MULTI STAKEHOLDERS JOIN FORCES TO ACHIEVE QUANTUM LEAPS IN WATER PRODUCTIVITY (WAPRO)

The Water Productivity Project (WAPRO) – a multi-stakeholder initiative to address water efficiency issues in rice and cotton production in Asia
An innovative approach to increase water productivity in rice and cotton

Experts and scientific studies in various science disciplines agree that water and irrigation issues are a key concern for global food security and that potential water conflicts are an essential risk for water scarce regions.

Positioned within the Global Programme Food Security of the Swiss Agency for Development and Cooperation (SDC) a multi-sectoral group of actors under the lead of HELVETAS Swiss Intercooperation allied to roll out an innovative approach to address inefficient irrigation practices in smallholder farming of cotton and rice in India, Pakistan, Tajikistan and Kyrgyzstan.

The alliance is based on the insight that the complexity of water productivity in the field cannot be tackled by individual actors. A more holistic approach is required that can only be achieved by a set of activities that plug together synergistically. Thus, the actors came up with the idea to develop an approach that can implement three components practically:

1) **The Push Component** will address the knowledge gap of farmers. Particularly small-farmers have either not the knowledge about modern irrigation practices or they cannot risk to experiment with practices different from the ones they are using already.

This component represents the usual approach of development cooperation: Bringing a change of technologies via extension. This approach is useful, but finds only a fraction of the farmers adopting the methods, because incentives for the change are lacking.

2) **The Pull Component** addresses the lack of incentives. Farmers that either produce cotton or rice will be motivated to change production and irrigation practices, because the buyers of the product support this change either by a direct premium or via the benefits of a systematic programme.

3) **The Policy Component** aims to fill the gap that inappropriate water governance is creating. The water distribution, the maintenance of the channel system, and the right timing of irrigation leaves in many cases room for improvement and requires efforts beyond the reach of an individual farmer or a single private sector entity. The stewardship approach (for explanations see next page) brings water users together to agree on a joint action and water use plan.

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**What is water productivity?**

It is the ratio between amount or value of a crop and the amount of water applied for its production. Increasing water productivity means:

a) to decrease the amount of water for production while keeping or increasing the level of yield/income from the crop, or

b) to increase yields/value of a crop, while keeping or decreasing the amount of water.

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**Knowledge gap**

- Compiling available know-how and tools on water management
- Awareness raising among stakeholders
- Capacity building of extension services
- Promote improved measures and technologies
- Measure and monitor water use

**Lack of incentives**

- Trade agreements between buyers and producers that address water management
- Technical support of producers in applying tested water saving practices
- Financial incentives to join the programme

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**Inappropriate water governance**

- Capacity building of local project implementers to facilitate procedures around water stewardships
- Strengthening capacities of water user associations in implementing joint action plans
- Strengthen national policies conducive to efficient water use based on evidence and experience

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The interaction between the three components: push – pull – policy
WAPRO is a multi-stakeholder initiative with six sub-projects in India, Pakistan, Kyrgyzstan, and Tajikistan. The consortium partners implement the following sub-projects and activities based on a co-financing model. Together with the SDC contributions the overall project budget for the first 3 year phase (2015 – 2018) amounts to six million Swiss Francs. A second phase with another jointly contributed funding amount of six millions Swiss Francs is planned for 2018 till 2021.

WATER STEWARDSHIP – AN INTEGRAL PART OF WAPRO

The policy component of the project is strongly based on water stewardship ideas. Rather than waiting for policy changes that may come as top down approach, the water users (farmers that need the water for agriculture, but also villagers that need water for household purposes) jointly agree on a reasonable way to share available water resources and on plans to improve the local water situation.

Since 2013, such joint processes can be based on a newly launched international Water Stewardship Standard. Owned and administered by the international NGO Alliance for Water Stewardship (AWS) this set of criteria and indicators specifies the action steps required to achieve a local water management plan that can be accepted by all local water users.

Examples for activities that could be conducted in such an action plan are:

- farmers and their organisations are involved in water measurement
- improved maintenance of small water ways
- improved water distribution plans to achieve right timing and volumes of water delivery
- interaction with local authorities responsible for the maintenance of larger water distribution infrastructures

Within the project the Alliance for Water Stewardship will train local implementers in facilitation skills, how to handle such sensitive discussion procedures and which hydrology facts and legal aspects have to be integrated to achieve reasonable and feasible results.

In combination with new irrigation measures that are implemented by the farmers via the other two project components (push and pull), a jointly accepted water management plan has chances to be endorsed and followed by all involved users. The entry into a new phase of a thoughtful water stewardship can begin.
EXAMPLES OF PROMOTED WATER SAVING METHODS

Intercropping: Wheat planted into cotton fields; last irrigation flow for cotton serves as initial irrigation for following wheat.

Every second furrow irrigation: Up to 30% reduced water application; less weed since watered area is reduced.

Soil cover or mulching: Depending on soil quality and coverage, water use can be reduced by 15–30%

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The System of Rice Intensification (SRI) involves a set of farming practices to «grow more with less», e.g. earlier transplantation of seedlings, alternate wetting and drying, or spacing plants wider apart.

Laser levelling reduces water losses due to uneven fields; application needed only every 5–10 years.

Water measuring:
- Increasing water productivity requires adequate monitoring and controlling. The Triangular weir is a simple, reliable tool applicable by individual farmers.

COMMON INDICATORS TO MEASURE IMPACT

The complexity of WAPRO requires a monitoring system that delivers comparable results from the six subprojects. WAPRO has therefore defined nine key indicators to be measured in a gender disaggregated way – some base on data from all beneficiaries, some base on regular case studies with selected farmers.

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<thead>
<tr>
<th>Impact / Outcomes</th>
<th>Key indicators (m/f)</th>
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<tbody>
<tr>
<td>Impact: Enhanced farming income and increased water productivity for 45000 farmers (t/m) embedded in participatory local water governance schemes and their corresponding regulatory and market frameworks.</td>
<td>1. Number of farmers involved 2. Additional income per farmer 3. Change of water productivity</td>
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<tr>
<td>Push: Rice/cotton farmers (t/m) adopt more efficient and more effective production methods.</td>
<td>4. Adoption rate of improved technologies and/or production systems 5. Enhanced productivity of cotton or rice (t/ha)</td>
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<td>Pull: Private sector companies purchase rice/cotton from farmers (t/m) who produce with more efficient and more sustainable methods.</td>
<td>6. Purchase volume of rice or cotton produced under improved methods</td>
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<td>Policy: Multi-stakeholder water stewardship plans are implemented.</td>
<td>7. Water productivity taken up in local policy discussions 8. Achievement of Alliance for water stewardship milestones</td>
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<td>Macro level: Push-Pull-Policy approach is up-scaled to more farmers and more companies.</td>
<td>9. Number of companies joining WAPRO</td>
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