

Alliance for Water Stewardship Assessment Report

as per AWS Standard Version 2.0

For

ECOLAB (TAICANG) TECHNOLOGY CO., LTD.

No. 7, Middle Xiexin Road, Taicang Port, Development Zone,

Taicang, Jiangsu, P. R. China

Prepared by: TÜV Rheinland AWS Reference Number: AWS-000127 Version: 2.0 Date: November 3-5 2021



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1. Client and Certification Details

Client Name:	Ecolab (Taicang) Technology Co., Ltd		
Audit loostion	7 Middle Xiexin Road, Taicang Port Development Zone,		
Audit location.	Taicang City, Jiangsu Province		
Country:	China		
Activities/Processes:	Clean agent/disinfectant manufacturing		
Contact person:	Jian Zhou		
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Company website:	https://www.ecolab.com.cn/		
AWS Reference Number:	AWS-000127		
Type of audit:	Re-assessment (Single Site)		
Audit date(s):	November 3-5 2021		
Audit Standard:	V2.0		
Proposed date of next audit:	November 5 2022		
Audit report completed by:	Layla Chen, Lingyun Yu		
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2. Executive Summary

The scope of service covers the conformity assessment of water management and usage for Ecolab (Taicang) Technology Co., Ltd. (hereinafter referred to as 'Ecolab'). The assessment was completed in compliance with the AWS Standard Version 2.0 dated on Mar 2019.

The Ecolab (Taicang) Technology Co., Ltd is a clean agent manufacturer, producing variety of food contact clean agent, hand wash or disinfector under the brand of Ecolab. The whole facility occupied about 166426 square meters, and has about 100 employees. The annual production capacity is about 150,000 tons. It located at the Taicang Port Economic and Developing Zone, Taicang City, Jiangsu Province, China. The main production process is mixing-filling-packing. Around the site are some factories including papermaking facility and power plants etc. The site only uses municipal water provided by local water company. The domestic wastewater is discharge to local municipal network. The industry wastewater was treated in the wastewater treatment plant, and then discharged into the water reuse system, the industry wastewater was Zero Liquid Discharge.

TÜV Rheinland performed a pre-assessment for Ecolab's facilities and activities as per AWS Standard (Version 2.0) on 13-14 September 2021. During the pre-assessment, TÜV-Rheinland conducted the site tour covered the production workshop, wastewater treatment plant, chemical warehouse, hazardous waste storage area, and water purified facilities, document review and interview.

On November 3-5 2021, TÜV Rheinland conducted the on-site conformity assessment for Ecolab's facilities and activities as per requirement of the AWS Standard (Version 2.0). During the audit, a half-day stakeholder meeting was held on 4 November 2021. About 8 stakeholders participated in the meeting covering government, suppliers, employee, customers, resident etc.

TÜV Rheinland also performed an evaluation for Ecolab's performance against the AWS advance criteria. The score of the evaluation is 88 points, which fulfills AWS platinum-level requirement.

Findings summary:

- Total: 2
- Major non-conformities: 0
 Minor non-conformities: 1
- Observation: 1

Client's response:

Ecolab responded to the findings raised with root cause analysis and action plans. It is confirmed that all corrective action plans are acceptable.

Certification level: Platinum

After thorough evaluation of the non-conformance, in compliance with the AWS Certification Requirement V2.0. TÜV Rheinland auditor team would recommend to reward Ecolab AWS Platinum Certified status. Surveillance audit should be conducted on an annual basis.



3. Scope of Assessment

Client factories main products	Clean agent, disinfectant
Client factories production	
processes	Mixing-Filling-Packing
Assessment preparations	
activities include:	Document review, stakeholder comments collecting
Assessment on-site activities	Document review, management interview, employee
includes:	interview, onsite tour
Assessment follow-up activities	
includes (in any):	Non-conformity follow up
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4. Description of the Catchment

The plant is located at the Taicang Port Development Zone, part of the Taihu Basin, much of which is comprised of the Yangtze River delta. Defined by the upstream area that contribute to the location of the site, and the downstream area influenced by the site. The plant used the water all supplied by the municipal water from the local water company.

The municipal water plant has one source (Yangtze River Diversion Project). The industry wastewater in the factory was Zero Liquid Discharge. Domestic wastewater is discharged into Gangqu Wastewater Treatment Plant for centralized treatment, and the treated wastewater is finally discharged into the Yangtze River.

Based on the location of water source and final discharge, the Outer Boundary of the factory is the Taicang section of the Yangtze River.



