



Mitigating water risk and creating shared value

Lessons from implementing the Alliance for Water Stewardship standard in Africa

This report documents the lessons generated by the first implementation of the Alliance for Water Stewardship Standard in East Africa. Olam International Ltd., a leading global agri-business, adopted the AWS standard at their Aviv Coffee Plantation in the Upper Ruvuma Basin in Southern Tanzania. They were supported by AWS accredited advisors, Water Witness International. Additional support to document the process came from the International Water Stewardship Programme (IWaSP) managed by GIZ on behalf of the UK (DFID) and German governments (BMZ) - for whom the water stewardship standard holds strategic interest. The objectives of the exercise were to:

- Advance and formalise Olam's approach to water stewardship using the AWS standard, to better manage water risk and support collective action for water security.
- Establish the business case for the AWS standard in Africa by exploring the costs and benefits for business, government and community stakeholders.

The results of AWS standard implementation, the costs, benefits and challenges faced are presented below, together with conclusions and recommendations.

Background and methodology

The Alliance for Water Stewardship launched the International Water Stewardship Standard in 2014 to guide and recognise responsible water use and collective action on water risks by private sector water users (See Box 1). During 2015 Olam adopted the stepwise methodology shown in Figure 1 to align operations at their coffee plantation in Tanzania with the requirements of the standard. The methodology was designed and supported by Water Witness International who also tracked and documented costs and benefits. Compliance will be verified through an audit against the standard in 2015 by an independent AWS accredited certification body.



In the face of climate change and growing demand for water, economies are increasingly threatened by poor water resource management. According to the World Economic Forum, from 2015 water crises became the primary risk to the global economy in terms of impact. In addition to physical water risks such as pollution and water scarcity, businesses face regulatory risks associated with non-compliance and charging, and reputational risk associated with negative environmental and social impacts. Businesses are becoming aware of the water-related risks they face and are seeking ways to address them.

The Alliance for Water Stewardship (AWS) is a global partnership which leads the practical response to mitigating shared water risk. The AWS is dedicated to supporting the responsible use of freshwater by all users through a water stewardship system that drives, recognizes and rewards improved water stewardship performance. AWS defines water stewardship as *'the use of water that is socially equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that involves site and catchment-based actions'*.

At the core of the AWS system is the International Water Stewardship Standard (the AWS Standard). The AWS Standard is an international standard which complies with best practice for standards set by the International Social and Environmental Accreditation and Labelling Alliance. Through a global process of consultation and testing with water stakeholders a set of criteria and indicators were developed for how water should be stewarded at the site and catchment level in a way that is environmentally, socially and economically beneficial. Implementing the AWS Standard helps businesses to mitigate their water risks, address shared water challenges in their catchment, and ensure that responsible water stewardship actions are in place to minimize negative impacts and maximize positive impact for everyone.

The Standard is organised around six steps, each of which contains a set of a criteria to contribute to water stewardship outcome are of: (1) good water governance, (2) sustainable water balance, (3) good water quality status, (4) healthy important water-related areas. The Standard is intended to encourage continuous improvement.

