



**Alliance for Water Stewardship Re-Certification Audit Report
Prepared for Olam International**

Single site certification

Site: Aviv Coffee Plantation

AWS Reference: AWS-010-INT-SGS-00-05-0003-0003

Prepared by: SGS


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REPORT DETAILS

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1 EXECUTIVE SUMMARY

The scope of services covers the certification assessment of water use in compliance with the AWS International Water Stewardship Standard Version 1 for Olam International Limited Arabica Coffee Farm in Tanzania, in the Ruvuma region. The certification assessment has been completed in compliance with the AWS Certification requirements, Version 1 dated July 2015. This is the first re-assessment audit for Aviv Tanzania, the following audit will be a surveillance audit.

Aviv Tanzania Limited is a fully owned subsidiary company of Olam International Limited which is located in Songea Rural District, Ruvuma Region. Aviv Tanzania was formed in 2011 to manage a large agriculture project, being the production of Arabica coffee under drip irrigation plantations on Aviv farm, in Lipokela Village.

A total of eleven findings were raised during the audit process, two major non-conformances, eight minor and one new information request.

Aviv Tanzania responded the findings raised with root cause analysis and action plans and submitted corrected documentation as evidence to successfully clear all findings raised in the audit.

Given the review of evidence produced and site visit inspections performed at the Aviv Plantation, SGS recommends that Aviv Tanzania is awarded continued AWS Core Certified status with a surveillance audit interval of annual frequency.

2 SCOPE OF ASSESSMENT

The scope of services covers a re-certification of the conformity assessment of water use in compliance with the AWS International Water Stewardship Standard Version 1 for Olam International Limited Arabica Coffee Farm in Tanzania, in the Ruvuma region. The assessment has been completed in compliance with the AWS Certification requirements, Version 1 dated July 2015.

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SGS visited Songea, Tanzania, from 8-13 June 2019 to perform the re-certification site visit and assess the facilities and activities of Aviv Tanzania with regard to certification to the AWS Standard. The audit took place at the offices of Aviv in Songea which are based at their Arabica Coffee Farm near Lipokela Village. The farm site is located in the upper Ruvuma River catchment, about 45km from Songea town, Songea Rural District, Ruvuma Region (approximately 950 km Southwest of Dar Es Salaam).

The audit interviews were held at the offices in Songea and the on-site-audit also included inspection of the installations and activities on the coffee farm. Aviv Tanzania provided most of the requested supporting documentation as evidence whilst on site. Outstanding documentation was forwarded on via email during the following months.

Table 2.1 photos from Aviv Coffee Farm



Chemical Store

Weather Data



Seedling Nursery



Settling Pond



Stakeholder Engagement



Stakeholder Engagement



Stakeholder Engagement



Met Station



PPE Wash Station



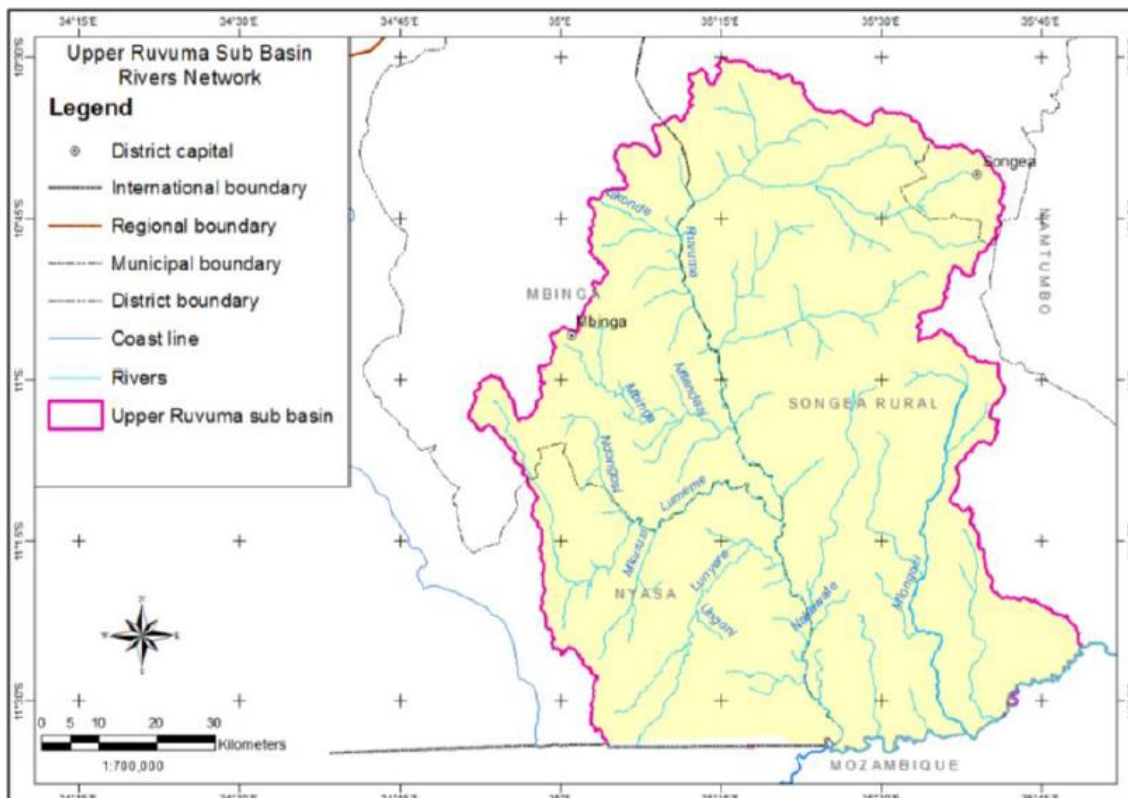
River Depth Marker

3 DESCRIPTION OF CATCHMENT

The Ruvuma River Basin is the 5th largest basin in East Africa, shared between 3 countries: Mozambique, Tanzania and Malawi. The main Ruvuma River flows along the border between Mozambique and Tanzania. The total catchment area is approximately 155,000 km². Mozambican territory covers 100,000 km² (~65%), whilst Tanzanian territory covers 52,000 km² (~34%). The remaining part in Malawi covers only 2,500 km² (<2%). The river basin is an almost unparalleled case in South-Eastern Africa because it is one, of the few shared rivers, that is basically hydrologically pristine with no significant water storage and / or river regulating infrastructure. The Ruvuma Basin is rich in both aquatic and terrestrial biodiversity and a large part of the basin is environmentally/ ecologically untouched, especially in Mozambique.

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Figure 3.1 Upper Ruvuma Sub Basin Network¹



¹ Figure taken from REF029 Appendix Volume 1 UR Sub-basin Plan

4 SUMMARY OF SHARED WATER CHALLENGES

Aviv Tanzania has identified general shared challenges which have been detailed below and were extracted from reference REF109 Aviv Water-related Risks and Opportunities. More specific shared water challenges have been provided in Table 4.1 below.

The Upper Ruvuma Basin faces a complex mixture of challenges and opportunities and naturally, aligned with the recently launched global Sustainable Development Goals (SDGs), priorities amongst these are, for the authorities and most of the stakeholders, the need for improved WASH provision and maintenance; water resource development which is sustainable and coordinated; improved land and resource management to control degradation and pollution. In particular, for the Upper Ruvuma Basin there is a need to plan, manage, monitor and coordinate increasing demands on water use in order to avoid problems during dry periods. Underpinning and contingent to this is the need to rapidly increase the levels of participation, capacity and accountability around water resource management. Major problems facing the Upper Ruvuma Basin can be summarised as follows:

- a. Insufficient water supply and sanitation both rural and urban (Songea and Mbinga town) and inequity in urban – rural provision;
- b. Catchment degradation due to poor land management, soil loss and deforestation and pollution;
- c. Low levels of awareness (in particular on sanitation and solid waste management);
- d. Conflict between pastoralists, farmers, other stakeholders;
- e. Pollution from agriculture and artisanal mining;
- f. Limited legal implementation and enforcement and low accountability;
- g. Shortage of manpower and skills;
- h. Low coordination between sectors and stakeholders;
- i. Managing water resources in dry season and dry years to avoid conflict;
- j. Sustainable new development of water resources for new industries; and

- k. irreversible economic loss from catchment stakeholders.

