

ALLIANCE FOR
WATER STEWARDSHIP™

**EXPLORING THE VALUE
OF WATER STEWARDSHIP
STANDARDS IN AFRICA**

**KENYA CASE STUDY
SUMMARY REPORT**

giz

BMZ



On behalf of
Federal Ministry
for Economic Cooperation
and Development

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Hepworth N, Agol D, Von-Lehr S and O'Grady K, 2011.

AWS Kenya case study summary report:

Exploring the value of water stewardship standards in Africa.

Alliance for Water Stewardship/Marks & Spencer/ GIZ.

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Correspondence to: nickhepworth@waterwitness.org

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ALLIANCE FOR WATER STEWARDSHIP™

This document sets out the findings of collaborative research to develop an international water stewardship standard which will minimise the negative impacts of water use on ecosystems, human health, social wellbeing and economic opportunity.

The stewardship standard will set out the actions required by water users in order to deliver catchment level sustainability targets and multi-stakeholder benefits through improved flow regimes, water quality, protection of high conservation values and more effective governance.

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If you want to know more about the case study and how the issues impact and involve the local communities, look at this section:

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WATER STEWARDSHIP STANDARDS IN AFRICA -



Marks & Spencer are one of the UK's leading retailers with a growing international presence in 42 countries. Sustainability is at the heart of how M&S does business and our public commitment is articulated in Plan A, 180 commitments covering climate, waste, sustainable raw materials, fair partner and health. For further details visit <http://corporate.marksandspencer.com/howwedobusiness>. Through Plan A we are working closely with our suppliers and key stakeholders to ensure that raw materials are sourced sustainably. Globally, our suppliers face threats of depleted water quantity and degraded water quality that have major impacts on production and quality. In a world of increasing water demand and a changing climate, we and our suppliers need to ensure that we do not impose negative impacts on others through unsustainable exploitation of water resources. Water stewardship is therefore a major priority for us.

The work described here builds on our existing work with WWF and the Food Ethics Council, and our publicly available water stewardship guide. Our motivation for supporting the Alliance for Water Stewardship's Kenya case study is the potential offered by the AWS's Water Stewardship Standard as an operational tool to help safeguard the sustainability of water use throughout our supply chain. The aim of the case study was to prove how effectively the standard could work in places like Kenya – where low levels of data, challenges in public water governance, small and large scale farming and persistently high levels of poverty make sustainable and fair water use difficult to define and achieve. The findings presented here reassure us that our suppliers are already efficient and responsible water users, but they also show that the standard will drive further improvements. The case study identifies the importance of collective action and improved performance of statutory water management systems and begins to clarify what responsible suppliers can do to drive better water management both within, and critically, beyond their fence line. Although the case study throws up plenty of difficult issues for further exploration, there is a very clear recognition that the water stewardship standard under development by the AWS has the potential to make a positive impact not only in Kenya but globally and across the supply chains of Marks & Spencer. We are proud to be the first retailer to support the development of the water standard and to have championed the first testing of draft water standards in Africa.

Louise Nicholls, Head of Responsible Sourcing
Marks & Spencer plc

WATER STEWARDSHIP STANDARDS IN AFRICA -



'Now that we understand what the AWS standard is about, it is clear that it will help us implement Integrated Water Resource Management and our National Water Policy. It has our full support'.

[Philip Olum, CEO, Kenya Water Resource Management Authority](#)

'This work to develop a water stewardship standard is very important. It will change the way water is managed in Naivasha for good'.

[Paul Ruoya, Vice-chair, Lake Naivasha Basin Umbrella Water Resource Users Association Representative of Upper Turasha/Kinja WRUA](#)

BENEFITS FOR ALL STAKEHOLDERS

‘Standards bring many benefits but some audits aren’t thorough and there isn’t much attention to water. This focus on water will bring targeted action’.

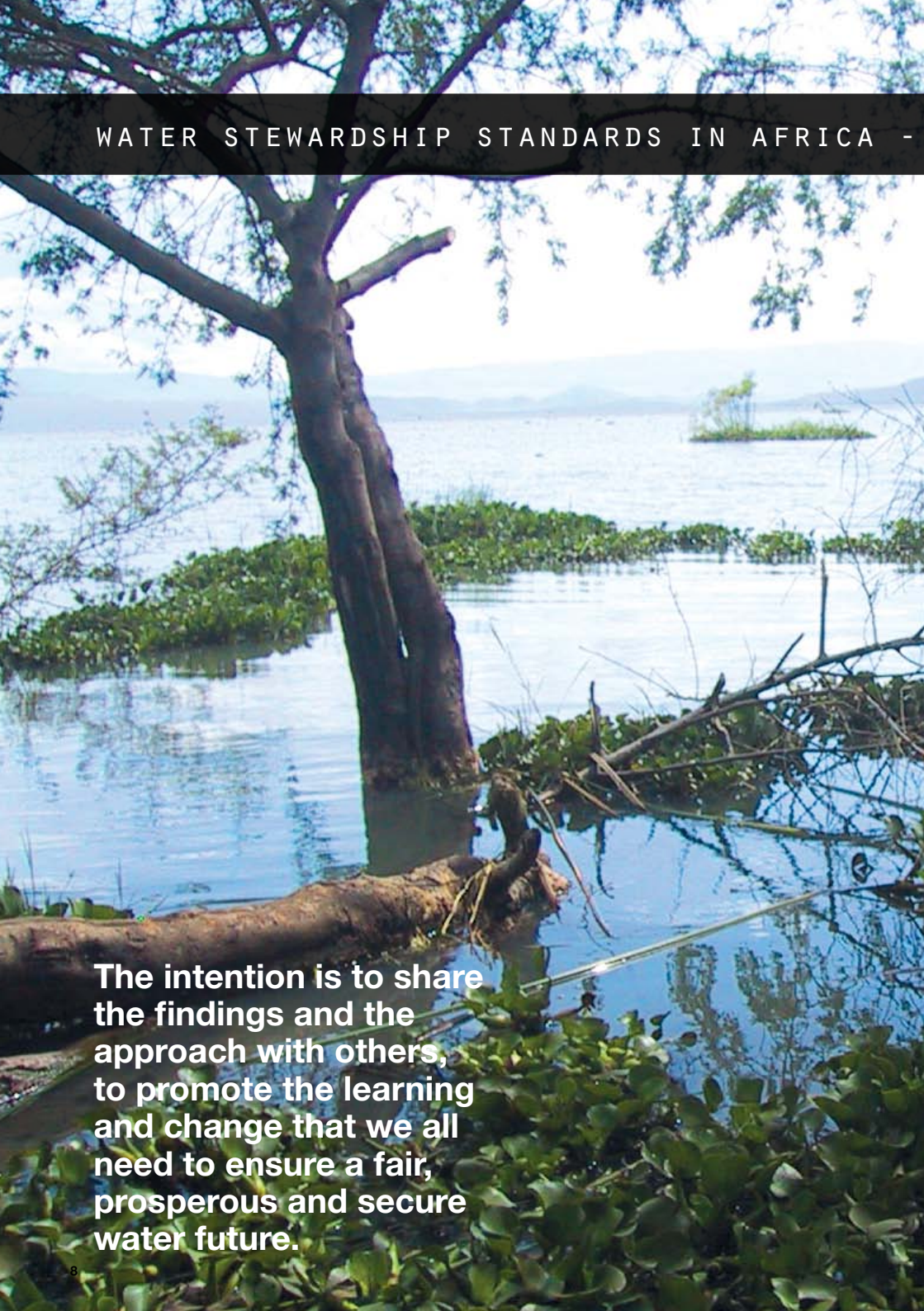
[Quality and Compliance Manager, Naivasha Agri-business](#)

