

Water Stewardship Malawi: Implementing the Alliance for Water Stewardship Standard at Kaombe Estate



This report documents the lessons generated by the application of the Alliance for Water Stewardship (AWS) Standard with the Kaombe sugarcane estate in southern Malawi. The estate received support to implement the AWS Standard from Water Witness International as part of the Water Stewardship Malawi initiative funded by the Scottish Government. The objectives of the exercise were to:

1. Secure cost-effective and long-term management of water risks for Kaombe Estate at the site and catchment level through supported implementation of the AWS Standard.
2. Ensure alignment with the objectives of the Draft Elephant Marsh Management Strategy and identify opportunities for collective action.
3. Establish the costs, benefits, challenges and value of AWS Standard implementation in an agricultural estate setting and disseminate lessons to inform improved water stewardship practice.

The results, benefits and challenges are presented below, together with conclusions and recommendations for improving the AWS system and water stewardship practice.

Background and methodology

Kaombe Estate is a sugarcane plantation managed by Agricane, located within the Nsanje District of Malawi, situated at the edge of Elephant Marsh, a recently RAMSAR declared wetland of international importance. The Estate is a 2,300-hectare farm, of which 830 ha is under cultivation. Of the 830 hectares, 500 ha are run commercially and 330 ha are run under the charitable Kaombe Community Development trust. The estate also contains an approximately 800 ha nature reserve, the Thangadza River Conservancy.

Kaombe Estate has received investment from the Commonwealth Development Corporation's (CDC) Impact Accelerator, a mechanism through which the UK government aims to generate economic opportunity and employment in Sub-Saharan Africa and South Asia. The site employs between 73 and 250 staff depending on the season and supports surrounding villages with a collective population over 8,000 people.

Given the site's reliance on water resources and close proximity to Elephant Marsh, Agricane is taking proactive steps to manage the water risks and impacts at Kaombe Estate. In 2017, Agricane began working with Water Witness International to implement the Alliance for Water Stewardship (AWS) Standard.

What is the Alliance for Water Stewardship Standard?

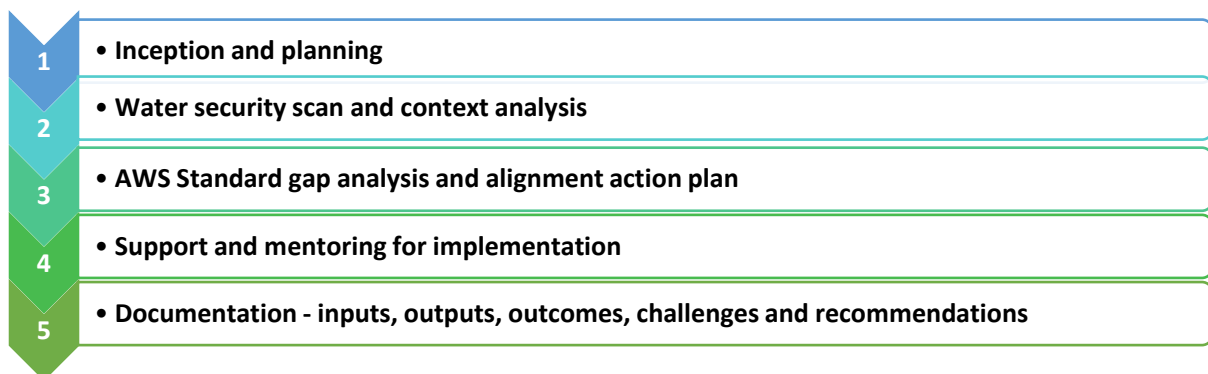
The AWS Standard offers a credible, globally applicable framework for major water users to understand their own water use and impacts, and to work collaboratively and transparently with others for sustainable water management within the wider water catchment context. Implementers follow the steps and guidance in the

AWS Standard to achieve good water stewardship practices that improve site water performance and contribute to wider sustainability goals.