A more detailed presentation of shared water challenges identified by Aviv Tanzania has been presented in Table 4.1 below. Information in the table below has been extracted from reference REF015 Water Monitoring Plan.

Table 4.1. Detailed Shared Water Challenges for Aviv Tanzania

Type of Challenge	Identified Water-Related Challenge(S)	Justification Rationale
1. Environmental/ Climate Change	a. Variation of rainfall pattern due to climatic changes	A reduction in the levels of rainfall would automatically impact the natural water flow of the river. Impacts would follow the same rationale as for Challenge 3.a. In addition, a change in the weather pattern will also impact the life cycle of the coffee plants, for instance flowering too early in the season. A disturbance of the weather pattern would definitively impact the coffee production
	b. Deforestation caused mainly by charcoal making, uncontrolled fires and land clearance for farming activities	Deforestation, in general creates areas which are more prone to erosion, hence to river siltation and loss of agriculture land. A loss of agriculture land pushes population to cultivate in buffer zones accentuating even more these effects of erosion.
	c. Siltation, i.e. from borrow pits operations that are excavated near water sources have become very common. Some areas or soils on Aviv site are much susceptible to soil erosion due to nature of soil, and the sudden character of rainy episodes. These represent erosion risks on the farm especially during rainy season that may cause serious access difficulties.	Siltation is a major origin of irrigation failure with drip irrigation. The water sent into the drip lines shall be clean enough to avoid any blockage of the drip holes. With the increase in siltation in the river, the filters at the farm must perfectly perform on a permanent basis; hence require significant maintenance (cleaning of filters, field check of each hole one by one).
	d. Eutrophication/Encroachment of Aquatic Invasive Species	A bloom in algae in the river could damage the pumps hence create irrigation failure. Nonetheless, it requires an algae growth to be considered as a high risk.
2. Pollution	a. Industrial/Domestic Pollution from other users' effluents	Besides SOUWASA, none of the upstream users may risk to suddenly pollute the river to a level forcing us to stop pumping from the river.
	b. Agriculture Pollution from agricultural activities especially on usage of pesticides & fertilizers	All upstream agriculture is done by smallholder famers for whom it is commonly known they face major challenges to finance fertilisers and pesticides for their crop fields. The risk appears rather low.
	c. Deterioration in Water Quality (physical, biological, chemical)	The upstream quality requires a regular monitoring to ensure a long-term deterioration in quality of the river is noticed but the risk is low to notice significant alteration of water quality stopping us from pumping.

3. Resource Access	a. Natural fluctuation in River Water flow	Natural variation of the river water flow becomes immediately a stress period for Aviv management as it generates additional (unbudgeted) pumping costs. If the flow reduces on a long period of time, the irrigation demand increases to a level where drip irrigation may fail in providing coffee water requirements, relating directly in potential loss of production. Securing the water supply to the plantations is the key priority for all Aviv departments and anything jeopardizing this is treated as a key priority.
	b. Over-abstraction	Any upstream users over-abstracting would impact on the flow of the river. This would reduce automatically access to water for Aviv, but the risk is relatively minor considering the consumption of other upstream users.
4. Weak Governance	a. Farming along buffer zones is still practiced into some areas along upper Ruvuma basin	With the demographic growth observed in Tanzania, even Ruvuma Region and Songea have their population density increasing. However, this growing population's main activity is subsistence agriculture. However, with an increasing density, areas and more particularly fertile river banks are progressively turning into agriculture land. The 60m buffer zone, as per the law, is barely respected in numerous areas hence increasing the risk of erosion and siltation in the river.
	b. Operation of some other water users without water use permit such as rice farmers	Many of the water users in the catchment do not have the water permits. This limits significantly the authorities to determine the actual water balance and confirm sustainable water resources management in the basin.
	c. Compliance to water regulation	Without compliance of all users against the same legal framework, some users may benefit and deliberately polluted, over-abtract, etc... Without following same rules, the potential for conflict between stakeholders raises.
	d. Weak joint support or platform that unites all stakeholders together for water governance and instead the all burden has been left to some few stakeholders. This is mostly observed when it comes to financial support to host stakeholders' meetings.	An inefficient joint platform limits Aviv to deal with conflicts or water-related risks in a constructive manner. Any issue coming from a stakeholder would have certain negative impacts on the image of Aviv, and Olam in general. Maintaining the social license to operate is also crucial to keep good productivity on the farm. Any disturbance of operations from communities would disrupt operations.

5 STAKEHOLDER ENGAGEMENT

SGS conducted stakeholder engagement meetings on the afternoon of June 11, 2019. SGS met with some stakeholders whilst onsite and recorded the following feedback:

1. Hilary P Kilfaru, Chairperson of JUWAMURU. Mr Kilfaru indicated his understanding for the need to keep the rivers and streams clean and flowing as the community depends on them for livelihood. He indicated that riverbanks should be planted with native species to encourage a healthy riverine ecosystem. Programs to discourage deforestation should be prioritised. He indicated that Aviv had assisted with initiating tree planting and gathered villages together to discuss water/river issues. Aviv donated a camera to JUWAMURU to allow for problems to be captured and conveyed to the WUA and authorities. He indicated that understanding of river conservation is limited in the villages, but that Aviv had been active in the community to provide training on environmental issues. He is aware that the authorities visited Aviv and that they inspected the buffer zones and found them to be correct and appropriate. He indicated that the villages and village authorities are lacking in the necessary resources to be able to action water governance issues in the way in which they should be.
2. Mr Baraka Biboka, the Hydrology Technician for the Rovuma Basin was interviewed on the same day; his job is to perform farm visits and assess irrigation practices and water management. He indicated that his opinion is that Aviv is managing their water resource well and are monitoring water being extracted correctly. The WUAs are supported by Aviv and the relationship is a good one.
3. Philemon Polepole Kinangadzi is a chemist at the water basin laboratory and he performs the sampling and testing of the water for Aviv. He confirms that they sample upriver and downriver as well as at the farm, the drinking water and the dam water.
4. The 4th interview was with Elias Malindisa the Basin Sub Officer; he is familiar with Aviv because they sit on the same forums and in meetings. He is responsible for verifying the water use of Aviv and he receives the monthly reports from Aviv. He indicated that he considered Aviv to be a positive contributor to the water ministry, basin office and community.

6 INDICATORS CHECKLIST

As per the requirement set out in the AWS certification requirements Section 2.11.3.1 below is a checklist of all the CORE AWS indicators with the relevant reviewed evidence provided by the site. and the indicator with which it is associated.

Table 1: Evidence reviewed by SGS against each CORE AWS indicator

STEP 1 - GATHER AND UNDERSTAND		
CRITERION 1.1	INDICATOR 1.1.1	
Gather information to define the site’s physical scope for water stewardship purposes, including: its operational boundaries; the water sources from which the site draws; the locations to which the site returns its discharges; and the catchment(s) that the site affect(s) and upon which it is reliant.	1.1.1 The physical scope of the site shall be mapped, considering the regulatory landscape and zone of stakeholder interests, including: <ul style="list-style-type: none"> - Site boundaries; - Water-related infrastructure, including piping network, owned or managed by the site or its parent organization; - Any water sources providing water to the site that are owned or managed by the site or its parent organization; - Water service provider (if applicable) and its ultimate water 	New Land use map from 2018 has been generated, it shows the current map of the farm with the all water sources, buildings, buffer zones, ablution blocks, processing facilities and effluent plant. REF001 & REF002.