‘Our businesses are almost totally dependent on water and sustainability requires action from ourselves, other users in the basin and the government. Doing nothing is not an option – we are committed to finding a solution. Our worry is that a lack of enforcement means that any leadership on our side is either a waste of time, or even worse, puts us at a competitive disadvantage. By flagging and targeting these governance issues and helping differentiate responsible water users, the AWS standards being piloted are an important part of that solution.’

[Harry Milbank, General Manager, Longonot Horticulture Ltd, Vegpro \(Kenya\) Ltd](#)

‘The Lake Naivasha Basin is a unique natural, social and business environment hosting 70 percent of the country’s cut flower business, geothermal power generation, tourism, fishing, pastoralism, small holder agriculture and an expanding municipality. All rely on water resources from the basin to support their activities. The concept of water stewardship recognises that an individual stakeholder cannot succeed without the active cooperation and participation of the others in managing water resources for the benefit of all. It is no longer sufficient to focus only on improving internal water use efficiency. The pilot studies and subsequent stakeholder engagement has created greater understanding amongst the Naivasha stakeholders of the fundamental importance of water stewardship. The draft standard is a valuable tool and will add value to the ongoing process of raising awareness and competence in water management at the sub-catchment level initiated by the Lake Naivasha Grower’s Group (LNGG) and now forming the backbone for the implementation of the recently launched Imarisha Naivasha Project.’

[Richard Fox, Sustainability Director, Finlays Horticulture Ltd](#)

A large, dark tree trunk stands in a body of water, with a fallen log in the foreground and a small island in the distance. The water is blue and reflects the sky and trees. The background shows a hazy landscape with mountains and a small island with trees in the distance.

The intention is to share the findings and the approach with others, to promote the learning and change that we all need to ensure a fair, prosperous and secure water future.

INTRODUCTION

Improving the management of water to support sustainable economic development whilst securing social equity and biodiversity conservation is one of our most urgent global priorities. This report introduces work supported by Marks & Spencer and their suppliers to promote greater water security and ensure genuinely sustainable product sourcing. Specifically, it describes the rationale, methodology and results of the Alliance for Water Stewardship Kenya case study, which explored the value of water stewardship standards as a way to better understand and manage the water risks facing producers and the river basins they operate in.

The German International Cooperation Agency (GIZ) has 80 water programmes across 60 countries, as well as a dedicated programme for cooperation with the private sector. In Kenya, we have been commissioned by the German Ministry for Economic Cooperation and Development (BMZ) to partner with the Kenyan Ministry of Water and Irrigation, helping to implement the National Water Act, working on issues ranging from integrated water resource management to water supply and sanitation.

Both in Kenya and beyond, we recognise that the private sector is increasingly interested in water issues, and that many companies are now looking for ways to mitigate their water-related risks. This goes beyond simply trying to secure their own water supply; heavy water users risk losing their social licence to operate where communities lack access to water, or where ecosystems are being intolerably degraded. For companies to become better water stewards, they need not only to adopt best practice for on-site water use, but also support the better water use by others and the public sector as the overall water managers.

We have supported this pilot test of the AWS standards in Lake Naivasha because a well-developed standard can help guide companies in their role in contributing to a secure water future for all. In our experience, the draft standard strongly compliments the Kenyan water resource management regulations. It seeks to minimise the negative impacts of corporate water use, while helping companies understand that water must be prioritised for basic human needs and ecosystems in order to meaningfully address the water risks they face.

Roland Werchota GIZ Programme Manager, Water Sector Reform Programme, Kenya

The complex water challenges facing Lake Naivasha in Kenya are a microcosm of those seen in river basins in many parts of the world. Growing demand and pressure from multiple water uses exist against a difficult biophysical, socio-economic and institutional backdrop of a changing climate, vulnerable ecosystems, poverty, and weak governance and regulation. The lake is an important wetland ecosystem but also provides irrigation for agriculture which generates over 10% of Kenya's export revenue, contributes 2.1% of the national GDP and provides employment for 75 000 people.