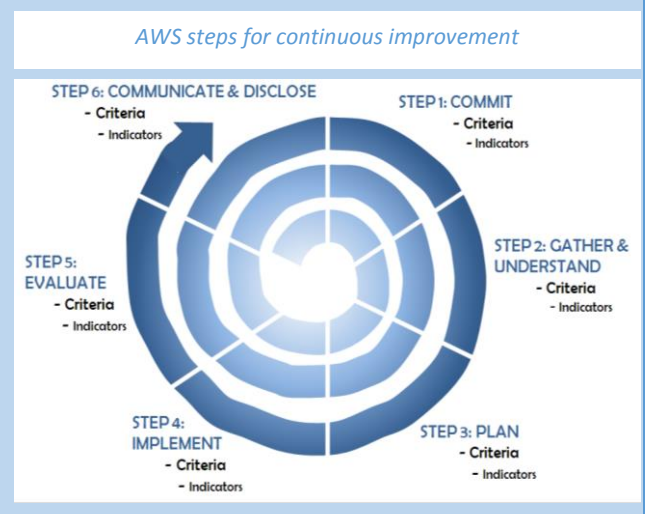
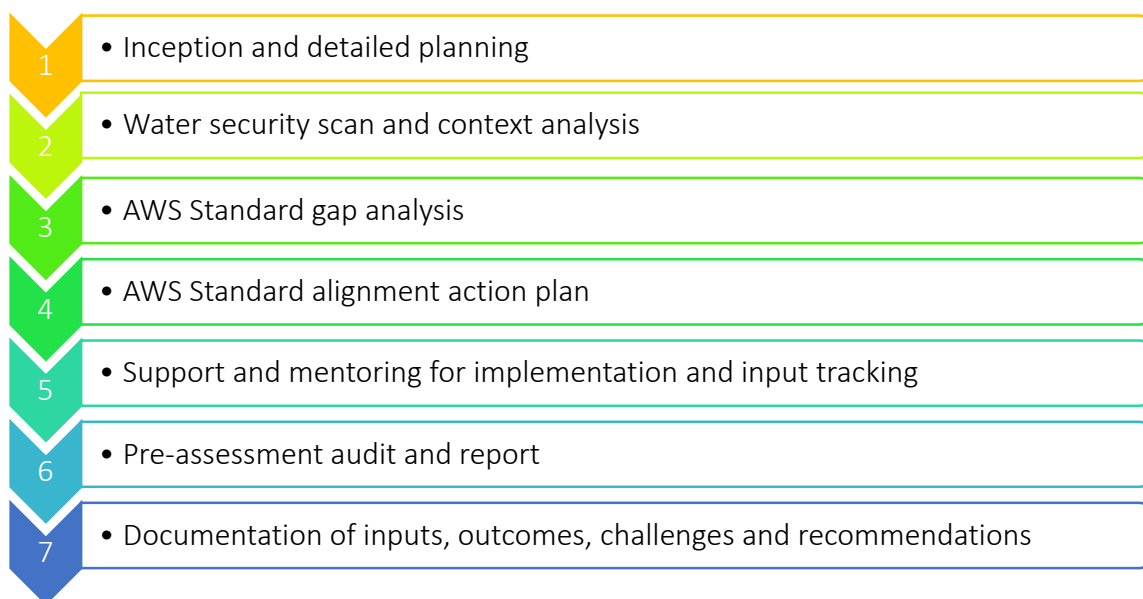


Figure 1. The methodology adopted to support alignment with the AWS standard



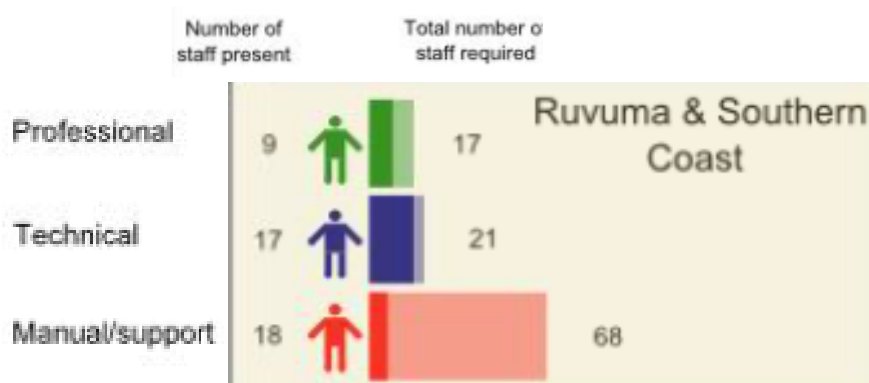
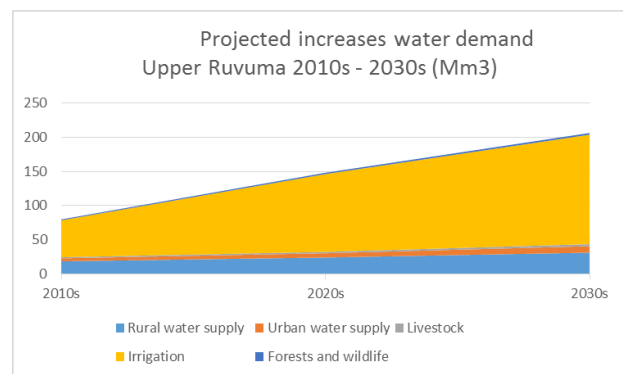
A challenging water security context