	<p>source; - Discharge points and waste water service provider (if applicable) and ultimate receiving water body or bodies; - Catchment(s) that the site affect(s) and is reliant upon for water.</p>	
CRITERION 1.2	INDICATOR 1.2.1	

<p>Understand relevant stakeholders, their water related challenges, and the site's ability to influence beyond its boundaries.</p>	<p>1.2.1 Stakeholders and their water-related challenges shall be identified. The process used for stakeholder identification shall be identified. This process shall: - Inclusively cover all relevant stakeholder groups including vulnerable, women, minority, and Indigenous people; - Consider the physical scope identified, including stakeholders, representative of the site's ultimate water source and ultimate receiving water body or bodies; - Provide evidence of stakeholder consultation on water-related interests and challenges; - Note that the ability and/or willingness of stakeholders to participate may vary across the relevant stakeholder groups; - Identify the degree of stakeholder engagement based on</p>	<p>More stakeholders have been added to the existing database of stakeholders and the way in which they have been rated as having influence has been updated. REF003 & REF004 Stakeholder Identification Document has been updated. The review process is performed by Johnson and Jeremy. There is also a Stakeholder Engagement Plan which has been updated. REF007 Olam has a set of new documents called Community Outreach, March 2017 -2024 REF005, REF006 which is implemented throughout Olam facilities worldwide. falls under the Environmental banner. in 4 villages there are 4 sustainability plans being implemented, working with the village on addressing shared water challenges, as well as upliftment programmes. REF008, REF009, REF010, REF011. Questionnaires have been circulated as well as presentation of the Water Stewardships Summary. A new policy, Olam Landscape Policy, commitment to growing agriculture responsibly. an improvement on the previous Olam Framework. Nyasa Basin membership is new, and Aviv is taking part in those forums. and Water Resource Forum 2030. REF005, REF037, REF039, REF042.</p>
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	<p>their level of interest and influence.</p>	
	<p>INDICATOR 1.2.2</p>	
	<p>Current and potential degree of influence between site and stakeholder shall be identified, within the catchment and considering the site's ultimate water source and ultimate receiving water body for wastewater.</p>	<p>The sphere influence document has been updated. REF004.</p>
<p>CRITERION 1.3</p>	<p>INDICATOR 1.3.1</p>	

<p>Gather water-related data for the site, including: water balance; water quality, Important Water-Related Areas, water governance, WASH; water-related costs, revenues, and shared value creation.</p>	<p>Existing water-related incident response plans shall be identified.</p>	<p>Incident Response Plan has been updated. REF012. There is an Olam Incident Notification and Escalating Policy, and this is new. REF013. Relevant people have been identified in IRP and allocated responsibility with regards water related incidents. Each division has an incident book where everything is recorded on the farm. At management meetings every two weeks, the incident is discussed, the minutes reflect the details including actions and plans. All provided are the attendance registers for management meetings with CRS and HR. Corrective actions are recorded in the Corrective Actions reports which was implemented in November 2018. E.g. forest fires on the hill above the farm cause ash to fall into the dam. The soot clogs the filters of the dam and causes problems for irrigation. There was 20 mm of rain which meant that the soot was entrained in the rain and run-off ended up in the dam. Monthly reporting framework for the Coffee Plantation. subsistence farmers clear the land through use of fire, it is considered that if the fire gets out of control and spreads it is considered to bring good luck to the farmer for the coming season. This was the main issue for 2018. an additional inflow point.</p>
	<p>INDICATOR 1.3.2</p>	
	<p>Site water balance, including inflows, losses, storage, and outflows shall be identified and mapped.</p>	<p>REF001 & REF002</p>
	<p>INDICATOR 1.3.3</p>	

<p>Site water balance, inflows, losses, storage, and outflows, including indication of annual variance in water usage rates, shall be quantified. Where there is a water-related challenge that would be a threat to good water balance for people or environment, an indication of annual high and low variances shall be quantified.</p>	<p>The 2018 water balance was reviewed against final version of the water balance agreed at the end of the previous audit. Differences were found. 001MAJCAR. Water abstraction takes place from the rivers, REF056, REF057, REF058, REF059, REF060. The abstraction model for 2018 was reviewed and it was discovered that the water abstraction for the wet mill had been omitted from the water balance. Finding was raised and the water balance amended. The dam was modified in 2018. The outflow pipe from the dam to the dame pumps was at 2m level, however, the iron present in the water is heavy and falls to the lower part of the dam and clogs up the irrigation pipes causing problems. A new outflow pipe was installed in Feb 2018 at the 6 m level to solve the problem of the iron levels in the water.</p>
<p>INDICATOR 1.3.4</p>	
<p>Water quality of the site's water source(s), provided waters, effluent and receiving water bodies shall be quantified. Where there is a water-related challenge that would be a threat to good water quality status for people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be quantified.</p>	<p>SGS reviewed the provided water quality tests provided and noted that the wet mill water samples in July 2018 reflected that BOD and COD levels were not compliant. REF015, REF019, REF027 This should be solved by the new wastewater treatment plant which has been commissioned.</p>

INDICATOR 1.3.5	
Potential sources of pollution shall be identified and if applicable, mapped, including chemicals used or stored on site.	Agro-chemical store inspection report. REF018. Identification of all chemicals on site. Chemical store is inspected once a month. There is an Emergency Response Plan for spillages, REF012, there is an Agro-chemical SOP. REF020, REF021, REF022. There is clear instruction on how to clean a spill and how to deal with the spilt material - most likely sent to the incinerator.
INDICATOR 1.3.6	
On-site Important Water-Related Areas shall be identified and mapped, including a description of their status including Indigenous cultural values.	Site Water related areas document has been updated to include the dam, the weather stations, the booster stations and the WWTW. REF023. To be reviewed in the Land Use Map and review the Estate Boundary Map which has identified all the points of the IWRA. REF001. REF056. REF057
INDICATOR 1.3.7	
Annual water-related costs, revenues, and a description or quantification of the social, cultural, environmental, or economic water-related value generated by the site shall be identified and used to inform the evaluation of the plan in 4.1.2.	Coffee Aspirations Water Related-Costs document. REF024 Available for 2014 - 1017 only. No cost provided for 2018 as yet.
INDICATOR 1.3.8	

	Levels of access and adequacy of WASH at the site shall be identified.	There is a WASH pledge for the farm. REF028. A self-assessment for access to WASH is performed every year. WASH aspirations are set globally by Olam and completed by Aviv - Aspiration 4. 2018 was the baseline year for comparison to targets up to 2020. Olam has an internal WASH standard. There are septic tanks by the toilet blocks which will need to be emptied every 5 years or so. REF025, REF026. Showers and toilets are provided all over the farm for workers. Drinking water is provided to all workers on the farm during the day and each person is allowed to take a bottle of water home each day.
CRITERION 1.4	INDICATOR 1.4.1	
Gather data on the site's indirect water use, including: its primary inputs; the water use embedded in the production of those primary inputs the status of the waters at the origin of the inputs (where they can be identified); and water used in out-sourced water-related services.	The embedded water use of primary inputs, including quantity, quality and level of water risk within the site's catchment, shall be identified.	The Materials Suppliers and Service Providers document has been updated. The calculations are called Indirect calculated water footprint has been done but omits the primary input of seeds. REF033
	INDICATOR 1.4.2	
	The embedded water use of outsourced services shall be identified, and where those services originate within the site's catchment, quantified.	All service providers are located outside the site's catchment
CRITERION 1.5	INDICATOR 1.5.1	
Gather water-related data for the catchment, including water governance, water balance, water quality, Important Water-Related Areas,	Water governance initiatives shall be identified, including catchment plan(s), water-related public policies, major publicly led initiatives under way, and relevant goals to help inform site of	Review stakeholder's identification document. REF003, REF004. Olam Plantation Code - how to operate the farm responsibly Aviv has a strong history of interacting frequently and consistently with local and national government agencies and there is much evidence of their awareness of government initiatives on water. REF030, REF031, REF032, REF034, REF035, REF036, REF038, REF041, REF043, REF044, REF045, REF046. REF047, REF051.