A rapidly growing population and economy depend on the Lake Naivasha basin's water resources for water supply and wastewater disposal, and the needs of small-scale agriculture, tourism and wildlife conservation, cattle ranching and grazing, fisheries and power generation must also be met. Climate is naturally highly variable and climate change is exerting new challenges. Poverty, poor health, inadequate water supply and sanitation, and inequity blight many parts of the catchment and whilst positive steps have been taken towards improving water governance institutions, difficult challenges mean these may not be fully functional for some time. Regulation of water abstraction and wastewater discharge

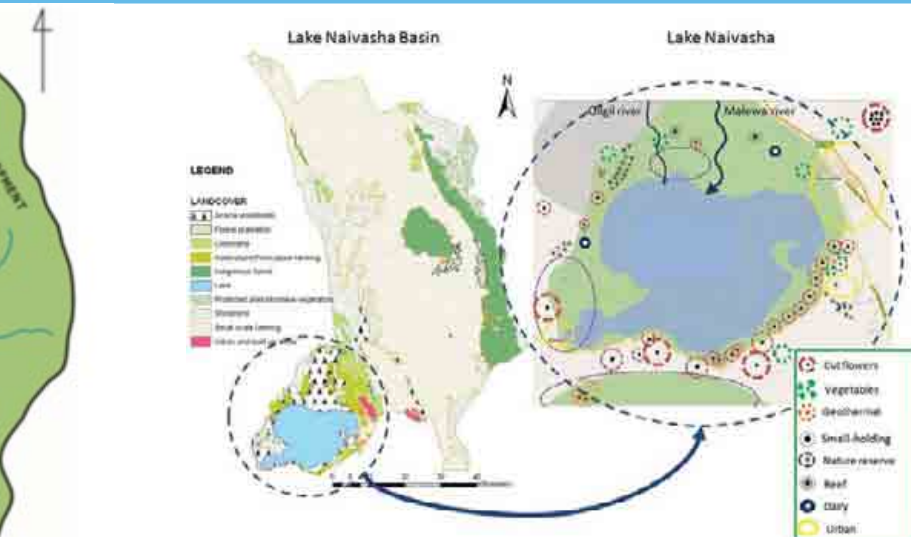
...a rapidly growing population and economy depend on the Lake Naivasha basin's water resources for water supply and wastewater disposal...



IN THE LAKE NAIVASHA BASIN

is extremely weak, with a recent survey showing that over 80% of water withdrawals do not have a valid permit. Over half of the water use in the basin is technically illegal, although many of the larger abstractors declare and pay the Government for the amount of water they are using. The Water Resource Management Authority (WRMA) is responsible for water regulation and enforcement but has historically lacked both the funding and political support needed to deliver its mandate.

The potential water-related impacts and risks in Naivasha include depletion of basin flows, groundwater and lake levels due to over-abstraction and drought, water quality deterioration, habitat degradation and conflict. These water risks are shared by government, communities, businesses and environmental concerns alike, and failure to address them threatens negative impacts which would be felt across Kenya because of the nationally important economic activity based on the lake's waters. Shared risk also presents a shared opportunity for collective action. The development of a stewardship standard to guide, incentivise and differentiate responsible water users has been identified by Naivasha stakeholders as one such opportunity and has been the focus of the support provided by Marks & Spencer.



Figures 1 and 2: Location of the Lake Naivasha Basin and land-use in the basin

THE ALLIANCE FOR WATER STEWARDSHIP

Established in 2009, the AWS brings together a growing number of organisations into a united, coherent effort to develop an International Water Stewardship Standard (IWSS). The intention is to develop an international market standard, similar to the Forest Stewardship Certification scheme, which will set out the actions required by suppliers and producers to deliver catchment level sustainability targets. These will include improved flow, water quality, protection of high conservation values and effective governance, and with widespread uptake the standards will minimise the negative impacts of water use on ecosystems, human health, social wellbeing and economic activity.

The new market-based standard, which will guide, incentivise and differentiate responsible water stewards. Whilst regulatory effort and existing market standards already attempt to manage the impacts of water use, neither are adequately driving the proactive and progressive water stewardship which is urgently needed. The AWS standard therefore aims to support and supplement these efforts and will meet the growing demands of consumers, purchasers and investors who need to ensure that their actions do not contribute to water problems but instead help to solve the world's water challenges.



The CEO Water Mandate



CARBON DISCLOSURE PROJECT



The rationale for the Kenya case study and the Marks & Spencer partnership approach

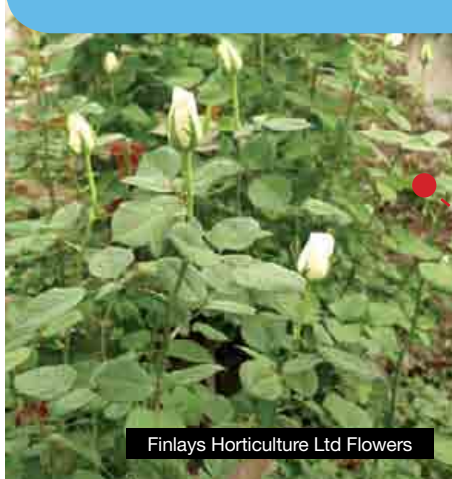
To be legitimate and effective, the International Water Stewardship Standard needs to be developed and owned by those expected to adopt it and be affected by it and must be fit for purpose in developing, as well as developed, regions. The AWS is therefore shepherding a multi-stakeholder development process or global 'Water Roundtable' over the next three years and this will be supported by pilot testing in various contexts.

The Kenya case study is the first ever exploration of how a water stewardship standard could work in a developing country. With support from Marks & Spencer and the German International Development Agency (GIZ), draft water stewardship standards developed in Europe and Australia were tested at flower and vegetable farms in the Lake Naivasha Basin of the Rift Valley. The work investigated whether these existing standards, developed by the European Water Partnership (EWP) and Water Stewardship Australia (WSA), were fit-for-purpose and viable in delivering better water management in the challenging contexts of an African river basin. Working closely with farm managers, Kenyan institutions and a Project Reference Group of local experts, the research team assessed what works well, what needs strengthening and what needs further development for a robust international water stewardship standard.