The AWS Standard is built around five steps, which each contain a series of criteria and indicators. Following the steps and criteria will lead to improved performance in five areas: water balance, water quality, healthy status of important water-related areas, good water governance and safe water, sanitation and hygiene for all. Sites making claims to good water stewardship are audited and certified by credible, third party auditors.



Implementation methodology



WWI conducted an initial desk-based review of the site and catchment water security context for Kaombe Estate to identify likely water risks and opportunities. Then, through site visits and documentation review, WWI conducted a gap analysis with the site to assess current performance relative to the criteria of the AWS Standard. This identified priority areas and needs for compliance. Following the gap analysis, the team drafted an action plan for Kaombe to begin demonstrating compliance against the criteria of the Standard. The WWI team provided training, guidance and support to the Kaombe staff and management throughout the implementation process in the form of site visits, calls, and review of materials and plans.

Water security: Site and catchment context

Kaombe Estate is located in the Lower Shire Valley within the Mwansa sub-basin of the Shire River Basin. The Mwansa sub-basin consists of floodplains and wetlands, including Elephant Marsh, which host significant biodiversity and provide important environmental services.

The Shire River Basin is significantly degraded. Deforestation and agricultural development have contributed to high levels of soil erosion and sedimentation, and the river has become more eutrophic due to contaminants from sewage discharge and agricultural run-off. These same issues threaten the sustainability and ecological integrity of Elephant Marsh.

The Lower Shire is also characterised by unreliable rainfall. Drought and flood events have already increased in frequency, intensity and magnitude over the past two decades as a result of climate change. The Mwanza sub-basin is particularly prone to floods.

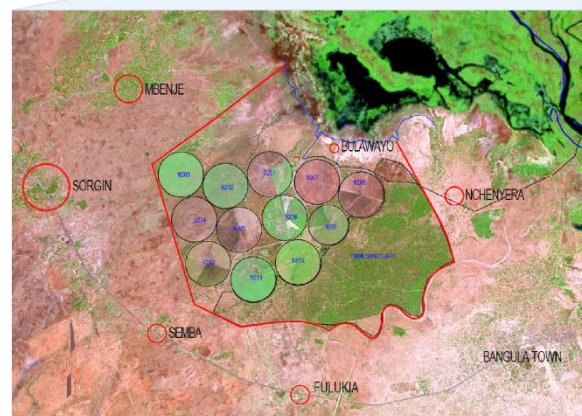
Kaombe Estate relies on rainfall as well as irrigation from the Shire River, which is supplied via 12 center-pivots. The site initially abstracted water directly from the Elephant Marsh, however issues of sedimentation and poor water quality prompted the site to build a canal to abstract directly from the Shire River. Run-off from the site is channelled into Elephant Marsh, so ensuring good water quality of run-off is a high priority. A Water Security Scan of the site identified the following priority water risks:

- Degraded water quality from upstream uses and catchment degradation.
- Increased water shortages from erratic and reduced rainfall.
- Potential damage to The Estate and surrounding communities during floods.
- Potential impact of the site’s run-off on the health of Elephant Marsh.
- Inadequate provision of water, sanitation and hygiene services for workers on-site.



Changes driven by AWS Standard implementation

Kaombe Estate has made considerable progress towards AWS Standard implementation. However, due to unforeseen financial and human resources constraints, the site remains in the early stages of its water stewardship journey. Nonetheless, AWS Standard implementation has identified and documented the following water related issues and stimulated plans for their resolution:



Water quality and irrigation

Highly saline soil and water is a threat to production at the Kaombe Estate. Through Standard implementation the site will develop and implement a Water Stewardship Plan with progressive targets to improve the quality of irrigation water and run-off into Elephant Marsh.

Safe chemical and oil storage and handling

Oil, pesticides and other hazardous materials pose a water pollution risk through potential spillages and mishandling. Standard implementation will help Kaombe Estate to mitigate these risks by ensuring proper storage and handling, and inventory measures.

“We were comfortable with the toilets we had at the office, but now we need to do something in the field”.

Thokozani Chakhwantha – Safety, Health and Environmental Officer, Kaombe Estate

Water supply, sanitation and hygiene (WASH)

AWS Standard implementation has flagged gaps in WASH provision for workers at the Estate and will drive compliance with national standards and alignment with international best practices for WASH provision in agricultural settings.