<p>infrastructure, and WASH</p>	<p>possible opportunities for water stewardship collective action.</p>	
<p>INDICATOR 1.5.2</p>		
	<p>Applicable water-related legal and regulatory requirements shall be identified, including legally defined and/or stakeholder-verified customary water rights.</p>	<p>Legal Compliance Checklist - check 2018 version. REF048.</p>
<p>INDICATOR 1.5.3</p>		
	<p>The catchment water-balance, and where applicable, scarcity, shall be quantified, including indication of annual, and where appropriate, seasonal,</p>	<p>Available in Ruvuma Basin Integrated Resource Management Plan. Previously reviewed and no change. It has been modelled in the plan. REF049, REF050, REF051, REF055</p>
<p>INDICATOR 1.5.4</p>		
	<p>Water quality, including physical, chemical, and biological status, of the catchment shall be identified, and where possible, quantified. Where there is a water-related challenge that would be a threat to good water quality status for</p>	<p>There is a Catchment Data document which Aviv has prepared which provides much of the information available on the catchment. REF050, REF051 REF052, REF053, REF054. River Quality Report. REF061, REF062, REF063. Also, Irrigation Water Quality Report - prepared by Olam which represents the status of the Ruvuma River. In terms of quantifying the water in the Ruvuma, the flow marker at the Nursery is an indicator of this status.</p>

<p>people or environment, an indication of annual, and where appropriate, seasonal, high and low variances shall be identified.</p>	
<p>INDICATOR 1.5.5</p>	
<p>Important Water-Related Areas shall be identified, and where appropriate, mapped, and their status assessed including any threats to people or the natural environment, using scientific information and through stakeholder engagement.</p>	<p>Available in Ruvuma Basin Integrated Resource Management Plan. Previously reviewed and no change. It has been modelled in the plan. REF051 details the IWRA for the catchment. REF049, REF057, REF058.</p>
<p>INDICATOR 1.5.6</p>	
<p>Existing and planned water-related infrastructure shall be identified, including condition and potential exposure to extreme events.</p>	<p>This has been detailed in REF051. Information is also available in Ruvuma Basin Integrated Resource Management Plan. Previously reviewed and no change. It has been modelled in the plan. REF049. SOUWASA WWTP. REF056 and REF057</p>
<p>INDICATOR 1.5.7</p>	
<p>The adequacy of available WASH services within the catchment shall be identified.</p>	<p>No evidence provided for the great catchment area, however, at village area WASH surveys have been performed. REF025.</p>

CRITERION 1.6	INDICATOR 1.6.1	
Understand current and future shared water challenges in the catchment, by linking the water challenges identified by stakeholders with the site's water challenges.	Shared water challenges shall be identified and prioritized from the information gathered.	JUWUMURU report from 2018. REF051 Details the government led initiatives to address water-related issues. REF019. Shared water challenges have been documented in REF003 & REF004.
	INDICATOR 1.6.2 Initiatives to address shared water challenges shall be identified.	REF051 Details the government led initiatives to address water-related issues. Working with TFS to stop illegal charcoal burners in Rutanga Hills. REF064. REF065 is the Water Stewardship Summary presentation used to share information with stakeholders. Aviv took part in the MULTI SECTORAL FORUM FOR NATIONAL WATER RESOURCES IN TANZANIA forum. REF066
CRITERION 1.7	INDICATOR 1.7.1	
Understand the site's water risks and opportunities: Assess and prioritize the water risks and opportunities affecting the site based upon the status of the site, existing risk management plans and/or the issues and future risk trends identified in 1.6.	Water risks faced by the site shall be identified, and prioritized, including likelihood and severity of impact within a given timeframe, potential costs and business impact.	Detailed in Risk and Opportunities Document. REF067 & REF068.
	INDICATOR 1.7.1 Water-related opportunities shall be identified, including how the site may participate, assessment and prioritization of potential savings, and business opportunities.	Detailed in Risk and Opportunities Document. REF067 & REF068.
CRITERION 1.8	INDICATOR 1.8.1	

<p>Understand best practice towards achieving AWS outcomes: Determining sectoral best practices having a local/catchment, regional, or national relevance</p>	<p>Relevant catchment best practice for water governance shall be identified.</p>	<p>Taking part in the water forums. REF069. Ruvuma Water Board Forum, Nyasa Basin Forum, 2030 Water Resource Group Forum. World Business Council Report. REF028 from 2016. GIZ WUA engagement programmes partnership, lessons learned. REF070. REF071 is a report from the authority's who came and inspected the farm. The open and transparent manner of operations is considered best practice. REF072 and REF073 indicate the best practice goals of Aviv in the sustainable management of the farm within the greater context of the surrounding community</p>
INDICATOR 1.8.2		
	<p>Relevant sector and/or catchment best practice for water balance (either through water efficiency or less total water use) shall be identified.</p>	<p>REF072, REF073, REF074 indicate the best practice goals of Aviv in the sustainable management of the farm within the greater context of the surrounding community Aviv has installed tensiometers on the farm which act as moisture sensors, this has aided significantly in the reduction of water used for irrigation. Crops are only irrigated when moisture levels in the soil require it. The construction of the dam allows the farm to reduce the quantity of water withdrawn from the river each year. The wastewater treatment works allows for water to be re-used where possible. REF053 and REF054 detail the work planned for the catchment in terms of best practice in water resource management.</p>
INDICATOR 1.8.3		
	<p>Relevant sector and/or catchment best practice for water quality shall be identified, including rationale for data source.</p>	<p>REF072 and REF073 indicate the best practice goals of Aviv in the sustainable management of the farm within the greater context of the surrounding community REF053 and REF054 detail the work planned for the catchment in terms of best practice in water resource management. REF079 are published guidelines for water quality management and monitoring for Tanzania. REF080 Aviv has provided training to the HSE Officer on Water Quality Testing, also a best practice example.</p>
INDICATOR 1.8.4		
	<p>Relevant catchment best practice for site maintenance of Important Water-Related Areas shall be identified</p>	<p>REF072 and REF073 indicate the best practice goals of Aviv in the sustainable management of the farm within the greater context of the surrounding community REF053 and REF054 detail the work planned for the catchment in terms of best practice in water resource management.</p>
INDICATOR 1.8.5		

	Relevant sector and/or catchment best practice for site provision of equitable and adequate WASH services shall be identified.	Aviv sank three boreholes in neighbouring villages to provide drinking water to the community. Water tests were conducted to ensure potability. REF075, REF076. New school buildings were built and a teacher's house. REF077. REF053 and REF054 detail the work planned for the catchment in terms of best practice in water resource management.
STEP 2 - COMMIT AND PLAN		
CRITERION 2.1	INDICATOR 2.1.1	
Commit to water stewardship by having the senior-most manager in charge of water at the site, or if necessary, a suitable individual within the organization head office, sign and publicly disclose a commitment to water stewardship, the implementation of the AWS Standard and achieving its five outcomes, and the allocation of required resources.	A signed and publicly disclosed site statement OR organizational document shall be identified. The statement or document shall include the following commitments: <ul style="list-style-type: none"> - That the site will implement and disclose progress on water stewardship program(s) to achieve improvements in AWS water stewardship outcomes - That the site implementation will be aligned to and in support of existing catchment sustainability plans - That the site's stakeholders will be engaged in an open and transparent way - That the site will 	Same as 2016, this has not been altered. REF078.

	allocate resources to implement the Standard.	
CRITERION 2.2	INDICATOR 2.2.1	
Develop and document a process to achieve and maintain legal and regulatory compliance.	The system to maintain compliance obligations for water and wastewater management shall be identified, including: - Identification of responsible persons/positions within facility organizational structure - Process for submissions to regulatory agencies.	Regulatory Checklist REF048.
CRITERION 2.3	INDICATOR 2.3.1	

<p>Create a water stewardship strategy and plan including addressing risks (to and from the site), shared catchment water challenges, and opportunities</p>	<p>A water stewardship strategy shall be identified that defines the overarching mission, vision, and goals of the organization towards good water stewardship in line with this AWS Standard.</p>	<p>Same from 2016. Review REF082</p>
	<p>INDICATOR 2.3.2</p>	
	<p>A water stewardship plan shall be identified, including for each target: - How it will be measured and monitored - Actions to achieve and maintain (or exceed) it</p>	<p>Review 2019 AWS Plan. REF081. The WS Plan complies with the requirements of the Standard.</p>
<p>CRITERION 2.4</p>	<p>INDICATOR 2.4.1</p>	
<p>Demonstrate the site's responsiveness and resilience to respond to water risks</p>	<p>A plan to mitigate or adapt to identified water risks developed in co-ordination with relevant public-sector and infrastructure agencies shall be identified.</p>	<p>Water Related incident Response REF012. Olam Incident and Notification Escalation document. Incident. REF013.</p>
<p>STEP 3 - IMPLEMENT</p>		
<p>CRITERION 3.1</p>	<p>INDICATOR 3.1.1</p>	

