



Farmers and villagers from Tajikistan and Kyrgyzstan discuss the outlook on the share of water resources using the 3D basin model of their watershed (Tajikistan sub-project).

WATER STEWARDSHIP IN SMALL-SCALE AGRICULTURE

Scaling Water Stewardship in Smallholder Farming: Promise and Risks

Agriculture uses on average 70% of the world's freshwater. As the global population increases and the climate changes, the threat of water and food shortages is a growing reality. To address this, a multi-stakeholder project was launched in 2014 to increase agricultural water productivity: WAPRO. Its Push-Pull-Policy approach offers entry points for private companies to join efforts in increasing crop water productivity and irrigation water use efficiency in the production of cotton and rice. Through its partnership with multi-stakeholder initiatives (see also [Multi-Stakeholder Initiatives Topic Sheet](#)) such as the Alliance for Water Stewardship, WAPRO applied water stewardship principles in smallholder farming. This topic sheet presents key outcomes and lessons drawn from experiences in Tajikistan, Kyrgyzstan, India, Pakistan, Madagascar and Myanmar, and demonstrates how field-level action combined with water stewardship can mean quantum leaps for water savings and improved livelihoods for farmers in small-scale agriculture.

WHY WATER STEWARDSHIP?

Water stewardship is defined by the Alliance for Water Stewardship (AWS) as the “use of water that is socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that involves site- and catchment-based actions” (2019).

Conceptual synergy to join efforts beyond the production site

The Water Productivity project (WAPRO) aimed at improving the livelihood of smallholder farmers by increasing the water productivity of rice and cotton, two of the highest water consuming crops globally. Drawing from a system analysis identifying major barriers and leverage factors, WAPRO proposed a three-pronged approach called Push-Pull-Policy (see Box 1).

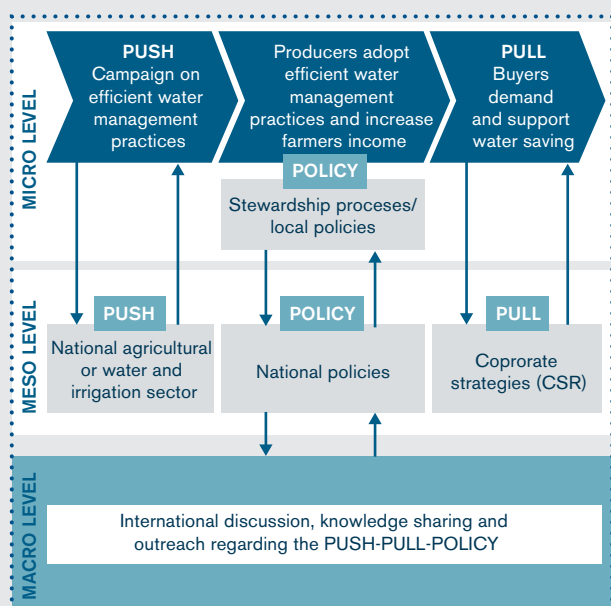
Recognising the responsibility of the private sector in the management of water resources, as well as the need to go beyond the usual focus on crop production by considering the wider value chains, the project engaged with private actors – in addition to the relevant actors from the public sector, local NGOs and civil society. WAPRO established partnerships with three multi-stakeholder initiatives (MSI): the Alliance for Water Stewardship, the Better Cotton Initiative (BCI) and the Sustainable Rice Platform (SRP). The Push-Pull-Policy approach therefore offers a way to apply water stewardship principles in small-scale agriculture, embarking numerous farmers on a journey towards water stewardship.

Unleashing the potential of water-saving technologies

In small-scale irrigated agriculture, one of the major barriers to increased water productivity and water use efficiency is the low rate of adoption of water-saving technologies by smallholder farmers. In many cases, this is not only due to a lack of knowledge, but also to a lack of incentives for farmers to adopt new technologies, including the risk and uncertainties around irrigation water supply.

Awareness, knowledge and collectively coordinated and endorsed actions are thus needed to create a trusted and conducive context in which farmers not only pro-actively embrace water-saving technologies, but also ensure their proper implementation and care for the sustainability of water resources. In jointly developed water management plans, water-saving technologies can unleash their potential and in turn, become a key element in collective action for irrigation water use efficiency and management.