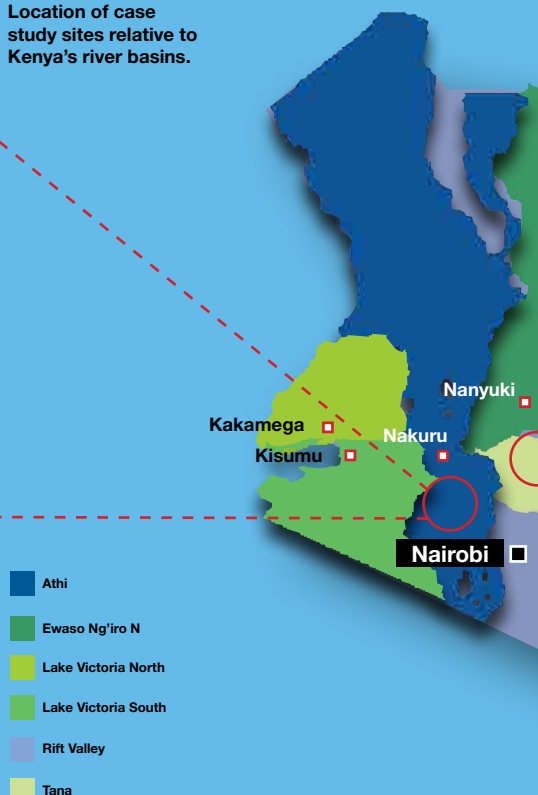
AWS partners include WWF; Water Stewardship Australia; the Nature Conservancy; the Pacific Institute; Water Witness International; Water and Environment Federation; the European Water Partnership; International Water Management Institute; the CEO Water Mandate and Carbon Disclosure Project; District Environment Officer; National Environment Management Authority; GIZ; Kenya Marine Fisheries Research Institute; Upper Turasha WRUA; Upper Gilgil WRUA; NAWACOMP; Naivasha Basin Civil Society Forum; Centre for Pastoralist Development; Naivasha Water and Sewage Company; Lake Naivasha Nature Club; Finlays Horticulture Ltd; Rift Valley Catchment WRMA; Irrigation Officer, Ministry of Water and Irrigation, LARNAWRUA; Elsamere Field Study Centre; Longonot Horticultural; ITC. See www.allianceforwaterstewardship.org

A COLLABORATIVE AND PARTICIPATORY MET

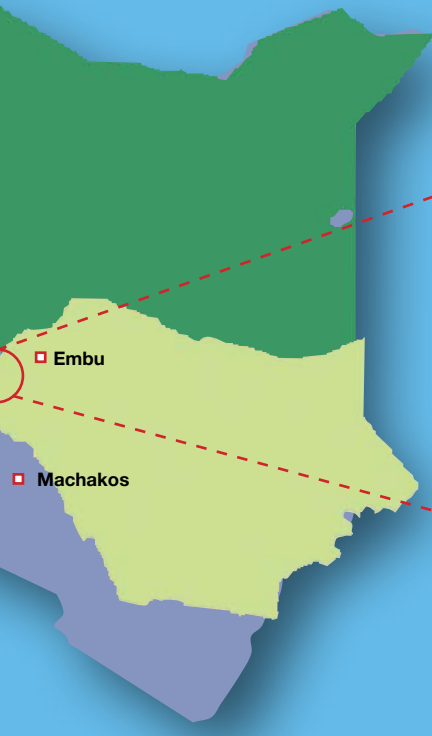
These draft standards were tested at sites operated by two Naivasha-based M&S suppliers; Finlays Horticulture Ltd and Vegpro, who grow high quality cut-flowers and vegetables. The work explored whether these standards can work in an African setting, their costs and benefits for both site operators and basin stakeholders, and highlights how they can be strengthened to bring maximum benefits to all water stakeholders in developing countries.



Location of case study sites relative to Kenya's river basins.



The insights developed from this piloting in Naivasha were ‘road tested’ for validity through supplementary pilots with water users elsewhere in Kenya: coffee smallholders of the Gikanda Farmers Cooperative Society and Mana horticultural and dairy farm in the Tana Basin. In addition, senior representatives of national stakeholder organisations came together in a high level discussion meeting to reflect on the findings and generate consensus on the recommendations emerging from this work. This report summarises the findings and recommendations contained within the full Technical Report of the AWS Kenya case study.



Gikanda Coffee Corporation



Mana Horticulture/Dairy

WHAT DO WATER STEWARDSHIP STANDARDS REQUIRE?

The table below provides an overview of the key components of the EWP in Kenya. More detail is available in the full case study report.

	EWP
Organisation based on key principles?	Yes, four principles <ul style="list-style-type: none"> • Water Quantity (linked to environmental flow) • Water Quality • High Conservation Value Ecosystems • Governance
Criteria and indicators?	Yes
River basin objectives?	Yes, based on European Water Framework Directive
Direct and Indirect water use considered?	Yes, in principle
Scoring system?	System of 'minor' and 'major' requirements under discussion
Quality management system (QMS) framework?	No, but could be built on to a QMS framework where these are in place
Business focus?	Emphasis on needs of small and medium-scale water users

and WSA standards tested in

WSA
<ul style="list-style-type: none"> • Yes, three or four principles • Water Quantity (linked to environmental flow) • Water Quality • [High Conservation Value Ecosystems] • Governance
Requirements not formatted as criteria, but cover similar aspects
Yes, based on system of 'catchment sustainability' indicators
Yes
Scores assigned for 'catchment sustainability' and 'Direct Water Use'
Yes
Explicit focus on large water users



‘This work to develop a water stewardship standard is very important. It will change the way water is managed in Naivasha for good’.



FINLAYS HORTICULTURE LTD



LOCATION:

MOI SOUTH LAKE ROAD, LAKE
NAIVASHA

OWNERS: FINLAYS HORTICULTURE LTD.

YEAR ESTABLISHED: 1987

CROPS GROWN: FLOWERS, MAINLY ROSES

AREA UNDER CULTIVATION: 35 - 40 HECTARES

TOTAL FARM SIZE: 80 HECTARES

CULTIVATION METHODS: 25 HA ROSES, 20 UNDER
HYDROPONICS ON INERT VOLCANIC SUBSTRATE, REPLACED
EVERY 7 YEARS.