Figure 1: The figure of Yangtze River



Figure 2: Municipal wastewater treatment plant, water source, and discharge point



Stakeholder name	Stakeholder type	Summary
Mr. Ni	Supplier	Provide packaging materials to the factory. They know AWS
Mr. Li	Supplier	through training materials provided by the factory. It also has a good development for the factory. They also did a questionnaire survey about water-related content.
Mr. Shen	Employee	The factory provided water content related training to them
Mr. Gu	Employee	through pre-shift meeting, such as saving water used and etc They also did a questionnaire survey about water-related
Mr. Dai	Employee	content. The surrounding rivers and the environment are
Mr. Shen	Employee	become better.
Ms. Wu	Employee	
Mr. Zhang	Government	Ecolab is a benchmarking enterprise in health and safety environment in the industrial park, the industry wastewater was Zero Liquid Discharge. One wastewater treatment plant is available in the industrial park, it can meet the requirements. The experience in environmental protection and wastewater treatment is worth promoting.

5. Summary of the Stakeholder meeting



6. Summary of Shared Water Challenges

Water-related challenges	Initiatives by related public institutions	Relevance to	Relevance to site	Priority 1 to 5 (high to	Reason for prioritization
		Stakenolder		low)	
water resource quality (Yangtze River)	"Implementation Plan of the Action Plan for the Protection and Restoration of the Yangtze River in Jiangsu Province" Suzhou fully promotes afforestation along the Yangtze River "Implementation Plan for the Quality and Efficiency Improvement Action of Urban and Rural Domestic Sewage Treatment in Suzhou City"	Local resident Local plant	Tap water quality, increased cost	1	Critical issue that adds manufacturing cost
Water pollution	Three Measures in Taicang City to Strengthen Ecological Protection of Rivers and Lakes "Suzhou Ecological Civilization Construction Plan (2021-2025)"	Local resident Local plant	Tap water quality, increased cost	2	will cause upgrade water standard and increase WW treatment cost, and will increase discharge fee of effluent WW
Salty tide of Yangtze River	"Taicang City's Measures for the Protection and Management of Drinking Water Sources"	Local resident Local plant	Tap water quality	3	Taicang Emergency water source
N/S water project: water resource reduction	"Taicang City Water Conservation Management Measures" "Implementation	Local resident Local plant	Increased cost	4	Minimum impact



	Opinions of the				
	Municipal				
	Government on				
	Implementing the				
	Most Strict Water				
	Resources				
	Management				
	System"				
	Flood Control	Local	Draduction		once in e
Inundation	Regulations of	resident	interruption	5	
	Jiangsu Province	Local plant	Interruption		Century



7. Indicators Checklists

Per requirements set from the AWS certification requirements V2.0, below is a checklist of all the CORE AWS indicators. The documents reviewed/ processes reviewed are also indicated.



Criteria	Documents Reviewed
STEP 1: Gather and	Understand
 1.1 Define the physical scope: 1.1.1 Map site boundaries; 1.1.2 Water-related infrastructure, including piping network, owned or managed by the site or its parent organization 1.1.3 Any water sources providing water to the site that are owned or managed by the site or its parent organization 1.1.4 Water service provider (if applicable) and its ultimate water source 1.1.5 Discharge points and waste water service provider (if applicable) and ultimate receiving water body or bodies 1.1.6 Catchment(s) that the site affect(s) and is reliant upon for water 	 Documentation or map of the site's boundaries Names and location of water sources Names and location of effluent discharge points Other : Ecolab draws a site boundary map, which identifies the site boundary information and the layout within the site. The location of the wastewater receiving water body, the location of water service providers and their water sources are collected in the catchment report. In Ecolab, only rainwater and domestic wastewater are discharged. The discharge points have been marked in the layout. All industrial wastewater is reused after
1.2 Understand relevant stakeholders:	on-site ETP treatment. There is no industrial wastewater outlet in the site. Evidences: Catchment Report; Map of the site's boundaries; Drainage and water supply pipeline diagrams
1.2 Understand relevant stakenoiders:	List of stakeholders
be identified. The process used for stakeholder identification shall be identified	 Current and potential degree of influence Other :
and stakeholder shall be identified	Ecolab has identified stakeholders such as the government, employees, NGOs, surrounding residents, suppliers, infrastructures, and surrounding companies, and has established diversified communication channels with different stakeholders. For example, participating in government meetings, supplier audits, visits to surrounding companies, community activities, email exchanges, questionnaires, employee seminars, satisfaction surveys, etc." Degree of influence between site and stakeholder has also been identified Evidences:
	List of stakeholders, Stakeholder participation and influence analysis, ECTC-QEM-AWS-001 AWS System Management Manual