Legal and regulatory compliance

As a large-scale agri-business, the Kaombe Estate must abide by environmental and water-related laws and regulations. Through Standard implementation, Agricane will develop a robust system for ensuring and tracking legal and regulatory compliance. Furthermore, the Standard will guide the site to align with and contribute to water-related public-sector initiatives, namely the Management Plan for Elephant Marsh.



Center pivot irrigation operator



Irrigation at Kaombe Estate



Staff cutting cane at Kaombe Estate



Elephant Marsh

Benefits of AWS implementation

Framework for water management

As a leading agricultural engineering and development company committed to sustainability, Agricane already demonstrated good water management practices at Kaombe Estate. However, the AWS Standard has provided the site with a guide to best practice and a system for gathering information. This systematic gathering and strategic use of information helps the site to ensure that is complying with all applicable laws and regulations, and to be transparent with stakeholders about their water use.

Community engagement

Agricane has a strong track record of engaging with and supporting communities surrounding Kaombe Estate. However, Standard implementation is requiring them to engage with all relevant stakeholders in their catchment to drive collective action on shared water risks. The site staff feel that one of the key

benefits of implementing the AWS Standard is that it helps surrounding communities understand that the site is using water sustainably and gives them an opportunity to be involved as well. Engagement around the Standard also serves as an opportunity for sensitizing the broader community on good environmental practices, and the law as it relates to water use. Through this engagement the site sees the opportunity to create shared value in the catchment.

“Definitely water stewardship will make us friends with the community”.

Alex Mkwapatira – Community Liaison Officer, Kaombe Estate

Challenges of AWS Standard implementation

Government engagement

Successful implementation of the AWS Standard relies on effective engagement with government to ensure that water stewardship strategies are aligned with catchment plans and priorities, and support policy and regulatory capacity. In Malawi, the Department of Water Resources and the National Water Resources Authority (NWRA) have primary responsibility for water development and management, however they face severe capacity and resource constraints. While government officers have demonstrated willingness to engage with Kaombe Estate on water stewardship, they often require a financial contribution from the site to cover the costs of their involvement. This imposes an additional cost burden on the site and introduces potential integrity risks of partial stakeholder engagement, including policy and regulatory capture.

WASH provision in the field

The AWS Standard requires sites to provide access to safe drinking water, sanitation and hygiene (WASH) for all workers. However, providing WASH on agricultural estates such as Kaombe poses distinct challenges. The site must ensure that workers are always within a reasonable distance to access WASH facilities – this is particularly challenging given that the site’s mobile workforce is dispersed across 830 hectares. Additionally, supervision and maintenance of WASH facilities is demanding given the risks of theft and vandalism in remote locations. While Malawi’s Occupational Safety, Health and Welfare Act stipulates clear requirements for WASH in the workplace, and international guidelines from the International Labour Organisation and World Business Council for Sustainable Development provide a guide to best practice, there is a lack of specialised technical guidance for providing WASH on agricultural estates.

Conclusions

Kaombe Estate’s implementation of the AWS Standard highlights the strengths of the Standard as a systematic means of monitoring water use, ensuring compliance with legislation and international best practice, and demonstrating responsible water use to catchment stakeholders. It also highlights the practical considerations of finances and human resources in Standard implementation, and the limitations of existing AWS guidance for WASH provision and stakeholder engagement. Emerging recommendations include:

Recommendations

1. **Guidance for WASH in agricultural settings:** With the pending development of both WASH and agricultural guidance for the AWS Standard, it is recommended that AWS take the opportunity to develop and pilot robust technical guidance for the provision of WASH in agricultural settings.
2. **Ensuring integrity in stakeholder engagement:** Effective engagement with government is key to the integrity and effectiveness of water stewardship initiatives. A study of budget allocation to and within the water sector is needed to highlight shortfalls for the Department of Water Resources and the National Water Resources Authority (NWRA), who have primary responsibility for water development and management.