PRIMARY MARKETS: 85% UNITED KINGDOM AND GERMANY

STAFF FULL TIME: 1000

1100 AT PEAK (VALENTINES, CHRISTMAS)

STAFF ACCOMMODATION: OFF-SITE IN NAIVASHA TOWN,
STAFF RECEIVE HOUSING ALLOWANCE AND TRANSPORT
SUPPORT

Water use characteristics:

Primarily drip irrigation through recirculated system whereby run-off water not used by plants (30%) is passed through an ultrafiltration plant and reused. Finlays Horticulture Ltd has been working towards a complete closed loop hydroponic system and this was largely completed by 2009. On average irrigation water totalling 2,000 m³ per day is made up of fertigant that has been collected and filtered, rainwater collection, water treated in the onsite wetlands with the balance drawn from boreholes and Lake Naivasha. Targets for water use efficiency are in place and a 40% reduction in water used for rose production has been achieved in 10 years.





Water quality interactions:

Filter backwash is discharged together with irrigation water system overflow through a constructed wetland treatment facility which discharges to the lake. Settled sludge removed from septic tanks was originally tankered offsite and disposed of at the municipal sewage works, but more recently it is disposed of on the farm by spreading in a controlled manner and allowing further breakdown by evaporation and drying. Agrochemicals and waste oils are stored and handled securely and pesticide washings applied to designated spray off area. Solid waste is composted on site or disposed of offsite. Pollution control training and emergency procedures are in place.

Biodiversity:

Site lies within Ramsar boundaries and abuts the lake shore. Wild animals use the shore area which is crossed by a deep abstraction canal and have been known to invade site especially during drought. Minor agricultural activity takes place in the riparian zone although staged withdrawal is underway to comply with local commitments.

Governance:

Permits are in place for the bulk of water abstraction but applications for additional extraction have not been processed by WRMA over the past 2 years and therefore not all water use is technically permitted. Fees are paid for all water use and all abstractions are metered. Site operator is heavily and proactively involved in improving basin governance and water stewardship through leadership roles in LNGG and LaNaWRUA and formation of the umbrella WRUA; sponsoring and coordination of research and hydrological surveys; support for Payment for Ecosystem Services scheme; capacity and coordination among catchment WRUAs and WWF shared risk study; Water Abstraction Plan, sub-catchment management plan and gazettment; and lobbying. Standards in place: KFC, GLOBAL GAP, MPS, FLO - Fairtrade, Tesco Nurture, Field to Fork – M&S, FFP, FLP.

THE PILOT SITES PARTICIPATING IN THE CA



LONGONOT HORTICULTURE

LOCATION: MOI SOUTH LAKE
ROAD, LAKE NAIVASHA

COMPANY: VEGPRO KENYA LTD. LARGEST VEGETABLE
GROWER IN KENYA

YEAR ESTABLISHED: 1980S

CROPS GROWN: VEGETABLES AND FLOWERS

AREA UNDER CULTIVATION: 100 HECTARES 25 HA FLOWERS

CULTIVATION METHODS: HYDROPONICS, DRIP IRRIGATION,
CENTRE PIVOTS, OVERHEAD, AND MICRO-SPRINKLER ON
SOIL

PRIMARY MARKETS: 87% TO UNITED KINGDOM AND OTHER
EUROPEAN MARKETS

STAFF FULL TIME: 900

STAFF SEASONAL: 200

Water use characteristics:

A total of 6,000 m³ day of water for irrigation is used comprising groundwater, rainwater harvesting and from the lake. Irrigation and crop water needs are guided by remote soil moisture probes.



Water quality interactions:

The packhouse creates about 20m³ per day wastewater which is channelled to a pit for chemical deactivation and directed to a soakaway. Sludge from septic tanks is collected and disposed of at the municipal Wastewater Treatment Works.

Solid waste is composted with some disposed of off site by licensed waste handlers. Buffer strips and swales are used to control soil erosion losses

Biodiversity:

Not within riparian zone, though abstraction canal crosses riparian zone.

Governance:

Abstraction permit for surface water is in place with compliance measured against meter with external and internal audits conducted. Monitoring is carried out of water abstracted, recycled and runoff. A completion record has been obtained for the borehole but no licence is in place despite one having been applied for over 12 months ago.

Site actively involved in basin governance through membership of LGGG and LaNaWRUA.

Standards in place: ETI, Tesco Nurture, FLO-Fairtrade, MPS, KFC, ETI, GLOBALGAP, Field to Fork – M&S.



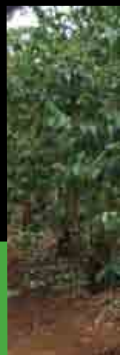


GIKANDA
FARMERS
COOPERATIVE
SOCIETY

LOCATION: KARATINA, NYERI CENTRAL KENYA
 OWNERS: APPROXIMATELY 2600 SMALL-SCALE FARMERS
 YEAR ESTABLISHED: 1987
 CROPS GROWN: COFFEE AND VEGETABLES
 TOTAL FARM SIZE: COFFEE RANGING FROM 200- 500
 TREES PER HOLDING
 CULTIVATION METHODS: RAINFED
 PRIMARY MARKETS: EUROPE VIA COFFEE MANAGEMENT
 SERVICES

Water use characteristics:

The smallholder farmers use a limited amount of water for pesticide application though coffee crop is rain fed. The majority of water use takes place during the wet milling, or processing of the coffee crop at three mills owned by the cooperative located on the Ragati and Rwaithanga rivers. Coffee milling is a water intensive process producing significant amounts of liquid and solid waste. The main process involves removal of pulp, fermenting the beans, washing, soaking and drying before the beans are taken to the dry mills for roasting. Water is gravity fed, abstracted via impoundments and channelled through pipe work shared with several other users. There are no metering or measuring devices for these abstractions (although secondary data estimates that 4-6 m³ of water are needed to process 1 tonne of coffee cherries). Some water is recirculated but bulk disposal of wastewater is required at the end of each daily process.