1.3 Gather water-related data for the site:

1.3.1 Existing water-related incident response plans

1.3.2 Site water balance, including inflows, losses, storage, and outflows

1.3.3 Site water balance, inflows, losses, storage, and outflows, including indication of annual variance in water usage rates. An indication of annual high and low variances shall be quantified for risky water-related challenge 1.3.4 Water quality of the site's water source(s), provided waters, effluent and receiving water bodies. An indication of annual, and where appropriate, seasonal, high and low variances shall be quantified for risky water-related challenge

1.3.5 Potential sources of pollution, including chemicals used or stored on site

1.3.6 Mapping on-site Important Water-Related Areas, including a description of their status including Indigenous cultural values

1.3.7 Annual water-related costs, revenues, and a description or quantification of the social, cultural, environmental, or economic water-related value1.3.8 Levels of access and adequacy of WASH at the site

- ☑ Water-related incident response plans
- Site water balance (in Mm³ or m³)
- Water quality of the site's water source(s), provided waters, effluent and receiving water bodies, such as water test reports
- Other :

Ecolab has established a set of environmental emergency response plans, covering special emergency plans for chemical leakage, water pollution, soil pollution, hazardous waste pollution, etc. According to the severity, urgency, hazard degree, scope of impact, the ability of the factory (production workshop, warehouse) to control the situation and the emergency resources that need to be mobilized, environmental emergencies are divided into different levels, followed by Class III (General environmental pollution parts), Class II (larger environmental pollution incidents), Class I (major environmental pollution incidents)

Ecolab conducts annual water balance analysis, and draws a water balance diagram, which identifies water inflow, drainage, production water, domestic water, reuse water, etc.

Ecolab has developed a water quality monitoring plan, including monitoring parameters and frequency requirements for production water, domestic wastewater, rainwater and its receiving water body (Nanheng River), groundwater and soil monitoring points in the site. Related test reports/records are provided for review.

Ecolab has mapped the potential sources of pollution on the layout map, and no IWRA identified in the site Ecolab has identified water-related costs, including water consumption costs, wastewater treatment facility operating costs, water quality monitoring costs, sludge disposal costs, water management costs, etc.. Ecolab conducts WBCSD self-assessment to evaluate the level of onsite WASH.

Evidences:

Environmental Emergency Response Plans (registered, 32058520200149), Water balance diagram, Water quality monitoring plan, Water testing



Criteria	Documents Reviewed
	report covered incoming water, drinking water,
	rainwater, domestic wastewater, Map of Potential
	Pollution source of Ecolab, WBSCD self-assessment
	sheet
1.4 Gather data on the site's indirect water use:	⊠ List of primary inputs
1.4.1 The embedded water use of primary inputs, including	☑ List of outsourced services
quantity, quality and level of water risk within the site's	Other :
catchment	
1.4.2 The embedded water use of outsourced services shall	Ecolab has screened and identified its main suppliers,
be identified, and where those services originate within the	and then sent the questionnaires to investigate their
site's catchment, quantified	indirect water consumption. Moreover, by using WWF's
	map of water risk filter, Ecolab also evaluated the water
	related risk level in the catchment where its suppliers
	are located.
	Ecolab evaluates the water-related risks of suppliers
	based on suppliers' incoming water sources, water
	consumption, wastewater discharge and IPE violation
	records, and requires high-risk suppliers to provide
	discharge water test reports.
	Ecolab also collects the water consumption of its
	outsourced services such as catering service provider,
	hazardous waste and general solid waste disposal units
	through questionnaires.
	Evidences:
	Supplier questionnaires, Indirect water investigation
	summary report, WWF Water Risk Filter



