: Min 40%

Jalsakhis: A unique and successful concept where women farmers from project areas are identified based on their interest and commitment towards project goals. They are trained on project components and on community capacity building approaches. Jalsakhi's bring in a strong women's presence and their acceptance as a knowledge repository on water management issues is creating a wave change, encouraging other women farmers to participate actively within the project.



The Jalsakhi Training

Jalsakhis initiate WEG formation and build their capacities. They handhold the WEGs while developing the WS plan and implementing the water works. Technical input from WAPRO is provided for the WS plans. Through this plan, canal and water source repair and construction works that will result in sustainable use of water are identified for implementation.

Conclusions and Way Forward

- Increase demonstrations as they help in 'learning by doing', and raises awareness levels
- Strengthen WEG's as they are highly effective. Villages need this local support bodies to seek solutions and undertake repair and maintenance themselves. WEG also acts as a conduit between the panchayat and farmers, resulting in greater ownership and local decision making
- Address the low adoption rate of some WETs and lack of incentives on the WET that limits its adoption
- Influence policies (Local /District/State/National)
- Explore options for marketing rice as well as other crops
- Strengthen the interdepartmental coordination at the block and district levels
- Emphasize and build discussion on water related issues at panchayat level
- Strengthen the flow of information on government policies to farmers
- Convincing farmers to change traditional practices to new technologies is still a challenge

The project is funded by Swiss Agency for Development and Cooperation (SDC) and globally implemented by Helvetas Swiss Intercooperation. The Intercooperation Social Development India, is the implementation partner for Helvetas Swiss Intercooperation in India. The Coop, ReismuehleBrunnen (RMB) and Nature Bio-Foods (NBF) are corporate partners for Pull factor of the project.

Water Pledge

WAPRO has developed a Water Pledge that brings the community together under the common umbrella of water conservation and sustainable use. WEGs and schools are provided with yearly calendars that has the pledge written on it.



The Water Pledge

Increased water efficiency and food production in key commodity value chains through multi stakeholder partnership applying a Push-Pull-Policy strategy (WAPRO)



In India, 80% of available fresh water is used for agriculture and around 50-55 % is used up by just two crops, rice and sugarcane. To produce 1 kg of rough rice, about 2500 lts of water is required.

Basmati Rice - India is the largest producer and exporter of Basmati rice, a special variety of long-grain fragrant rice cultivated at the foothills of Himalayan mountain range. In Uttarakhand, the total Basmati area is estimated to be 14,535 ha. About two thirds of the basmati rice produced in India is exported.

Basmati rice productivity is 1,400 – 2,100 kg per hectare, but several factors affect the productivity, with monsoons in particular playing a key role. The region receives 1100 to 2370 mm annual rainfall, but its erratic nature and high runoff losses makes water scarcity a major concern. Rice crop suffers adversely from varied levels of drought resulting in low productivity.

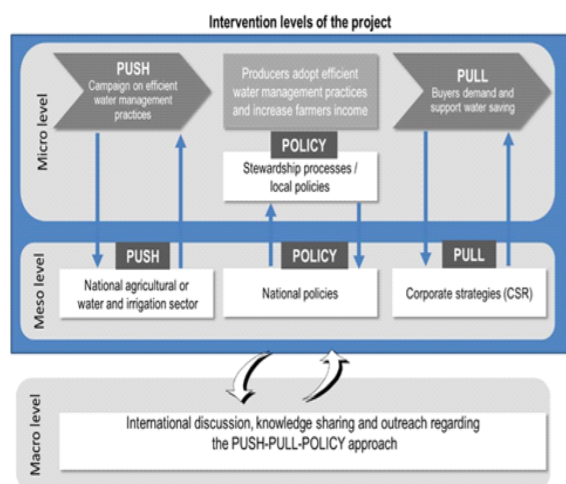
Project titled 'Increased water efficiency and food production in key commodity value chains through multi stakeholder partnership applying a Push-Pull-Policy strategy.' aka WAPRO project, implemented in three districts of Uttarakhand state since 2015, aims to bridge the water productivity gap in the rice value chain. The project encourages farmers to adopt identified Water Efficient Techniques (WET) and endeavors to make the best use of available water, thus improving farmers' income levels. Starting from rice production the project expanded to other related challenges



Intercooperation Social Development India
Sappers Line Quarters, 153/A/4, Balamrai, Balamrai Rd,
Pratap Colony, Rasoolpura, Secunderabad, Telangana 500003

The Approach

The project framework is based on three pillars of Push – Pull – Policy (PPP) and develops innovative approaches to implement Water Efficient Technology (WET) for improved production and Water Stewardship (WS) plans. The implementation would be carried out by the Water Environment Group (WEG) formed in the village. The three pillars are cross-cutting the three intervention levels in the project Micro – Meso and Macro levels, as seen in the figure.