Like many investors in Africa, Olam faces a complex mix of water challenges which pose risks to operations and financial viability, and to the company's social and legal licence to operate. At their Aviv Tanzania coffee plantation these include:

- A naturally dynamic physical environment of regular flood and drought events, the frequency and severity of which are likely to increase as a result of climate change.
- Competition and conflict over water resources in the sub-basin where rapid demographic change within relatively poor communities alongside new economic investment is increasing degradation and demand.
- Weak governance and low levels of investment in water. Despite reformed water law and institutional frameworks, government authorities lack the resources and reach to effectively manage water resources. Very few users possess water use permits and the ability of the Basin Water Board to control and coordinate water use so that everyone gets a fair share is limited.

Within this context Olam plans to irrigate close to 2000 ha of coffee via abstraction from the Upper Ruvuma, to employ some 1250 people and contract 1100 out-growers. The increasing prevalence of dry spells in a sub-basin where competition, conflict and degradation are increasing, and where governance capability to manage these issues is limited exposes all water users in the basin to serious risks. As a leading global agri-business committed to doing business in a sustainable manner, Olam had already begun to act on these risks. This new and pioneering work to implement the AWS standard seeks to support and strengthen that effort, and advance the water stewardship agenda for greater water security in the region.

Images (clockwise from top left): Location of Upper Ruvuma Basin; small scale rice farming requires substantial water but few small scale farmers possess a water use permit; demand projections for the Upper basin; artisanal activities such as small scale mining pose risks to downstream users; the Ruvuma and Southern Coast Basin Office responsible for water resource management face large shortfalls in staff and resources required to deliver.



Positive change driven by the Alliance for Water Stewardship standard

Olam was already performing well as a water steward ahead of the AWS standard implementation. However, implementing the standard has bolstered those efforts. Examples of significant change driven by the standard include:

Improved water quality management and pollution control

Pollution risks posed by and affecting the site have been systematically identified and acted on. Comprehensive pollution prevention and control planning has led to improved fuel storage facilities, management processes, and investment in risk-based water quality monitoring. Perhaps the most significant change has been in erosion control which posed serious risk of infrastructure damage and resource loss on site, and catchment degradation downstream. A focused approach to erosion control has been funded and implemented with erosion risks mapped and control measures such as check dams and planting of vetiver grass initiated.

To address pollution risks in the basin Olam have initiated communications with the municipal sewerage provider to demand that sewage pollution threatening the site be controlled.

Sustainable water balance and equitable use

The most significant risk facing all water users in the basin is water scarcity during periods of low flow and resulting shortage in supplies, environmental impacts and conflict. AWS implementation has strengthened Olam's ability to demonstrate compliance with its water use permit and protect environmental flow needs so that its own activities don't impact on others. It has also driven a review of the site's permit and the likely surrender of water back to the basin, once long-term operational needs have been established during 2015. This will contribute to equitable and sustainable resource use among basin stakeholders in the future.

Further, Olam's Aviv Tanzania site is now monitoring its water use intensity so that it can set and track water efficiency targets. Proactive conflict mitigation measures to prevent future disputes with downstream users have also been initiated.

Water supply, sanitation and hygiene provision

AWS standard implementation confirmed a previously identified requirement to improve water, sanitation and hygiene (WASH) facilities for staff across the site. Previously these were inadequate in terms of location, provision per head and distance to travel and this posed reputational, regulatory and operational water risks. Olam's approach to WASH provision has been strengthened at site, and globally as a result of working through the AWS standard. Internal policies, guidelines and standards now make reference to World Health Organisation guidelines, with new funding mobilised to ensure alignment with these.

Improved governance and positive influence beyond the fence line

Olam are co-investing in establishment of the Upper Ruvuma Water User Association. Once successfully established this body will lead efforts to address priority shared risks, including low flows, inadequate WASH infrastructure, unregistered water use by small irrigation schemes and catchment degradation including through artisanal mining activities. It will also support water allocation in line with sustainable yield, and plan responses to extreme events such as drought.