Criteria	Documents Reviewed
1.5 Gather water-related data for the catchment:	☑ Water governance initiatives
1.5.1 Water governance initiatives shall be identified,	Applicable water-related legal and regulatory
including catchment plan(s), water-related public policies,	requirements
major publicly-led initiatives under way, and relevant goals	Catchment water balance (in Mm ³ or m ³)
to help inform site of possible opportunities for water	Documentation identifying Important Water-
stewardship collective action	Related Areas (IWRAs)
1.5.2 Applicable water-related legal and regulatory	Other :
requirements shall be identified, including legally-defined	Ecolab has established a legislation and regulatory
and/or stakeholder-verified customary water rights	requirement collection procedure. The legislation and
1.5.3 The catchment water-balance, and where applicable,	regulatory is reviewed and updated once per season.
scarcity, shall be quantified, including indication of annual,	Ecolab can identify the catchment plan(s), water-
and where appropriate, seasonal, variance	related public policies, major publicly-led initiatives,
1.5.4 Water quality, including physical, chemical, and	and legal requirements.
biological status, of the catchment shall be identified, and	Ecolab collected the water resource public report of
where possible, quantified	China and water quality public report of Taihu Lake
1.5.5 Important Water-Related Areas shall be identified, and	catchment and Yangtze river catchment via the related
where appropriate, mapped, and their status assessed	authority website, which contained the water-balance
including any threats to people or the natural environment,	and water quality information of the catchment.
using scientific information and through stakeholder	Ecolab collected the Yangtze River and the Taihu
engagement	Lake Ecological, Environmental Protection Plan and
1.5.6 Existing and planned water-related infrastructure shall	related documents, and those contained the IWRAs in
be identified, including condition and potential exposure to	the catchment.
extreme events	The Taicang City has 2 municipal water plants, 2 water
1.5.7 The adequacy of available WASH services within the	sources, the centralized water supply rate and public
catchment	water supply rate reaches 100%. It indicates that the
	WASH services in the Taicang are adequate.
	Evidences
	Catchment Report
1.6 Understand current and future shared water challenges in the	List of shared water challenges
catchment:	Other:
1.6.1 Shared water challenges shall be identified and	Background Report for Water Risks, Opportunities and
prioritized from the information gathered	Challenges of Yangtze Catchment in Taicang City
1.6.2 Initiatives to address shared water challenges	identified 6 shared challenges in the catchment, and
	addressed initiatives are also established.
	Evidences:
	Catchment Report



Criteria	Documents Reviewed
1.7 Understand the site's water risks and opportunities:	List of water risks facing the site
1.7.1 Water risks faced by the site shall be identified, and	☑ List of water-related opportunities
prioritized, including likelihood and severity of impact within	Other :
a given timeframe, potential costs and business impact	
1.7.2 Water-related opportunities shall be identified,	Ecolab has identified its water risks covering water
including how the site may participate, assessment and	governance, water supply and extreme weather effects.
prioritization of potential savings, and business opportunities	Based on risk analysis, Ecolab has prioritized its water
	risks according to potential impact, likelihood within a
	given time and difficulty of detection. Meanwhile,
	corresponding response strategies to mitigate water
	risks are developed. Water opportunities including
	government support, customer encouragement and
	self-improvement are also identified.
	Evidences:
	Water risk and opportunity assessment analysis record



Criteria	Documents Reviewed
1.8 Understand best practice towards achieving AWS outcomes:	Relevant catchment best practices
1.8.1 Relevant catchment best practice for water	Other :
governance	
1.8.2 Relevant sector and/or catchment best practice for	Ecolab has identified relevant catchment best practice
water balance (either through water efficiency or less total	for water governance, water balance, water quality, and
water use)	WASH.
1.8.3 Relevant sector and/or catchment best practice for	Best practice for water governance identified by Ecolab:
water quality, including rationale for data source	- Implement AWS management on the site and carry out
1.8.4 Relevant catchment best practice for site maintenance	AWS certification;
of Important Water-Related Areas	-Prepare environmental emergency response plans,
1.8.5 Relevant sector and/or catchment best practice for site	and conduct regular drills
provision of equitable and adequate WASH services	Best practice for water balance identified by Ecolab:
	-Refer to the first-level (most stringent) standard for
	water consumption in the cleaner production standard
	Best practice for water quality identified by Ecolab:
	-Using 90% of the pollutant concentration in the
	permitted domestic wastewater discharge standard as
	the internal standard.
	- Zero discharge of industrial wastewater
	Best practice for WASH identified by Ecolab:
	- Overall score result corresponds to meeting at least
	90% of Pledge requirements by using WBSCD self-
	assessment tool.
	Evidences:
	Best practice for water governance, water balance.
	water quality, and WASH, including the benchmarking
	standard.
STEP 2: Commit	and Plan
2.1 Commit to water stewardship:	Statement
2.1.1 A signed and publicly disclosed site statement OR	Other :
organizational document	
	A water stewardship commitment to follow all the AWS
	core criteria has been signed by the general manager
	of Ecolab. The commitment has been displayed on
	Ecolab's website.
	https://www.ecolab.com.cn/news/2021/local/enterprise
	-water-management-announcement
	Evidences:
	Ecolab Commitment to Water Stewardship