Project Achievements

Since inception, 55 WEG's have been formed (by 2017) and they have submitted 200 WS plans. Of these, 20 plans on Irrigation water have been completed and 03 ongoing, while 32 proposals were of safe drinking water. These WEG initiatives have benefited 1624 families from the irrigation activities (8847 bigha covered) while the number of individuals benefitted by drinking water activities is 10000. Participation of women has risen from 53% in 2015 to 88% in 2018. This is a great achievement and the Jalsakhi have played a major role in this achievement.

Studies carried out in demonstration plots show that 23-25% water saving achieved through SRI and AWD adoption enhanced crop productivity by 20%. More specific crop based analysis shows that, by using 19, 23, 22 and 24% less water in chickpea, lentils, vegetables and wheat, 55, 39, 11 and 23% more productivity was recorded in respective crops.

Case Studies

There are success stories that have emerged from the field and some are shared below. Under the project, WET demonstrations undertaken include SRI, AWD, intercropping of Soya-rice, line sowing of lentil, chickpea, wheat and vegetables, and composting. The WS plan executed vary as does the outreach. The approach under the WEGs are also diverse as can be seen in the case studies. These learnings can be replicated to multiply the WAPRO effort to manage water in the hills of Uttarakhand.

Village: Dhamola	Household: 353	Population: 1757
Block: Kotabag	District: Nainital	
WEG: Dhamola Jal Evam Paryavaran Samooh	Since: 11 May 2017	Trained Farmers: 120

The WEG has proved to be a model, successfully inspiring peripheral villages to form WEGs and establishing good working relations with line departments.

Under Dhamola's WS plan, one plan executed is that of irrigation water source repair as well as new collection chamber for drinking water construction.

During their meetings WEG decided to link with the drinking water department and submitted a proposal for constructing a new collection chamber at the drinking water source. This was executed successfully, directly benefitting 353 households in the village.

The Jalsakhi, Janaki Sati, has a good network in the project area and conducts awareness programs across 19 villages. Her approach is to contact the gram pradhan when initiating meetings and trainings within a village. This has proved to be a successful model of work as she has always got their support. She encourages women in WEGs to take up posts within the executive committee.

Outreach

Work under Dhamola WEG spread to nearby village Khempur. The Gram Pradhan from Khempur showed interest and asked the Jalsakhi to provide training and facilitate WEG formation. The WEG was formed, WS plan for canal repair work to improve irrigation water situation of the village prepared and undertaken through ICSD funds, keeping the irrigation department in loop regarding the activities.

Gebua Panchayat near Khempur saw the visible progress in the water condition of Khempur and Dhamola. The Gebua Gram Pradhan approaching the Jalsakhi to provide trainings and form the WEG. This is currently under progress.



AWD Demo

Village: Kiarigaon	Household: 36	Population: 186
Block: Ramnagar	District: Nainital	
WEG: Kyari Jal Evam Paryavaran Samooh	Since: 20 Nov 2015	Trained Farmers: 51

Kiari Gaon village is situated inside the Jim Corbett National park and surrounded by forest from sides and a tributary of Kosi River flows near the village. The adoption of WET technologies is high among the farming community. Here 4 WS work plan have been executed and they include:

a) Desilting tank construction: Drinking water to Kiari Gaon originates from springs located 2 kms from the village and flows through the canal to the village carrying silt and decaying organic matter rendering water non-palatable.



Desilting Tank, Kiari Gaon

The community submitted a WS plan to construct a desiltation tank at the source allowing silt and organic waste to settle and clean water to flow through the canals.

b) Two canal repair work to reduce seepage of clean drinking water was taken up with community contribution of 20 per cent of the overall cost in the form of shramdhan.

c) Concerned about the water quality in the government school, villagers voted to have a water cooler and filter installed. The maintenance of the cooler and filter is the responsibility of the WEG members.

Jalsakhi – Kaladevi, from Dhela Village of Ramnagar block, is also a Fair Farmer Foundation (FFF) member. As her area is very far and government program information do not reach these parts, she decided to be part of the solution and joined as Jalsakhi and covers 8 villages.

Village: Tiwarigaon	Household: 78	Population: 413
Block: Betalghat	District: Nainital	
WEG: Jagrti Jal Evam Paryavaran Samooh	Since: 10 March 2017	Trained Farmers: 102

Tiwari gaon is situated in a valley on the banks of Kosi River and surrounded by high hills. Floods in 2010 destroyed the irrigation canals which led to constant change in the cropping pattern. Shift to Amaranthus and rabi crops is emerging lately. The WEG is constituted of mainly women members.

WS plan implemented were two - water filter provided in a government school and installing a water lift pump for irrigation purpose. In addition, as irrigation water in this hilly area is poor, the WEG prepared a WS plan to repair the head of the canal to improve flow of water in the canals to reach the tail end farmers. This was forwarded to the line departments, but there was no action taken for a long time. The WEG escalated the issue with local media support, resulting in the departments taking note and having a discussion with the villagers. This resulted in the WS plan being incorporated in the department's canal action plan, thus resolving the issue.



Water Filter

Seema Tiwari the Jalsakhi conducts awareness programs in 16 villages; with demo plots established in 4 villages of Betalghat and 3 of Mallisetti block.