As well as investing in new skills and capacity at site level, Olam are also working with out-growers and local communities to improve water management and WASH provision. The process of alignment with the AWS Standard has demanded greater levels of transparency and disclosure by the site which in turn facilitates stronger and more trusting stakeholder relationships. Drawing on this credibility, the company is now supporting national level advocacy for improved water resource management in Tanzania through the Uhakika wa Maji Initiative.



Erosion control planning will reduce impacts on and off site



New protocols for monitoring water use and abstraction will drive efficiencies and compliance



Improved WASH provision will improve worker wellbeing, health and productivity



Stronger stakeholder participation in basin management will improve water security for all

The benefits of AWS standard implementation

The outcomes and benefits of the AWS standard are summarised in Table 1, with benefits at site level elaborated in Table 2 and for basin governance and stakeholders more widely in Table 3.

Table 1. Summary outcomes and benefits of AWS standard implementation at Olam’s Aviv Coffee Plantation


Outcome areas	Summary outcomes of AWS Standard implementation	Benefits		
		Community and basin stakeholders	Site and company	Water governance institutions
Good water governance	<ul style="list-style-type: none"> • Support for basin governance • Investment in establishing Upper Ruvuma Water User Association • Investment in improved WASH for workers • Constructive national level advocacy • Proactive approach to conflict resolution • Greater transparency and disclosure 	✓	✓	✓
Sustainable water balance	<ul style="list-style-type: none"> • Establishing a site water balance and targeting more efficient and productive use • Review of water use permit to support sustainable resource use 	✓	✓	✓
Good water quality status	<ul style="list-style-type: none"> • Comprehensive pollution prevention planning & control • Investment in water quality monitoring and analysis • Improved erosion control • Addressing priority water quality risks in the basin 	✓	✓	✓
Healthy important water related areas	<ul style="list-style-type: none"> • Demonstrating compliance and protection of environmental flow needs • Improved management of the Ruvuma River corridor 	✓	✓	✓

Table 2. Benefits of AWS standard implementation at site and company level

Benefits of AWS Standard implementation for Olam International
Long term security of business operations and reputation through reduced water risk and demonstrable commitment to responsible use
Reduced likelihood of regulatory action, fines, compensation and remediation costs because of new systems to assure compliance
New water use data and efficiency tracking and likely long-term cost saving, efficiencies and higher productivity
Enhanced staff and team capacity to systematically and adaptively manage water risks, and to replicate new skills and approaches in other areas
Efficient targeting of new investment towards management of priority water risks
Ability to scale and transfer best practice from leader site implementation across global value chains in order to reduce vulnerability to water risk
Securing of new business and investment, and safeguarding existing business through demonstrable credibility as a responsible water steward

Table 3. Benefits of AWS standard implementation for basin stakeholders and governance

Benefits of AWS Standard implementation for basin governance and water security of local stakeholders
Direct contribution to improved water security for 14,286 people through action on WASH and better water management in local communities and out-grower farms.
New investment and action to improve sub-basin management which potentially contributes to improved water security for sub-basin population of 295,180
Reduced risk of pollution and inequitable water use through private sector alignment and compliance with national water policy and law
Targeted support and investment for the formation of a Upper Ruvuma Water User Association and basin Integrated Water Resource Management and Development plan
Advocacy for improved water resource management in Tanzania



In water vulnerable areas there is no doubt that the AWS Standard helps. Without the Standard, we wouldn't be where we are in developing capacity and processes to manage our water risks

Jeremy Dufour, Environmental and Social Manager, Olam

It has helped me to point out and take action on water problems which were neglected

Elia Mnonjela, Health, Safety and Environment Office, Olam

It is clear that the AWS standard can improve water security for investors and local communities alike, and help to implement government policy on water.

Jane Joseph, Country Manager, Shahidi wa Maji NGO

The AWS certification process does not only benefit OLAM and the public sector but will also improve water security for communities. The establishment of the multi-stakeholder dialogue creates an opportunity for ongoing learning and continuous improvement. We hope that the benefits will motivate other companies to apply the standard.

André Lammerding, International Water Stewardship Programme, IWaSP (GIZ)

The big benefit has been to showcase our commitment to sustainable resource use. This will help us secure investment, social licence to operate and market access.

Jeremy Dufour, Environmental and Social Manager, Olam

Efficient water use in irrigation by Olam and other water users in the Upper Ruvuma is the key to sustainable water resource management in Upper Ruvuma River and the wider basin.