CASE STUDY - GIKANDA FARMERS COOPERATIVE SOCIETY

Water quality interactions:

The fully washed processing of coffee as practiced at these sites generates large quantities of liquid and solid waste with a high pollution potential. Waste water includes runoff from pulping (fermentation) and washing and has particularly high Biochemical and Chemical Oxygen Demand (BOD/COD) – considerably higher than raw human sewage – associated with carbohydrates and proteins. Waste water also contains elevated nitrogen and phosphorus and variable pH. Wastewater is collected in unsealed lagoons where it soaks away whilst solid waste is collected and applied to land by farmers.

Biodiversity:

The sites do not lie within or close to protected or designated areas, although the activities of 2600 farmers are likely to have widespread interactions with biodiversity. Farming was observed to begin immediately adjacent to water courses.

Governance:

An abstraction licence has been issued by WRMA for one site only and a monitoring record of waste water and river water quality has been issued. The sites are not members of any WRUAs. FLO-Fairtrade, Tesco Nurture, Field to Fork – M&S, FFP, FLP

Standards in place:

The Society was given a Plan A Award by Marks & Spencer, UK in recognition of its efforts for sustainable production. The Cooperative is registered under Fairtrade certification





MANA HORTICULTURE AND DAIRY FARM

LOCATION: NYERI CENTRAL KENYA

OWNERS: PRIVATE OWNERS SUPPLYING HOMEGROWN LTD.

YEAR ESTABLISHED: 1997

CROPS GROWN: FRENCH BEANS, BABY CORN, GARDEN PEAS (FOR EXPORT). OTHERS INCLUDE ONIONS, CARROTS, SPINACH, CABBAGE, TOMATOES, CAPSICUM, CUCUMBER, CELERY AND CORIANDER LEAVES FOR LOCAL MARKETS. DAIRY (40 COWS) PRODUCE AROUND 200 LITRES PER DAY FOR KENYAN MARKETS

TOTAL FARM SIZE: 40 ACRES

CULTIVATION METHODS: GREENHOUSES TAKE $\frac{3}{4}$ OF LAND WHERE TOMATOES, CAPSICUM, CUCUMBER, CELERY, CORIANDER LEAVES ARE GROWN.

PRIMARY MARKETS: INTERNATIONAL AND DOMESTIC

STAFF FULL TIME: 10

Water use characteristics:

The farm abstracts from the River Honi (also known as Amboni) which originates in the Aberdare mountains, at an abstraction point 4km from the farm. The river is fed by the Ikumare springs from which a furrow supplies other local farmers for domestic and farm purposes. A borehole is also used. The farm irrigates using overhead sprinklers in the open field and drip irrigation within the green houses.

SE STUDY - MANA HORTICULTURE AND DAIRY FARM

Water quality interactions:

The main sources of waste and potential water quality issues are crop and animal waste (slurry), wash out from chemical tanks, run-off from irrigation and soil erosion. Organic wastes are reused on site as animal feed and for land conditioning with slurry stored in tanks prior to application. Agricultural chemicals including fertilizers, fungicides, pesticides and herbicides are stored and used in line with best practice. Wash water containing agricultural chemicals is disposed of to soak pits.

Biodiversity:

Site is located within 5km of Solio Ranch and 20km from the Aberdares National Park though there is no direct involvement with biodiversity management. The farm does not abut any watercourse and has no riparian land. Some agroforestry is underway on the site.

Governance:

Regulatory and governance interaction is limited to permits issued by WRMA for ground and surface water abstractions though numerical limits are not set within these.

Standards in place:

GlobalGAP, Fairtrade, Homegrown internal standards



Much best practice is already in place in terms of water use and stewardship by M&S suppliers

M&S suppliers exhibit numerous features of best practice in terms of their existing water stewardship. Storage and handling of agricultural chemicals and innovative practices such as precision calculation of crop water and nutrient requirements, integrated pest management and water recirculation, appear to meet or exceed regulatory specifications in Europe. Sites have implemented progressive strategies for efficient water use and over the past ten years Finlays Horticulture Ltd has reduced water consumption by 40%. These suppliers recognize that better water management across the basin is critical for their reputation and future business viability. They have therefore made impressive contributions to improved basin planning and governance through initiation and support for Water Resource User Associations, and an ongoing programme of research and partnership projects.

Water stewardship standards identify opportunities to further improve performance

For example, the robust analysis demanded in the standards help clarify the pollution risks of waste disposal to the municipal Wastewater Treatment Works (WwTW), flag potential improvements to lake shore management to enhance wildlife values and highlight the potential savings available through a risk-based approach to environmental management. One problematic aspect is the challenge of obtaining water abstraction permits where the standards require this as a minimum condition. The under-resourced and under-capacity Water Resource Management Authority (WRMA) face a backlog of applications which can take several years to be determined. Whilst existing social and environmental standards address some aspects of water use, they do not yet adequately address the progressive water stewardship needed in Naivasha. Water stewardship standards offer multiple benefits for site

operators including:

- reduced costs and efficiency gains;
- reduced operational water risks;
- reduced regulatory and reputational risks;
- generation of intellectual and political capital;
- securing certain markets and accessing new ones.

Water stewardship standards also drive positive outcomes for:

- downstream water users and the environment;
- biodiversity conservation;
- sustainable economic growth;
- efficient and good government;
- conflict prevention.

Unlocking the maximum benefits in terms of market access and basin governance is conditional on the generation of demand and the development of an internationally recognized brand for the standard as part of the AWS effort.

Water stewardship standards advance the implementation of government policy

The standards were found to be fully complimentary with Kenyan water and environmental policy and laws, and their implementation would incentivise compliance, payment of fees and proactive support for statutory resource management plans. The introduction of stewardship standards represents ‘smart’, efficient regulation, where the burden of checking compliance is shared with the regulated, freeing up time and resources for authorities to focus on other priorities and poorly performing sites.