10 sub-projects in 6 countries: India, Kyrgyzstan, Madagascar, Myanmar, Pakistan, and Tajikistan



Duration: 2015–2022 (8 years)

Partners: Multi-stakeholder initiatives, multinational and local private companies, local NGOs, and civil society

Funds: SDC and private sector partners

Key outcomes:

PUSH: 81,280 farmers reached/trained to support adoption of water-saving technologies and farming practices.

PULL: global and domestic companies sourcing rice and cotton more sustainably by providing various incentives for the supplying farmers.

POLICY: influenced national and sub-national policies to allocate scarce irrigation water fairly, empowered thousands of farmers to claim their right to access irrigation water and contributed to shaping global production standards.

Box 1: WAPRO Push-Pull-Policy approach and key outcomes

WORKING STEPS TOWARDS WATER STEWARDSHIP

The Alliance for Water Stewardship (AWS) has led the development of a global standard which guides multi-stakeholder action by responsible water users from the private sector, public sector and civil society organisations (CSO)/NGOs. The AWS Standard is implemented through 5 steps to achieve 5 objectives: good water governance, sustainable water balance, good water quality status, important water-related areas, and safe water, sanitation and hygiene (WASH) for all (see Figure 1).

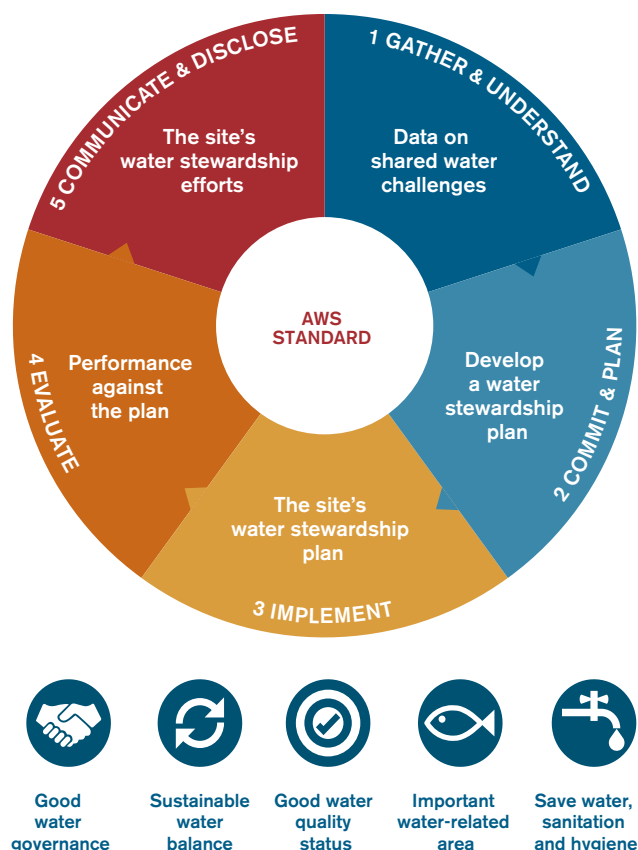
Given that WAPRO was not aiming at full implementation of the standard *per se*, application of water stewardship principles translated into specific contributions to the objectives of **sustainable water balance and good water governance**, with emphasis on the first three steps. In step 1, creating awareness on present and future water challenges within and around the farming sites was a demanding and time-consuming task. To facilitate effective discussion of water issues among water users, creative means of basin visualisation proved to be particularly helpful (see cover page photo).

In step 2, WAPRO not only engaged with **local water and irrigation authorities, but also with government representatives at higher political levels**. In many cases, water policy and legislation were outdated, and neither reflected the new insights on climate change nor the increasing water demand. Advocacy was often needed to promote a governance of water resources that enabled planning and implementation of water stewardship.

Photo 1: Farmers and government officers discussing irrigation water use planning at WUA level, Tajikistan



Figure 1: Water stewardship objectives and working steps according to AWS (after AWS, 2019)



In step 3, the building and collective endorsement of water stewardship plans required thoughtful **facilitation processes to achieve active and genuine participation** of farmers, private companies and government authorities in joint workshops and platforms. Wherever possible, WAPRO strengthened the capacity of **local CSOs** to enable them to take over the role of facilitator. Their expertise in the local water sector granted them the credibility to act as a neutral but committed entity.

MORE CHALLENGING BUT POTENTIALLY MORE IMPACTFUL

Implementing water stewardship in collaboration with government authorities and private sector partners carried multiple opportunities and benefits, but also unavoidable risks and challenges. This section highlights the key related outcomes drawing from the experience of the WAPRO sub-projects.