Lazaro Msaru, Ruvuma Basin Water Officer, Ministry of Water

Implementing the AWS standard has definitely opened our eyes to the risks we face. There were issues we just hadn't seen. Before the AWS standard we weren't making best use of our resources, and this was risking productivity, impacts on the environment as well as regulatory and reputational problems.

Jeremy Dufour, Environmental and Social Manager, Olam

Costs and challenges of AWS Standard implementation

Tracking the costs of implementation shows that adopting the AWS standard is a cost-effective investment. In summary the costs amounted to several weeks of staff time, external support for implementation and investment in modelling and analysis of around €40 000, together with a further €140 000 in essential infrastructure improvements, and €30 000 onward investment annually. Cost will vary at other sites depending on context, prior investment and scale of operations. However, it is clear that for operations of comparable scale, AWS implementation represents good value for money given the role of stewardship in mitigating water risk. Adopting the standard can have a multiplier effect and lever additional investment in stewardship by donors, government and the private sector.

The most significant challenges facing implementation include:

- A lack of data or limited availability of good quality data in some catchments which can impose higher costs.
- Variable stakeholder capacity and willingness to engage, with some demanding payment for attending meetings.
- In some governance challenged basins there is potential for a disconnect between what is desirable from a sustainability perspective, and the requirements of legal compliance. For example, where water has been allocated historically based on poor data, compliance can be meaningless, or worse, can drive inequitable use and depletion. A robust duty of care requirement would be a simple addition to the standard to address this 'sustainability gap'.

Conclusions and recommendations

The guided implementation of the AWS standard at Olam's Aviv Tanzania Coffee Plantation shows the standard to be a cost-effective mechanism for improved water security with multiple benefits for the site and other stakeholders. By targeting management effort on priority water risks, and establishing capacity and systems to track and modify responses where necessary, the standard drives long-term resilience to water and climate risks. This is particularly important in basins across Africa, where despite reformed water management institutions, government led action on water risks may take some years to become effective.

For companies like Olam, the AWS Standard provides new ways of managing and monitoring resource use, of ensuring compliance with legislation and international best practice, and of avoiding conflict with other resource users. In addition to costs saving, the AWS Standard helps to secure companies' legal and social licence to operate, and through documenting and showcasing efforts, it has the potential to secure business growth and new investment.

For local communities the standard can ensure that large commercial enterprises which share their water resources do so in an equitable and sustainable manner, irrespective of the limited efficacy of government regulation. It also drives action to improve water and environmental management within local communities and operations of local suppliers and out-growers.

For other basin stakeholders and water governance more widely, AWS standard implementation is contributing to strengthening of basin institutions. It mobilises the private sector to support better water resource management at local, catchment and national levels in ways which are aligned with public policy goals.

The exercise has demonstrated the value of the AWS standard in a challenging basin context and flagged where improvements are required to enhance impact in Africa. It has generated valuable training and case study material to support the AWS and advance its goal of equitable water stewardship globally. Emerging recommendations include:

1. Use Olam's implementation as a spring board for AWS roll out in Africa.

Use the experience to support training and communications in order to promote the standard to companies in the region, and to develop regional expertise and certification capacity.

2. Promote implementation and verification against the standard across vulnerable supply chains

Strategic focus on sites and suppliers in areas which are vulnerable to water risks because of physical, social or institutional contexts is likely to be a highly cost effective response to corporate water risk. Verification through an audit by an AWS accredited certification body gives confidence to stakeholders and guarantees due diligence on water.

3. Build the regional AWS membership base to maximise relevance and impact in Africa

Given the specific challenges facing water management in Africa alongside the need for private sector investment, African stakeholders should be proactive in guiding and shaping the AWS effort in the region to ensure maximum relevance and impact.

4. Stronger government engagement to integrate potential benefits

The AWS standard system has multiple benefits for government and statutory water managers. By recognising and referencing the AWS standard in policy, guidance, licencing regimes and risk based regulation and enforcement, government can both strengthen uptake and maximise the systems contribution to smarter and efficient regulation. Particular effort should be focused on helping government agencies to understand and harness the AWS standard within their institutional toolbox for water security.