KEY RESULTS GENERATED BY THE CASE STUDY



An urgent need for improved service delivery by government is also highlighted

This work also shows how important it is for government to meet its own obligations and to provide an enabling environment for better water stewardship. The case study found that regulators were unable to respond to permit applications and that there are inconsistencies and erroneous requirements within water related law. For example multiple definitions of the riparian zone, parallel systems for effluent regulation and a blanket requirement for even very large water users to install 90 day storage facilities make legal compliance difficult. Further, compliance is by no means an indicator of sustainable water use where water use permits have no numerical limits, or where their issuance is not based on a proper determination process. The poor performance of government licenced Water Service Providers in treating waste is also a problem. Unless such issues are resolved and government standards of service improved, global demands for better water stewardship could jeopardize Kenyan business.

Supplementary pilots reveal the relevance of these standards for smallholders & SMEs

Multiple and significant water risks are faced by smallholder farmers, cooperatives, SMEs and water users downstream of them which are not actively managed by statutory processes or extant standards. These could be addressed through adoption of a water stewardship standard to deliver collective benefit and improve water security. The IWSS must therefore consider and be applicable to the contexts, needs and capabilities of smallholder cooperatives and SMEs.

The Kenya case study helps to validate the business case for water stewardship standards

Both draft standards provide a workable and effective framework for ensuring regulatory compliance, for driving efficiencies in resource use, and a proactive, efficient and risk-based approach to action on key water issues. They also promote effective action towards water stewardship throughout the 'chain of influence' of site operations. However, this work succeeds in identifying where the standards need to be refined to be effective in Africa.

The Kenya case study flushes out the issues for further deliberation and generates recommendations to aid the development of an effective international water stewardship standard. Initial insights drawn from the Kenya case study to feed into this process include:

- I. **The standard should require full compliance with water related law.** One of the main problems in the Naivasha basin is lack of legal compliance and it would therefore be difficult to envisage a credible standard which did not require this as a minimum.
- II. **Embed a risk-based approach.** Risk-based approaches are rational and cost effective in targeting investment and management effort to priority issues and should be a central feature of an international water stewardship standard.

Standard elements which need strengthening or more explicit attention

- III. **A robust response to climate change, flooding and other emergencies.** Although both standards consider extreme weather events, the requirements and guidance in this respect could be usefully strengthened because floods and droughts and climate change are primary triggers for water conflict and impacts in developing countries.
- IV. **Promoting a duty of care.** A duty of care requirement should be explicitly set out which levels an obligation on the site operator to ensure that the chain of handling and disposal of solid and liquid wastes produced by operations do not have negative impacts.
- V. **Quality assurance in water monitoring.** For example, the standard should require sampling and monitoring to be carried out in accordance with ISO 5667-5 and any laboratories used to be accredited against ISO 17025.
- VI. **Prioritising health and water linkages.** Proactive preventative management regarding linkages between water and diseases like bilharzia and malaria must be incorporated.
- VII. **Improving water supply and sanitation service delivery.** To be genuinely progressive the standard must require action by

site operators within their sphere of influence to improved water supply and sanitation facilities for unserved communities.

- VIII. **Promoting recreational water use.** A requirement to proactively promote water based recreation should be contained in a future standard
- IX. **Action on alien and invasive species.** Contributions to prevention and management of alien species need to be emphasised given the gravity of impacts associated with water hyacinth and introduced fish and invertebrate species in places like Naivasha.
- X. **Making stewardship user friendly.** To ensure maximum uptake and impact the international standard needs to be clearly set out and easy to follow. Issues of common language, clear definitions and specificity need to be addressed.
- XI. **Prioritising the needs of the poor.** An international standard should more explicitly explore the livelihood needs of local communities, in particular in relation to riparian access and water allocation requirements.

Standard elements which need further exploration and development

- XII. **Setting boundaries for stewardship.** A clearer indication of the boundaries of analysis is required for both assessment and design of the stewardship response.
- XIII. **Reviewing the role of water footprint assessment.** The role of the site level water footprint assessment was questioned by site operators, the project reference group and evaluators because of the significant management effort it requires and unclear benefits for operational water stewardship.
- XIV. **Supporting small and medium sized enterprises, small-holder and out growers.** Whilst improved water stewardship among smallholders and out growers is a priority, it is unlikely that they could meeting the standard requirements in their current format. Access to and uptake of the standard by smallholders needs to be thoroughly explored and scaled requirements developed which are proportional to the risks posed so that smaller producers are not unduly prejudiced.

- XV. **Compensating water stewards.** The potential for charging a premium for goods and services produced or provided based on water stewardship principles, or for sharing the burden of additional investment with retailers or consumers should be explored.
- XVI. **Rethinking basin assessment.** The difficulties implicit in benchmarking sustainable water resource use mean that devising an optimal and cost effective approach requires the further work anticipated by the Water Roundtable and AWS development effort. The insights generated by the case study point to a potential third way of assessing catchment and site management priorities in order to design an expedient and effective stewardship response. It is recommended that the standard prioritises support for and application of local pre-existing or emerging planning and assessment frameworks rather than imposing new ones. In particular local participatory frameworks should be supported to identify maximum abstraction volumes and rates, set environmental flow needs and to quantify sustainable yield.

This introduces a difficult dilemma when statutory planning and assessments are non existent, failing or dysfunctional, as is the case in many countries. A progressive response in this eventuality would be to initiate a process of basin dialogue to appraise the issues, needs and risks according to basin stakeholders and to contribute to a consensus based development process for defining basin priorities and stewardship responses.

- XVII. **Driving proactive engagement with water governance.** The kind of interpretive approach to governance described here is likely to be necessary if the standard is to effectively respond to the disparate challenges facing the world's river basins. Put simply, the standard should drive an iterative approach to the governance principle of stewardship which asks, 'what are the main problems facing sustainable water management

locally, how best can we make a proactive contribution to their equitable resolution and what targets can we set, work towards and monitor to that end?'. Such an approach overcomes the shortcomings of the EWP standard and would embody the intent of the WSA standard.