Achieving multiplier effects on impact and investment

- The three stakeholder groups (public sector, private sector and CSOs/NGOs) played complementary roles from the production sites through to the supply chains (see for example Figure 2) and their activities were synergised under the Push-Pull-Policy framework. Notably, farmers were significantly **incentivised to reduce their water consumption** through premiums, increased market access, enhanced knowledge, and provision of small equipment for water saving.
- Such collective action contributed to the high numbers of **trained farmers** (more than 80,000 in total), a good **rate of adoption** of water saving technologies and practices (70% on average), and increased livelihood income (20–30%) resulting from higher crop water productivity (by 30% on average) and better sales.
- At the global level, **experiences and lessons were shared** among the various water stewardship actors through the dynamic AWS platform, including the annual Global Forum on Water Stewardship and the Agriculture Working Group. WAPRO also provided trainings and field-testing sites to improve the water component of the Better Cotton Initiative and the Sustainable Rice Platform standards through cross-fertilisation with the AWS standard.

While addressing multiple challenges and managing risks

- **Addressing different interests and unbalanced power relationships** between farmers and supply chain actors, given the capacity of large companies to influence the water agenda. WAPRO focused its support on farmer groups such as Water User Associations (WUAs) that were lacking capacity and were often economically and financially weak.
- Paying attention to **the sustainability of WUAs that may be at stake** in some countries, due to a lack of buy-in by the private sector, insufficient WUA engagement or coordination with the producers (rice growers in Haryana and Uttarakhand, India), weak institutional environments or political instability (Myanmar).
- Making sure that saving water and generating economic benefits **did not affect progress on social and environmental objectives** or obscure the resulting trade-offs between the different objectives (see examples in the following section).
- Partnering with large multinationals brought some media exposure, increasing the **reputational risk of NGO partners** where the media misinterpreted or oversimplified messages on the role and intention of civil society and NGOs in multi-stakeholder water stewardship initiatives.

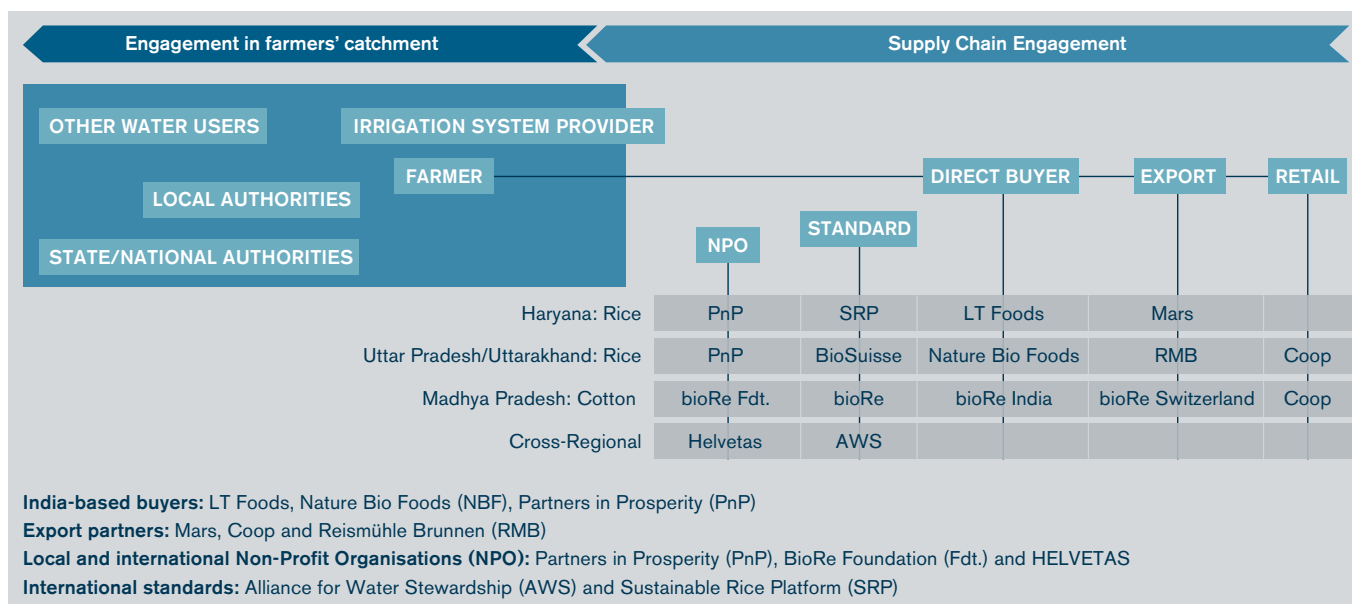


Figure 2: Actors mapping for the WAPRO sub-projects in India (Pietschmann, 2021)

KEY LESSONS FOR SCALING

Given the multiple challenges and risks, the WAPRO experience underscores the importance of being well-prepared to optimise the range of benefits, ensure their fair distribution, and avoid or limit potential negative effects.