Implement plan to participate positively in catchment governance.	Evidence that the site has supported good catchment governance shall be identified	Aviv has a well-established relationship with all regulatory bodies and is in regular communication with catchment authorities and stakeholders. REF005, REF006, REF008, REF009, REF010, REF011, REF032, REF034, REF035, REF036, REF037, REF038, REF039, REF040, REF041, REF042, REF044, REF047, REF064, REF069, REF071
	INDICATOR 3.1.2	
	Measures identified to respect the water rights of others including Indigenous peoples, that are not part of 3.2 shall be implemented	Aviv has undertaken several projects with the 4 local villages surrounding the farm. They have installed boreholes and initiated water testing in villages. REF075, REF076, Aviv has undertaken several WASH surveys in villages, built a dispensary in the villages. SGS Reviewed test results and letters to show that the boreholes in the villages have been tested. The document for Priority and budget for LTSP document. REF077 is evidence of this.
CRITERION 3.2	INDICATOR 3.2.1	
Implement system to comply with water-related legal and regulatory requirements and respect water rights.	A process to verify full legal and regulatory compliance shall be implemented	Regulatory Checklist REF048. Olam supplier code further stipulates that all service providers should be legally compliant. REF040 Olam Plantation Code for the sustainable operation of farms.
	INDICATOR 3.2.2	
	Where water rights are part of legal and regulatory requirements, measures identified to respect the water rights of others including Indigenous peoples, shall be implemented.	covered by 3.1.2
CRITERION 3.3	INDICATOR 3.3.1	

Implement plan to achieve site water balance targets.	Status of progress towards meeting water balance targets set in the water stewardship plan shall be identified	This was completed but not by the target date of Jan 2018 it was completed in June 2018. Invoices for meter installation to be used as evidence. A new meter was installed at the wet mill to easily monitor the water being used by the mill, this is also used to calculate the quantity of water going to the effluent plant by estimating 15% mucilage. The dam water had too high iron level which was blocking the irrigation pipes. The withdrawal pipe from the dam was raised from 2m up to 6 meters to withdraw water with lower iron levels. Progress report Feb. REF083, REF084, REF058.
	INDICATOR 3.3.2	
	Where water scarcity is a shared water challenge, annual targets to improve the site's water use efficiency, or if practical and applicable, reduce volumetric total use shall be implemented.	Irrigation Plan for 2018, ETO of each month with a plan of how to utilise water in the dam each month. REF058. The total volumetric use decreased 2014, 2015, review the abstraction document. The installation of tensiometers to test the level of moisture in the soil is a measured which has been implemented to improve water efficiency but has never been included in the WS plan. Irrigation efficiency is monitored through aspirations documents. REF024, REF026, REF072, REF073, REF065.
	INDICATOR 3.3.3	
CRITERION 3.4	Legally-binding documentation, if applicable, for the re-allocation of water to social, cultural or environmental needs shall be identified.	Legally binding documentation was not reviewed as not relevant for the site
	INDICATOR 3.4.1	

Implement plan to achieve site water quality targets	Status of progress towards meeting water quality targets set in the water stewardship plan shall be identified.	Water quality targets meet the requirements of the standard and water testing is being performed regularly.
	INDICATOR 3.4.2 Where water quality is a shared water challenge, continual improvement to achieve best practice for the site's effluent shall be identified and where applicable, quantified	Site effluent is contained on site within the newly operational WWTW.
CRITERION 3.5	INDICATOR 3.5.1	
Implement plan to maintain or improve the site's and/or catchment's Important Water-Related Areas	Practices set in the water stewardship plan to maintain and/or enhance the site's Important Water-Related Areas shall be implemented	Leases with Ruvuma Basin office in implementation of catchment protection by installation of 60 meters beacons in Ruvuma River. Implement action plan and sharing of finding from JUWAMURU upon water management surveys. The beacons were never installed because the water basin officer changed, and the programme was no longer supported. The catchment water management plan was never implemented. there are difficulties of lack of funding for JUWAMURU. Off-site wash training and surveys in villages as evidence for 2nd last item on the WS Plan. REF008, REF009, REF010, REF011, REF086
CRITERION 3.6	INDICATOR 3.6.1	
Implement plan to provide access to safe drinking water, effective sanitation, and protective hygiene (WASH)	Evidence of the site's provision of adequate access to safe drinking water, effective sanitation, and protective hygiene (WASH) for all	Aviv has two water treatment plants on the farm which are used to provide clean drinking water to all employees, Employees are encouraged to take a bottle of water home after each shift. There an abluion blocks spread out over the farm providing toilets and showers for all works. REF002 shows the abluion blocks marked on the farm map. All workers are training in basic hygiene and provided with facilities for washing. REF003, REF006, REF007, REF030, REF087, REF088, REF089.

<p>for all workers at all premises under the site's control</p>	<p>workers onsite shall be identified and where applicable, quantified.</p>	
	<p>INDICATOR 3.6.2</p> <p>Evidence that the site is not impinging on the human right to safe water and sanitation of communities through their operations, and that traditional access rights for Indigenous and local communities are being respected, and that remedial actions are in place where this is not the case, and that these are effective</p>	<p>Aviv undertook WASH surveys in neighbouring villages and installed new boreholes for Lipokela Village. REF006, REF007, REF008, REF009, REF010, REF011, REF075, REF076, REF077, REF085, REF086, REF087, REF089</p>
<p>CRITERION 3.7</p>	<p>INDICATOR 3.7.1</p>	
<p>Implement plan to maintain or improve indirect water use within the catchment.</p>	<p>Evidence that indirect water use targets set in the water stewardship plan, as applicable, have been met shall be quantified</p>	<p>No targets for indirect water use set. Finding raised for Aviv to engage further with indirect water users in form of suppliers to improve their response to this indicator.</p>
	<p>INDICATOR 3.7.2</p> <p>Evidence of engagement with suppliers and service providers, as well as, when applicable,</p>	<p>No targets for indirect water use set. Finding raised for Aviv to engage further with indirect water users in form of suppliers to improve their response to this indicator.</p>

	actions they have taken in the catchment as a result of the site's engagement related to indirect water use, shall be identified	
CRITERION 3.8	INDICATOR 3.8.1	
Implement plan to engage with and notify the owners of any shared water-related infrastructure of any concerns the site may have	Evidence of engagement, and the key messages relayed with confirmation of receipt, shall be identified.	Multiple references as evidences of engagement. REF006, REF007, REF008, REF009, REF010, REF011, REF032, REF047, REF069, REF71
CRITERION 3.9	INDICATOR 3.9.1	
Implement actions to achieve best practice towards AWS outcomes: continually improve towards achieving sectoral best practice having a local/catchment, regional, or national relevance	Actions towards achieving best practice, related to water governance, as applicable, shall be implemented	Taking part in the water forums. REF069. Ruvuma Water Board Forum, Nyasa Basin Forum, 2030 Water Resource Group Forum. World Business Council Report. REF028 from 2016. GIZ WUA engagement programmes partnership, lessons learned. REF070. REF071 is a report from the authorities who came and inspected the farm. The open and transparent manner of operations is considered best practice. REF072 and REF073 indicate the best practice goals of Aviv in the sustainable management of the farm within the greater context of the surrounding community
	INDICATOR 3.9.2	
	Actions towards achieving best practice, related to targets in terms of water balance shall be implemented	REF072, REF073, REF074 indicate the best practice goals of Aviv in the sustainable management of the farm within the greater context of the surrounding community Aviv has installed tensiometers on the farm which act as moisture sensors, this has aided significantly in the reduction of water used for irrigation. Crops are only irrigated when moisture levels in the soil require it. The construction of the dam allows the farm to reduce the quantity of water withdrawn from the river each year. The waste water treatment works allows for water to be re-used where possible. REF053 and REF054 detail the work planned for the catchment in terms of best practice in water resource management.
	INDICATOR 3.9.3	