Criteria	Documents Reviewed
2.2 Develop and document a process to achieve and maintain	Documented description of system
legal and regulatory compliance:	□Other :
2.2.1 The system to maintain compliance obligations for	
water and wastewater management shall be identified	Ecolab has established a procedure to ensure the
	operation of Ecolab to meet the provisions of relevant
	laws, regulations and other requirements.
	Evidences:
	Procedure for Compliance Evaluation of Laws and
	Other Requirements
2.3 Create a water stewardship strategy and plan:	☑ Water stewardship strategy
2.3.1 A water stewardship strategy shall be identified that	🛛 Water stewardship Plan
defines the overarching mission, vision, and goals of the	Other :
organization towards good water stewardship in line with	
this AWS Standard	Ecolab Group has launched the 2030 impact goals,
2.3.2 A water stewardship plan shall be identified	through cooperation with customers and its own
	operations, to provide sufficient resources for everyone
	to maintain a safe and healthy world
	Ecolab Taicang site has formulated a sustainable water
	management strategy (2021-2025):
	-40% reduction in fresh water consumption per unit
	product (based on 2020);
	-100% recycling and reuse of washing water;
	-Achieve platinum AWS certification;
	-Carry out more extensive cooperation with
	stakeholders inside and outside the basin to achieve
	sustainable management of water resources
	Ecolab also develops a Water Stewardship Plan (Year
	2021), which specifies targets, required actions,
	measurement, and responsible person, etc.
	Evidences:
	Water Stewardship strategy, Water Stewardship
	Performance & Plans



Criteria	Documents Reviewed
2.4 Demonstrate the site's responsiveness and resilience to	🛛 Water risk mitigation plan
respond to water risks:	Other :
2.4.1 A plan to mitigate or adapt to identified water risks	
developed in co-ordination with relevant public-sector and	Ecolab has identified its water risks covering water
infrastructure agencies	governance, water supply and extreme weather effects.
	Based on risk analysis, Ecolab has prioritized its water
	risks according to potential impact, likelihood within a
	given time and difficulty of detection. Meanwhile,
	corresponding response strategies to mitigate water
	risks are developed.
	Evidences:
	Water risk and opportunity assessment analysis record
STEP 3: Imple	ment
3.1 Implement plan to participate positively in catchment	☑ Good catchment governance evidence
governance:	⊠ Identified measures
3.1.1 Evidence that the site has supported good catchment	Other :
governance	
3.1.2 Measures identified to respect the water rights of	Ecolab actively cooperates with government
others including Indigenous peoples, that are not part of 3.1	departments to carry out catchment governance affairs,
	including the implementation of environmental
	protection policies, environmental monitoring,
	government training and visits, etc.
	Evidences:
	Records of participating in government meetings and
	cooperating with inspections



Criteria	Documents Reviewed
3.2 Implement system to comply with water-related legal and	Legal and regulatory compliance verification
regulatory requirements:	process
3.2.1 A process to verify full legal and regulatory compliance	Identified measures (if applicable)
3.2.2 Where water rights are part of legal and regulatory	Other :
requirements, measures identified to respect the water	
rights of others including Indigenous peoples	Ecolab has established a procedure to ensure the
	operation of Ecolab to meet the provisions of relevant
	laws, regulations and other requirements. They also
	conducted the regularly review to assess the most
	updated regulations and its compliance status.
	Minor non-conformities:
	No facility for preventing liquid chemicals from flooding
	and spreading is available for the Sulfuric acid
	discharge port of waste water station.
	Observation:
	The shower at the chemical storage tank is not
	equipped with a cofferdam to recover wastewater.
	Evidences:
	Procedure for Compliance Evaluation of Laws and
	Other Requirements, Evaluation Report for Compliance
	with Laws and Regulations Issued and the follow up
	records of CAP.
	Unsite observation.
3.3 Implement plan to achieve site water balance targets:	Status of progress
3.3.1 Status of progress towards meeting water balance	Valer use elliciency annual target (il applicable)
argels set in the water stewardship plan	
3.3.2 Where water scalcity is a shared water than engre,	
if practical and applicable, reduce volumetric total use shall	Ecolah has formulated plans to reduce water
he implemented	consumption and improve water management and
3.3.3.1 egally-binding documentation if applicable for the	follow up the progress of the plan
re-allocation of water to social, cultural or environmental	Ecolab has set its annual water consumption target and
needs	conducts monthly performance evaluations on the
	water consumption
	Evidences:
	Water Stewardship Performance & Plans, Monthly KPI
	evaluation records