Embedding water stewardship in the existing water management and governance context

While this may sound trivial, in practice water stewardship tends to be perceived and operationalised as an add-on intervention. This was prevented by:

- **Highlighting the role and added value of water stewardship in each specific context** as water stewardship interventions will often be initiated in existing water management and governance settings and dynamics.
- **Defining complementarities with existing frameworks and seeking synergies.** In WAPRO, frameworks such as the **Water Use Master Plan (WUMP)** in Pakistan and the **WUA water use plans** in Tajikistan were tailored to water stewardship (see Photo 1). In addition, synergies with SDC-funded interventions in **integrated watershed management** and **Integrated Water Resources Management (IWRM)** were sought to accelerate upscaling in Tajikistan.

Balancing interests and needs while preventing capture of water agendas, by:

- **Defining clear rules, roles and responsibilities** while establishing comprehensive contractual relationships with private sector partners including due diligence (see the [Private Sector Engagement Topic Sheet](#)) and building ownership of farmers' communities and local organisations (see Photo 2). In Madagascar for example, contracts between farmers and corporate buyers contain a clause on water use efficiency under the scope of water stewardship.
- **Developing the adaptive capacity of farmers**, that is their ability to adapt to shocks and stresses by 1) adapting the design of water stewardship interventions to local priorities and institutional settings, 2) building trust, and 3) supporting cross-stakeholder learning (Sommer, 2021). According to the author's analysis, this resulted in robust and fortified relationships between actors in both Pakistan and Tajikistan.
- **Empowering smallholder farmer groups** such as WUAs and Water Users Groups. WAPRO strengthened the role and legitimacy of WUAs as key players in irrigation water stewardship, and successfully advocated for the institutional recognition of WUAs in Kyrgyzstan (see the documented experience about [participatory advocacy](#)). However, the sustainability of such groups may require a joint contribution by the private sector as well as further commitment of government authorities.



Photo 2: Private company representatives exchanging with communities, Uttarakhand, India

Making sure that economic benefits do not undermine social and environmental objectives and that no harm is inadvertently done, by:

- **Connecting water stewardship to the well-being of farmers and their communities.** Saving water resources *per se* is unlikely to be the sole driver of systemic change in small-scale agriculture. Economic and social benefits in the livelihood of farmers and in their communities need to be proven.
- **Compensating for undesirable consequences and new challenges brought by water stewardship, especially on vulnerable farmers.** For example, the adoption of new sowing techniques such as dry seeded rice in Pakistan reduced the need for transplanting, a task traditionally performed by women (see Photo 3). WAPRO therefore supported women in finding other tasks in the rice value chain and in building their skills for alternative jobs.
- Paying attention to the potential **'rebound effect'** occurring when enhanced water productivity or efficiency actually increase rather than decrease water consumption. Such outcome would affect the distribution of benefits from agriculture water savings with respect to other users (e.g., Water, Sanitation and Hygiene) and the environment.

Establishing robust control mechanisms throughout the water stewardship journey, by:

- **Monitoring, Evaluation, Accounting and Learning (MEAL)** systems that include procedures such as reward and sanction mechanisms specifically assigned to the provision (or not) of environmental and social benefits.
- **Assessing and managing risks**, especially those that arise through engagement with the private sector, both at project and organisational levels.
- **Managing adaptively** to integrate lessons from the control mechanisms and to improve or adjust implementation if it diverges from the desired and jointly defined environmental, social and economic objectives.



Photo 3: Women farmers transplanting rice, Pakistan

CONCLUSION

In conclusion, engaging with the private sector for water stewardship in small-scale agriculture can have a leverage effect in accelerating and scaling increases of crop water productivity and irrigation water use efficiency, so long as the multi-stakeholder partnership is well managed and closely monitored.

In particular, this means ensuring that not only economic objectives, but also social and environmental goals are sustainably achieved. Further implementation, learning and sharing of experience are called for to improve such multi-stakeholder relationships for the benefit of the farmers, supply chain actors and water resources.

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