	Actions towards achieving best practice, related to targets in terms of water quality shall be implemented	REF072 and REF073 indicate the best practice goals of Aviv in the sustainable management of the farm within the greater context of the surrounding community REF053 and REF054 detail the work planned for the catchment in terms of best practice in water resource management. REF079 are published guidelines for water quality management and monitoring for Tanzania. REF080 Aviv has provided training to the HSE Officer on Water Quality Testing, also a best practice example.
	INDICATOR 3.9.4	
	Actions towards achieving best practice, related to targets in terms of the site's maintenance of Important Water-Related Areas shall be implemented	REF072 and REF073 indicate the best practice goals of Aviv in the sustainable management of the farm within the greater context of the surrounding community REF053 and REF054 detail the work planned for the catchment in terms of best practice in water resource management.
	INDICATOR 3.9.5	
	Actions towards achieving best practice related to targets in terms of WASH shall be implemented.	Aviv sank three boreholes in neighbouring villages to provide drinking water to the community. Water tests were conducted to ensure potability. REF075, REF076. New school buildings were built and a teacher's house. REF077. REF053 and REF054 detail the work planned for the catchment in terms of best practice in water resource management.
STEP 4 - EVALUATE		
CRITERION 4.1	INDICATOR 4.1.1	
Evaluate the site's performance in light of its actions and targets from its water stewardship plan and demonstrate its contribution to	Performance against targets in the site's water stewardship plan and the contribution to achieving water stewardship outcomes shall be evaluated	REF081 The WS Plan has a column linking the targets to AWS outcomes. Where in the power to do Aviv has achieve 2018 targets, where dependant on outside entities some targets were not achieved. More information on the achievements and evaluation of performance can be found in REF024, REF026, REF065, REF072, REF073, REF074.
	INDICATOR 4.1.2	

achieving water stewardship outcomes	Value creation resulting from the water stewardship plan shall be evaluated	To be reviewed in surveillance
	INDICATOR 4.1.3	
	The shared value benefits in the catchment shall be identified and where applicable, quantified	To be reviewed in surveillance
CRITERION 4.2	INDICATOR 4.2.1	
Evaluate the impacts of water-related emergency incidents (including extreme events), if any occurred, and determine the effectiveness of corrective and preventative measures	A written annual review and (where appropriate) root-cause analysis of the year's emergency incident(s) shall be prepared and the site's response to the incident(s) shall be evaluated and proposed preventative and corrective actions and mitigations against future incidents shall be identified	EAF Coffee Plantations Monthly Reporting Framework. REF091
CRITERION 4.3	INDICATOR 4.3.1	

<p>Evaluate stakeholders' consultation feedback regarding the site's water stewardship performance, including the effectiveness of the site's engagement process</p>	<p>Consultation efforts with stakeholders on the site's water stewardship performance shall be identified.</p>	<p>REF090, REF091. SGS met with some stakeholders whilst onsite and recorded the following feedback. Hilary P Kilfaru, Chairperson of JUWAMURU. Mr Kilafaru indicated his understanding for the need to keep the rivers and streams clean and flowing as the community depends on them for livelihood. He indicated that river banks should be planted with native species to encourage a healthy riverine ecosystem. Programs to discourage deforestation should be prioritised. He indicated that Aviv had assisted with initiating tree planting and gathered villages together to discuss water/river issues. Aviv donated a camera to JUWAMURU to allow for problems to be captured and conveyed to the WUA and authorities He indicated that understanding of river conservation is limited in the villages, but that Aviv had been active in the community to provide training on environmental issues. He is aware that the authorities visited Aviv and that they inspected the buffer zones and found them to be correct and appropriate. He indicated that the villages and village authorities are lacking in the necessary resources to be able to action water governance issues in the way in which they should be. Mr Baraka Biboka, the Hydrology Technician for the Rovuma Basin was interviewed on the same day; his job is to perform farm visits and assess irrigation practices and water management. He indicated that his opinion is that Aviv is managing their water resource well and are monitoring water being extracted correctly. The WUAs are supported by Aviv and the relationship is a good one. Philemon Polepole Kinangadzi is a chemist at the water basin laboratory and he performs the sampling and testing of the water for Aviv. He confirms that they sample upriver and downriver as well as at the farm, the drinking water and the dam water. The 4th interview was with Elias Malindisa the Basin Sub Officer, he is familiar with Aviv because they sit on the same forums and in meetings. He is responsible for verifying the water use of Aviv and he receives the monthly reports from Aviv. He indicated that he considered Aviv to be a positive contributor to the water ministry, basin office and community.</p>
<p>CRITERION 4.4</p>	<p>INDICATOR 4.4.1</p>	
<p>Evaluate and update the site's water stewardship plan, incorporating the information obtained from the evaluation process in the</p>	<p>The site's water stewardship plan shall be modified and adapted to incorporate any relevant information and lessons learned from the evaluations in this step and these</p>	<p>To review at Surveillance</p>

context of continual improvement	changes shall be identified.	
STEP 5 - COMMUNICATE AND DISCLOSE		
CRITERION 5.1	INDICATOR 5.1.1	
Disclose water-related internal governance of the site's management, including the positions of those accountable for legal compliance with water-related local laws and regulations.	The site's water-related internal governance, including positions of those accountable for compliance with water-related laws and regulations shall be disclosed	Aviv Water Stewardship PDF printed as a booklet and presented at meetings. REF065. Meeting with Chipole Sisters, all four villages with the 2 wards and the Executive of the 7 villages, Water Basin Office, JUWAMuru. The questionnaires were also issued and completed at this meeting except Chipole and Water Basin, they have only the attendance register for these. REF005, REF007, REF008, REF009, REF010, REF011. REF037.
CRITERION 5.2	INDICATOR 5.2.1	
Communicate the water stewardship plan with relevant stakeholders.	The water stewardship plan, including how the water stewardship plan contributes to AWS Standard outcomes, shall be communicated to relevant stakeholders.	REF065
CRITERION 5.3	INDICATOR 5.3.1	

<p>Disclose annual site water stewardship summary, including the relevant information about the site's annual water stewardship performance and results against the site's targets</p>	<p>A summary of the site's water stewardship performance, including quantified performance against targets, shall be disclosed annually at a minimum</p>	<p>REF065</p>
<p>CRITERION 5.4</p>	<p>INDICATOR 5.4.1</p>	
<p>Disclose efforts to collectively address shared water challenges, including: associated efforts to address the challenges; engagement with stakeholders; and co-ordination with public-sector agencies</p>	<p>The site's shared water-related challenges and efforts made to address these challenges shall be disclosed</p>	<p>REF065</p>
	<p>INDICATOR 5.4.2</p> <p>Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies shall be identified</p>	<p>REF065</p>
<p>CRITERION 5.5</p>	<p>INDICATOR 5.5.1</p>	
<p>Communicate transparency in water-related compliance: make any site water-related</p>	<p>Any site water-related compliance violations and associated corrections shall be disclosed</p>	<p>No Compliance Violations recorded in 2018.</p>
	<p>INDICATOR 5.5.2</p>	

<p>compliance violations available upon request as well as any corrective actions the site has taken to prevent future occurrences.</p>	<p>Necessary corrective actions taken by the site to prevent future occurrences shall be disclosed if applicable</p>	<p>REF012, REF013</p>
	<p>INDICATOR 5.5.3</p>	
	<p>Any site water-related violation that may pose significant risk and threat to human or ecosystem health shall be immediately communicated to relevant public agencies and disclosed</p>	<p>No water-related violations were recorded in the year.</p>

7 SGS AUDIT FINDINGS

A findings log was issued to Aviv which detailed the findings raised during the audit. The findings log acted as a live document and was updated periodically until all documents that were submitted to close out findings had been reviewed for compliance. After the initial review SGS was not satisfied with the initial submission and held a conference call with Aviv. Aviv was then afforded more time to respond to the findings and supply additional information for SGS to the review and to either accept and close the finding or request further information or action. Once all findings were closed by the Lead Auditor all documentation and audit trail were then reviewed by a technical reviewer, independent from the audit process.