Criteria	Documents Reviewed
3.4 Maintain or improve site water quality:	Status of progress
3.4.1 Status of progress towards meeting water quality	Site's effluent best practice (if applicable)
targets set in the water stewardship plan	Other :
3.4.2 Where water quality is a shared water challenge,	
continual improvement to achieve best practice for the site's	All industrial wastewater (equipment, floor cleaning
effluent shall be identified and where applicable, quantified	wastewater) is reused after on-site ETP treatment. The
	water-containing sludge generated in the wastewater
	treatment facility is disposed of by a qualified hazardous
	waste treatment unit. Ecolab does not discharge
	industrial wastewater.
	Ecolab uses 90% of the pollutant concentration in the
	permitted domestic wastewater discharge standard as
	the internal domestic discharge standard. And Ecolab
	conducts daily tests on domestic wastewater to ensure
	compliance with internal discharge standards
	Evidences:
	Environmental Monitoring Program, Wastewater testing
	report
3.5 Implement plan to maintain or improve the site's and/or	Practices set in the water stewardship plan
catchments IWRAs:	Other :
3.5.1 Practices set in the water stewardship plan to maintain	
and/or enhance the site's IWRAs shall be implemented	There are no Important Water-Related Areas in the site.
	In addition, the site has little influence on the Important
	Water-Related Areas in the catchment.
	The greening of the site is maintained by the property
	company, and the current greening coverage of the site
	is 20.11%
	Ecolab launched the Arbor Day activities in 2020, and
	employees planted and maintained plants in the site
	Evidences:
	Greening maintenance service contract,



Criteria	Documents Reviewed
3.6 Implement plan to provide access to WASH:	Evidence of site's provisions of WASH
3.6.1 Evidence of the site's provision of adequate access to	igtimes Evidence of site operations not affecting water
safe drinking water, effective sanitation, and protective	rights of surrounding environment
hygiene (WASH) for all workers onsite shall be identified	Other :
and where applicable, quantified	
3.6.2 Evidence that the site is not impinging on the human	Ecolab has conducted an environmental management
right to safe water and sanitation of communities through	questionnaire survey, collected employees' satisfaction
their operations, and that traditional access rights for	with WASH adequacy, and conducted satisfaction
indigenous and local communities are being respected, and	analyses.
that remedial actions are in place where this is not the case,	Ecolab also conducts WBCSD self-assessment to
and that these are effective	evaluate the level of onsite WASH.
	Ecolab investigates the distribution of drinking water
	points and toilet facilities within the site, and analyses
	the adequacy of these facilities based on the standard
	of WBCSD
	Evidences:
	Drinking water layout, Changing room cleaning record,
	Drinking water disinfection record, Drinking water
	quality inspection report
3.7 Implement plan to maintain or improve indirect water use	☐ List of suppliers and service providers
within the catchment:	Evidence of engagement with suppliers and
3.7.1 List of suppliers and service providers, along with the	service providers
actions they have taken as a result of the site's engagement	☐ Other :
relating to indirect water use	
3.7.2 Evidence of engagement with suppliers and service	Ecolab communicated with suppliers and required
providers, as well as, when applicable, actions they have	major suppliers to carry out water-saving training. A
taken in the catchment as a result of the site's engagement	total of 13 suppliers submitted feedback
related to indirect water use, shall be identified	Friday
	Records of water conservation training provided by
	suppliers



Criteria	Documents Reviewed		
3.8 Notify the owners of shared water-related infrastructure of any	Evidence of engagement		
concerns:	☐ Other :		
3.8.1 Evidence of engagement, and the key messages			
relayed with confirmation of receipt	Ecolab actively cooperates with government		
	departments to carry out catchment governance affairs,		
	including the implementation of environmental		
	protection policies, environmental monitoring,		
	government training and visits, etc.		
	Ecolab keeps close contact with local water-related		
	infrastructure owners through many ways such as		
	Wechat, e-mail or phone call.		
	Evidences:		
	Records of communication with water-related		
	infrastructure owners		
3.9 Implement actions to achieve best practice towards AWS	Actions related to water governance		
outcomes:	Actions related to water balance		
3.9.1 Actions towards achieving best practice, related to	Actions related to water quality		
water governance	Actions related to IWRAs		
3.9.2 Actions towards achieving best practice, related to	Actions related to WASH		
targets in terms of water balance	Other :		
3.9.3 Actions towards achieving best practice, related to			
targets in terms of water quality	Ecolab has collected the best practices for AWS		
3.9.4 Actions towards achieving best practice, related to	outcomes, and established plans to achieve these		
targets in terms of the site's maintenance of IWRAs	outcomes. The actions, cost, benefit, responsible		
3.9.5 Actions towards achieving best practice, related to	person, timeline and status are listed in plans, and the		
targets in terms of WASH	progress will be reviewed regularly.		
	Evidences:		
	Water Stewardship Performance & Plans		
STEP 4: Evaluate			