Whilst such a flexible approach may overcome the challenge of real world complexity it could also invite misplaced action. Corporate engagement in water policy has potential for positive outcomes but can also invite unforeseen negative outcomes, for example through regulatory capture. Principles for responsible business engagement with water policy have therefore been developed recently by the CEO Water Mandate with the aim of setting out broad do's and don'ts in this area. Developing of the international water stewardship standard should test the value of these principles as a way of bounding an interpretive and adaptive response to improving water governance. The Project Reference Group in Naivasha considered that the following wording for this element of the standard could be useful:

'The site operator must demonstrate an effective, proactive leadership role in improving basin governance and public water policy implementation within their area of influence. This should be interpretive and adaptive adhering to the 'Principles for Responsible Engagement with Water Policy':

Principle 1: Advance sustainable water management

Principle 2: Respect public and private roles

Principle 3: Strive for inclusiveness and partnerships

Principle 4: Be pragmatic and consider integrated engagement

Principle 5: Be accountable and transparent

This approach gained universal support within the PRG and they recommended that its value should be tested in future pilots.



Kenyan stakeholders value the AWS effort, reached consensus on recommendations and made a valuable contribution to the development of an international standard.

Senior representatives of national and local stakeholder groups were invited to deliberate on the findings and recommendations and to generate ideas for how some of the difficult questions facing the development of an IWSS could be handled. Each of the recommendations set out above gained majority agreement though important differences of opinion were highlighted and the level of support for each was recorded to indicate their relative priority. Contentious issues were explored including how the standard should handle the following challenges:

- 1. Where attaining the standard relies on performance of a third party, eg. full statutory compliance, the duty of care requirement for solid and liquid waste.**
- 2. Engaging with out-growers, smallholders and SMEs.**
- 3. How to define stewardship in data scarce or 'governance challenged' catchments?**

WATER STEWARDSHIP STANDARDS IN AFRICA -

The results of these deliberations have been documented and provide valuable and progressive ideas for further development within the global standard setting process. Reflecting on the AWS effort, Kenyan stakeholders provided the following testimonies:

‘Now we understand what the AWS standard is about, it is clear that it will help us implement Integrated Water Resource Management and our National Water Policy. It has our full support’.

Philip Olum, CEO, Water Resource Management Authority

‘This work to develop a water stewardship standard is very important. It will change the way water is managed in Naivasha for good’.

Paul Ruoya, Vice-chair, Lake Naivasha Basin Umbrella Water Resource Users Association and representative of Upper Turasha/Kinja WRUA



REFLECTING ON THE AWS EFFORT

‘Standards bring many benefits but some audits aren’t thorough and there isn’t much attention to water. This focus on water will bring targeted action’.

Quality and Compliance Manager, Naivasha Agri-business

‘Of course our resources are stretched, so anything that promotes compliance and business cooperation is a welcome initiative’.

Ben Langwen, Director of Enforcement and Compliance, Kenya National Environment Management Authority

‘Our businesses are almost totally dependent on water and long-term sustainability requires action from ourselves, other users in the basin and the government. Doing nothing is not an option – we are committed to finding a solution. Our worry is that a lack of enforcement means that any leadership on our side is either a waste of time, or even worse, puts us at a competitive disadvantage. By flagging and targeting these governance issues and helping differentiate responsible water users, the AWS standards being piloted are an important part of that solution.’

Harry Milbank, General Manager, Longonot Horticulture Ltd, Vegpro (Kenya) Ltd.



There is consensus from all stakeholders that the AWS Kenya case study was a successful exercise which provides signposts for how retailers, suppliers, governments, communities and civil society can work together towards sustainable and equitable river basin governance. By bringing its suppliers together with other water users in the basin and linking them to expertise within the AWS, M&S have taken an innovative step and an important leadership role in the development of an international water stewardship standard. Reflecting on the case study exercise provides the following insights for further work:

REFLECTING ON THE AWS EFFORT

1. Water stewardship standards provide a promising tool to guide suppliers and retailers towards locally appropriate strategies to address operational and reputational water risks and enable them to demonstrate their responsible approach to water use and stewardship.
2. Further pilot testing and case studies are required to ensure that the International Water Stewardship Standard is developed in a way which brings maximum benefits to water users and suppliers. In particular, the next version of the standard will require testing in a variety of geographical contexts across a range of production processes and commodity types. The AWS and project collaborators look forward to working with other partners and suppliers to that end.
3. Because water uses, values and functions are determined beyond the fenceline of production sites and farms, a catchment wide, participatory and multiple stakeholder process within this type of work is essential.
4. Although the stakeholder representation within the Project Reference Group was well balanced across interests, future case studies and pilots should actively seek a more equitable gender balance among stakeholders and informants. In addition, where possible a longer time period should be set aside to undertake intensive exploratory work onsite. Further, now that the pilot process has been developed and tested it should be possible to conduct a case study within a shorter time period – probably three months or less.

The AWS Kenya case study reinforces the need for local and global discussion with stakeholders to decide on the exact specifications of a water stewardship standard. Although this work provides many useful insights, some of the questions it raises do not have easy black or white answers. For the standard to be both legitimate and effective all stakeholders must have the chance to input into the resolution and the AWS Water Roundtable process and International Standard Development Committee will help ensure this.

The AWS invites all interested parties to actively contribute to this effort to ensure that the world's international water stewardship standard delivers the rapid and meaningful progress in water management which we all need.

Further details of the AWS's work and the full technical report on the Kenya case study can be obtained from nickhepworth@waterwitness.org.

ALLIANCE FOR WATER STEWARDSHIP™

By guiding and differentiating responsible water users who 'do the right thing' on water – through sustainable water management within the fence line and contributing to better water governance beyond, the Alliance for Water Stewardship's standard will make a major contribution to the fair water future we all need.

We invite all concerned to join our effort and to collaborate with us to ensure that the world's first water use standard delivers the progress towards water security we all seek.

This work was led by Water Witness International on behalf of the Alliance for Water Stewardship. The Alliance is a joint initiative of:



The CEO Water Mandate



CARBON DISCLOSURE PROJECT



PACIFIC INSTITUTE

water witness 
...because we're all downstream

The Nature Conservancy 
Protecting nature. Preserving life.™

MARKS & SPENCER

PlanA  Natural resources

protecting the most valued natural resources for the future