7.1 MAJOR NON-CONFORMANCES

During the audit two major non-conformances were raised. 01MAJCAR non-conformance related to the water balance and the accuracy of the information entered into the calculations both from a weather station data recording perspective and chain of custody of the data from instrument to water balance. 010MAJCAR was raised as an additional water abstraction point for the wet mill which had not been included in the water balance. These areas of concern which were considered significant enough to warrant the categorisation of the non-conformance to be deemed major in nature.

Table 2. Major Non-Conformances raised during the AWS audit process

No.	Ref.	Criteria	Finding Details	Response by Aviv
1	001MAJCAR	Criteria 1.3.3	When reviewing the 2018 water balance it was noted that previous versions of the water balance had been altered when compared to earlier, verified versions of the water balance. The area of farm hectareage under crop had been changed and this changed the water balance which had been previously verified during audits. Please provide reasons for the alterations and also provide the correct and accurate hectares of land under crop for 2014, 2015, 2016, 2017 and 2018. Please provide a corrected 2018 water balance which has been signed off by management as correct and accurate	Aviv has undergone several changes of planted hectareage based on plantation planning and coordinates. In time there have been exclusion of non-productive areas like wetlands and Dam soil excavation pits. The farm managers have confirmed the actual irrigation planning and other operation references plant population area which is updated in the water balance file. Aviv Tanzania Limited total land tittle deed states 1999.1 Ha in total, however since planting started in 2012 in Division A several changes occurred due to excluded areas as well as sandy areas. The 3rd part company 1st consulted to plantation mapping in 2015 which indicated the total planted area is 1082Ha which included mostly land cleared parts.

				Similar exercise was reviewed in 2017/2018 which included satellite imagery to map the farm effectively and resulted 1032 Ha in total of planted area. Despite this desktop mapping, Aviv agronomist had different GPS coordinates which illustrates hectare coverages excluding all farm roads. The actual Aviv irrigation & agronomist team areas are 1012 Ha in total which is based upon plant population. In this case the Aviv water balance is revised based upon Irrigated areas (which is plant population Ha).
2	010MAJCAR	Criteria 1.3.3	The wet mill abstraction data has been omitted from the water balance for both 2017 and 2018. Please update the water balance for both years' and provide the original abstraction data for this new source for both years so the recalculation can be verified.	The wet mill abstraction point was established in 2017 whereas not much of the data was recorded in construction and testing phase. Effectively in January 2018 we did initiate with wet mill Supervisor in charge (See mail attached). The new abstraction point has been added to the water balance and resubmitted for review

7.2 MINOR NON-CONFORMANCES

Eight minor non-conformances were raised during the audit process. In six of the eight cases of non-conformances it was considered that Aviv had either not met or partially-met the AWS Core criterion requirement but were requested to make some small adjustments to the documentation in order to be considered fully compliant. In the case of 007 – 009MINCAR minor errors or mismatches in data provided for the water balance had to be corrected.

No.	Ref.	Criteria	Finding Details	Response by Aviv
3	003MINCAR	Criteria 1.3.7	Although the costs have been detailed there is no evidence to reflect a description or quantification of the social, cultural, environmental, or economic water-related value generated by the site has been identified.	Currently Aviv signed the contract to works on the Water Poster with Project WET foundation, and presentation of the Integrated Impact Statement (IIS) that will be easily demonstrate the value for the Natural Capital, Social Capital and Human Capital associated to water.
4	004MINCAR	Criteria 1.5.7	No evidence provided for the great catchment area, however, at village area WASH surveys have been performed. REF025. There is insufficient evidence that this indicator has been sufficiently addressed. Please provide evidence to show you	WASH Surveys have been conducted for the past 3 years together with livelihood survey to monitor and demonstrate social investment capital Aviv injecting to nearby communities. Indeed, surveys only covered 4 villages and not the catchment but however, Aviv recently initiated catchment wise short questionnaire which goes along with

			have identified the adequacy of WASH services for the catchment.	Disclosure of Aviv sustainability strategies. 3 major question which target the village level, ward and institution along catchment targets Climate Change Adaptation Actions in their areas, Water and Sanitation Status and feedback on sustainability initiatives no Aviv end. Despite four villages in the catchment, Aviv indeed has not done any WASH assessment within the catchment. However, Aviv being a major stakeholder in the catchment including SoUWASA (Songea Urban Water and Sanitation Authority), Local Government Authorities (13 villages), Water User Association, Government Institutions etc. In several meeting between the stakeholders in Upper Ruvuma catchment WASH has not much arisen in minutes. In 2019, Aviv water stewardship strategy disclosure form is innovated by incorporating questionnaires which include targets catchment initiatives towards Climate action, Water & Sanitation as well as feedback toward Aviv Sustainability Practices. UNICEF report on development project on WASH does indicates Ruvuma region receive least of budget towards WASH sector developments.
5	005MINCAR	Criteria 4.2.1.	The is no evidence of an annual review of impacts of water-related incidents. Please provide evidence to address the requirements of this indicator.	"Root Cause Analysis of NC: The development of the Annual Water Stewardship Plan still seems to be a stand-alone exercise not involving the whole management team.
6	006MINCAR	Criteria 3.7.	Criteria 3.7 requires that Aviv implement a plan to maintain or improve indirect water use within the catchment. Aviv does not currently have an indirect water use target in their water plan. The current evidence provided to SGS on indirect water does not adequately address the requirement of the standard. Even if the suppliers are not present in the catchment Aviv needs to address the issue of engaging with suppliers on improving their water use in some way or form. e.g. questionnaire on water use practices.	Unfortunately, without building a clearer and more robust process around the development of the Annual Water Stewardship Plan, these oversights will keep popping up and NCs will be raised. Corrective Action: 1. Set up a meeting for the whole Aviv Management Team to discuss the water-related incidents for 2018 + H1 2019 (mostly on A. Erosion Issues; and B. perturbation of dam water quality from wild fires).
7	007MINCAR	Criteria 1.3.3.	The Division A rainfall data in the water balance for March and April 2018 does not match the rainfall data provided by the Farm Managers. The Division B & C rainfall data in the water balance for May 2018 does not match the rainfall data provided by the Farm Managers. Please make the necessary corrections and resubmit.	Corrective Action: 2. For each type of water-related incident, compile a document including A. description of the incident; B. Response Plan put in place and Action taken by the team; and C. Outcomes of the incident in terms of assessment of impact on operations and effectiveness of actions taken.

8	008MINCAR	Criteria 1.3.3.	The Division A ETO data in the water balance does match the information provided by the Farm Managers for Jan - June 2018. Please make the necessary corrections and resubmit for review.	"As Above
9	009MINCAR	Criteria 1.3.3	The Abstraction Model data for 2018 for the Nursery does not match the nursery abstraction data in the water balance for April - October 2018. Please provide the correct data for Nursery abstraction for 2018.	This justify that this specific indicator was not overlooked and misinterpreted in Aviv end. Suppliers within the catchment identified were contactor and security services which both did not one way or another applicable with the criterion. Indeed, Aviv got several suppliers outside the catchment to whom have never engaged in any indirect water discussion. Corrective Action: Generally, Aviv WS Plan that target improve of water practices by service providers AND raise awareness around water-related matters to service providers and their workforce within the catchment by; 1. Amend Aviv Water Stewardship Plan 2019 to include the targets towards indirect water footprint with our suppliers. 2. Identify current water-related practices from both service providers through a simple questionnaire to conduct with them AND courtesy site visits together.
11	011MINCAR	Criteria 1.3.2	Please plan to provide a water map for the site water balance. As per the indicator the map must reflect ALL inflows, abstraction points, losses, storage and outflows. Please directly link this map to the abstraction data provided in the water balance.	Aviv water poster is nearly to be completed. Attached is a Draft No 6 Olam_ Aviv Working Poster_6_sm which is meant to communicate the Aviv Water Stewardship Action in Place. The poster represents water flows in Aviv major pumping station, rainfall neglecting the wet mill and nursery which seems to be quite very minor compare to the irrigation volumes i.e. 30 cmd for nursery and 700 cmd for wet mill as maximum volume being addressed

7.3 OBSERVATIONS

No observations were raised during the audit which are effectively recommendations for future improvement.