Criteria	Documents Reviewed	
4.1 Evaluate the site's performance:	Performance against targets	
4.1.1 Performance against targets in the site's water	☑ Value creation	
stewardship plan and the contribution to achieving water	☑ The shared value benefits (if applicable)	
stewardship outcomes shall be evaluated	Other :	
4.1.2 Value creation resulting from the water stewardship	As per the Water Stewardship plan, Ecolab has	
4 1 3 The shared value benefits in the catchment shall be	established targets covering the water governance,	
identified and where applicable, quantified	water balance, water quality and etc Until the audit	
	day, the Ecolab has:	
	Established the AWS management system.	
	Completed the survey of indirect water consumption of	
	the suppliers.	
	Achieved the target (Year 2020) of water consumption	
	of the unit product.	
	Evidences:	
	Evaluate performance record and Management review	
	record.	
4.2 Evaluate the impacts of water-related emergency incidents:	A written annual review and root-cause analysis	
4.2.1 A written annual review and (where appropriate)	Other :	
root-cause analysis of the year's emergency incident(s)	No water-related emergencies or extreme events	
shall be prepared and the site's response to the incident(s)	occurred at the site in recent years.	
shall be evaluated and proposed preventative and	Ecolab has developed several water-related incident	
shall be identified	response plans, which contained the analysis and	
	improvement procedure.	
	Evidences:	
	Ecolab's website, Environmental Emergency Plan,	
	Management review record	
4.3 Evaluate the stakeholders' consultation feedback:	Stakeholder feedback	
4.3.1 Consultation efforts with stakeholders on the site's	☐ Other :	
water stewardship performance shall be identified	Ecolab performed an online satisfaction survey	
	regarding its water stewardship. A Stakeholder	
	Evaluation and Analysis Report in 2021 was	
	generated.	
	Evidences:	
	Summary of satisfaction survey	



Criteria	Documents Reviewed
4.4 Evaluate and updated the site's water stewardship plan:	Modification of water stewardship plan
4.4.1 The site's water stewardship plan shall be modified	Other :
and adapted to incorporate any relevant information and	The site updated the AWS Stewardship plan for 2020-
lessons learned from the evaluations in this step and these	2021.
changes shall be identified	
	Evidences:
	Ecolab AWS Stewardship plan 2020-2021
STEP 5: Communication	and Disclosure
5.1 Disclose water-related internal governance of the site's	Summary of governance
management:	Other :
5.1.1 The site's water-related internal governance, including	Ecolab's Organization Chart of Integrated
positions of those accountable for compliance with water-	Management System clearly shows the manager
related laws and regulations shall be disclosed	representative of environment and water stewardship,
	the responsible department and person. The
	https://www.ecolab.com.cp/pews/2021/local/enterprise
	-water-management-announcement and notice board
	at the date of the factory.
	, , , , , , , , , , , , , , , , , , ,
	Evidences:
	Ecolab's website, Notice board
5.2 Communicate the water stewardship plan with relevant	Documented evidence of communicating
stakeholders:	Other :
5.2.1 The water stewardship plan, including how the water	The water stewardship plan is available on Ecolab's
stewardship plan contributes to AWS Standard outcomes,	website:
shall be communicated to relevant stakeholders	https://www.ecolab.com.cn/news/2021/local/enterprise
	-water-management-announcement and notice board
	at the gate of the factory.
	Evidences:
	Ecolab's website. Notice board
5.3 Disclose annual site water stewardship summary:	Water stewardship performance summary
5.3.1 A summary of the site's water stewardship	Other:
performance, including quantified performance against	Water stewardship performance summary is available
targets, shall be disclosed annually at a minimum	on notice board at the gate of the factory.
	Evidences:
	Notice board