SGS further added an additional finding category of a New Information Request (NIR) which is not an aspect of the AWS Standard. This is to address the circumstance where the information provided during the site audit proved insufficient to evaluate compliance and further clarification

or evidence is required to make a professional assessment of conformity. One new information request was sent to Aviv for further information, to allow for a decision on conformity to be made by the SGS audit team. Details of the new information request raised have been detailed in the table below.

Table 4. Observations and New Information Requests raised during the AWS audit process

No.	Ref.	Criteria	Finding Details	Response by Aviv
3	002NIR	Criteria 1.3.4	<p>"1. Your 2018 WS Plan shows the Wet mill water to be tested in July, Aug, Sept and Oct, however, I can only find results for May and July 2018. Please can you send through all the remaining results for 2018 Westmill water tests?</p> <p>2. Your 2018 WS Plan shows the PPE station water to be tested bi-annually, however, I can only find tests for May 2018. Please can you send through the remaining test results for PPE wash station conducted in 2018?"</p>	<p>Indeed, there has been changes in frequency to reflect the operational status at the that particular moment. This can be observed from waste water lagoons which have not utilized more than 30% of its capacity to date. Nevertheless, we scheduled to undertake the annual analysis of lagoons to monitor waste water quality parameter differences as transiting from one lagoon to another. Similarly, the frequency did not reflect the plan due to picking season were not much (closely to non) of spraying is done. 1. In 2018 indeed two points from wet mill was analysed its quality in July 2018, due size of the wastewater ponds wastewater appeared to be less. In that case wastewater quality analysis regime changed to monitor the parameter alteration from monthly wise to flow transition from one pond to another. 2. Similar to the PPE Cleaning station, May 2018 the water analysis test was conducted by taking sample from wetland and not the outlet. During the picking season spraying is very limited causing the frequency to change. Due all changes occurred the 2019 WS Plan was reviewed to reflects tangible action to improve the 2018 WS Plan.</p>

8 AUDIT SUMMARY

In reviewing the body of evidence presented by Aviv Tanzania/Olam International it is apparent that a considerable quantity of effort and work has been put into the preparation for the audit for Alliance for Water Stewardship Re-Certification.

The major non-conformances indicated a repeated necessity to pay closer attention to the completeness and accuracy of the water balance. Errors and inconsistencies in the water balance have arisen consistently throughout the three-year period of initial certification and surveillance.

The minor non-conformances were all situations where Aviv was considered to have partially met the AWS Core criterion requirement but were requested to make some small adjustments to the documentation, data provided or work process in order to be considered fully compliant.

All evidence submitted to SGS in response to the findings was reviewed and evaluated for compliance to the AWS standard. All actions were accepted as sufficient to demonstrate compliance and the findings were cleared and closed.

9 CONCLUSIONS AND RECOMMENDATIONS

Given the review of evidence produced and site visit inspection performed at the Aviv Plantation, SGS recommends that Aviv Tanzania is re-awarded AWS Core Certified status with a surveillance audit interval of annual frequency.

10 REFERENCES

- REF001. Aviv Tanzania Land Use Map
- REF002 Aviv Estate Boundary Map
- REF003 Stakeholder Identification
- REF004 Water Sphere of Influence
- REF005 Stakeholder Meeting
- REF006 Community Outreach
- REF007 Environmental and Social Management Plan
- REF008 Liganga Village Stakeholder Engagement
- REF009. Liganga Ward Stakeholder Engagement
- REF010 Mbinga Mhalule Ward Stakeholder Engagement
- REF011 Lusonga Village Stakeholder Consultation
- REF012 Water-related Incident Response Plan
- REF013 Incident Notification and Escalation
- REF014 Aviv Water Balance
- REF015 Water Quality Tests 2018
- REF016 Division A Weather Data 2018.
- REF017 Division B Weather Data 2018.
- REF018 Agrochemical Stores
- REF019 Water Management Plant
- REF020 Disposal of Empty Agrochemical containers
- REF021 Issuance and Control of Agrochemicals
- REF022. Mixing of Agrochemicals
- REF023. Site Water-Related Areas
- REF024 Coffee Aspirations: Water-related Costs 2018
- REF025 Wash Survey Report
- REF026 Aspirations 2021

REF027 River & Dam Irrigation water quality

REF028 WASH Self-Assessment Tool

REF029 Service Providers and Suppliers

REF030 Olam Plantation Code

REF031 Tanzania Water Policy

REF032 Aviv Invitation to Stakeholder Meeting

REF033 Indirect Water Uses

REF034 Juwamuru Formation

REF035. Juwanuru Report 2018

REF036 International WS Programme Invitation

REF037. Ruvuma Sub Basin Office and Aviv Meeting

REF038 Multi stakeholder Water Forum Tanzania.

REF039 Water Resource Group

REF040 Olam AWS 2030 WRG Forum.

REF041 Signed Letter of Intent Upper Ruvuma IWASP

REF042 2030 Water Resource Group

REF043 WSDP 11 Final 2014

REF044 WUA Partnership

REF045 Water Sector Development Plan

REF046 Food Security Investment Plan

REF047 Aviv Invitation Ruvuma Basin Board Meeting

REF048 Regulatory Compliance Checklist.

REF049 Sub Basin Plan.

REF050 Catchment Data

REF051 Ruvuma Catchment Data.

REF052 Ruvuma River Catchment Map

REF053 Component 4-5 Volume 1

REF054 Component 4-5 Volume 2

REF055 District Medium Term Development Plan

REF056 ERM IWRM Phase 1

REF057 ERM IWRM Phase 1.5 Olam

REF058 Dam 2018 Irrigation Plan

REF059 Abstraction Model 2018

REF060 Wet mill Abstraction 2018

REF061 Irrigation Water Duncan Water Quality

REF062 River & Dam Irrigation Water Quality

REF063 River Water Analysis November 2018

REF064 Deforestation of Litenga Hills

REF065 Aviv Water Stewardship Summary 2018

REF066 National MSP Program

REF067 Aviv water-related Risks and opportunities

REF068 Site Water-related Risks

REF069 Aviv invitation to Stakeholder Meeting

REF070 DPs Lessons Learnt and Recommendations

REF071 RC Committee Aviv inspection Report

REF072 Aspirations Coffee Plantations Final Dashboard Explanation

REF073 Coffee Aspirations 2018 Q1 Update

REF074 Olam Case Study

REF075 Lipokela Village Boreholes

REF076 Invoices for borehole testing

REF077 Priorities and Budget for Village LTSDP

REF078 Signed Water Policy and Commitment

REF079 Wastewater Quality Monitoring Guidelines for WSSA

REF080 Water Training Certificates

REF081 Aviv Water Stewardship Plan

REF082 Aviv Water Stewardship Strategy

REF083 Irrigation invoices

REF084 Progress Report

REF085 Community Water Users

REF086 Village Survey

REF087 Tippy Tap Training

REF088 Hand washing Workplace Programme

REF089 Olam Wash Standard

REF090 Water Resource Training

REF091 Coffee Plantations Monthly Reporting Framework

REF092 Grievance Procedure - Stakeholders

REF093 Revised Water Balance

REF094 Revised Water Balance – SGS Comments

REF095 Plant Populations

REF096 Abstraction Model 2018

REF097 AVIV Water level Drinking V notch

REF098 Responses to findings

REF099 Meeting Register – Incidence Reporting

REF100 Incidence Review

REF101 Meeting – Agronomical & Water Balance

REF102 Updated Water Stewardship Plan

REF103 Questionnaire - Water

REF104 Revised Water Balance

REF105 Revised Water Balance – SGS Checks

REF106 DHL Waybill – Weather station

REF107 CW Price Aviv Visit

REF108 Site Water-related Areas

REF109 Aviv Nursery Abstraction water level

REF110 Water Management Plan

REF111 Response to Findings Log

REF112 Minutes of Meeting

REF113 Calorimeter Iron DPD Free PK1000

REF114 Dam Water Quality

REF115 Dam Water Analysis

REF116 Erosion Control Plan

REF117 Revised Water Balance 2

REF118 Olam Aviv Working Poster

REF119 Revised Water Balance – SGS Checks