Criteria	Documents Reviewed	
5.4 Disclose efforts to collectively address shared water	Disclosure evidence	
challenges:	☐ Other :	
5.4.1 The site's shared water-related challenges and efforts made to address these challenges shall be disclosed 5.4.2 Efforts made by the site to engage stakeholders and coordinate and support public-sector agencies shall be identified	Efforts to collectively address shared water challenges are available on Ecolab's website: https://www.ecolab.com.cn/news/2021/local/enterprise -water-management-announcement and notice board at the gate of the factory.	
	Evidences:	
	Ecolab's website, Notice board	
5.5 Communicate transparency in water-related compliance:	☐ List of water-related compliance violations with	
5.5.1 Any site water-related compliance violations and	corresponding corrective actions	
associated corrections shall be disclosed	Other :	
5.5.2 Necessary corrective actions taken by the site to	No water-related compliance violations occurred at the	
prevent future occurrences shall be disclosed if applicable	site to date.	
5.5.3 Any site water-related violation that may pose		
significant risk and threat to human or ecosystem health	Evidences:	
shall be immediately communicated to relevant public	Ecolab's website and IPE	
agencies and disclosed		



Advanced indicators

Criteria	Evidences	Score
	Ecolab has screened and identified its main suppliers, and then sent	
	the questionnaires to investigate their indirect water consumption.	
	Moreover, by using WWF's map of water risk filter, Ecolab also	
	evaluated the water related risk level in the catchment where its	
	suppliers are located.	
	Ecolab evaluates the water-related risks of suppliers based on	
1.4.3	suppliers' incoming water sources, water consumption, wastewater	
The embedded water use of	discharge and IPE violation records, and requires high-risk suppliers	7
primary inputs in catchment(s) of	to provide discharge water test reports.	
origin shall be quantified. (7 points)	Ecolab also collects the water consumption of its outsourced services	
	such as catering service provider, hazardous waste and general solid	
	waste disposal units through questionnaires.	
	Evidences:	
	Supplier questionnaires, Indirect water investigation summary report,	
	WWF Water Risk Filter	
	The factory has established a water quality monitoring plan (once per	
1.5.8	quarter) for surrounding rivers (Nan river), the monitoring item included	
Efforts by the site to support and	COD, ammonia nitrogen, total phosphorus and PH, the test records	
undertake catchment level water-	was provided for review.	4
related data collection shall be		
identified. (4-7 points)	Evidences:	
	Internal water quality test results	
	By searching on the Statistic Yearbook of different provinces, Ecolab	
	has identified adequacy of WASH provision within the catchments of	
1.5.9	origin of primary inputs including the coverage of safe drinking water	
The adequacy of WASH provision	supply, the coverage of wastewater treatment, the rate of security	
within the catchments of origin of	disposal of municipal solid waste, and public facilities and	4
primary inputs shall be identified.	environmental sanitation in urban districts.	
(4 points)		
	Evidences:	
	Identification of embedded water use of primary inputs	
	Ecolab has collected the information of future water issues, anticipated	
1.6.3	impacts and trends in the Special Emergency Response. It is states	
Future water issues shall be	that the water resources in the Taicang River Basin can fully meet the	
identified including anticipated	city-wide water supply needs.	3
impacts and trends (3 points)		
	Evidences:	
	Catchment Report	



2.1.2	A water stewardship commitment to follow all the AWS core criteria	
A statement that explicitly covers	has been signed by the general manager of Ecolab. The commitment	
all requirements set out in Indicator	has been displayed on Ecolab's website.	
2.1.1 and is signed by the	https://www.ecolab.com.cn/news/2021/local/enterprise-water-	1
organization's senior-most	management-announcement	I
executive or governance body and		
publicly disclosed shall be	Evidences:	
identified. (1 point)	Ecolab Commitment to Water Stewardship	
0.0.0	Ecolab and Taicang Port Economic and Technological Development	
2.3.3	Zone Chemical Park jointly produced and released promotional videos	
The site's partnership/water	to promote/share Ecolab AWS practical experience and best water	
stewardship activities with other	management practices in the chemical park	
sites within the same catchment		4
(which may or may not be under	Evidences:	
the same organisational	Information on the public news account on "Ecolab practices	
ownership) shall be identified and	sustainable water management and witnesses the green changes in	
described. (4 points)	Taicang Port Park"	
2.3.4		
The site's partnership/water	Ecolab works with Ecolab (Nanjing) site, another subsidiary of Ecolab	
stewardship activities with other	Group, and shares the experiences and knowledge during	
sites in another actoment(a)	implementation of the AWS system.	4
(either under some corporate		
etructure or with another corporate	Evidences:	
situation of with another corporate	Communication record with Ecolab (Nanjing) site	
site) shall be identified. (4 points)	Easish implement AWS management on the site and corry out AWS	
3.1.3	econab implement AWS management on the site and carry out AWS	
Evidence of improvements in water	An anvironmental manager of Ecoloh obtained the Taicang City	
apportance canacity from a site	Enterprise Environmental Manager Cartificate in 2021 (issued by the	
selected baseline date shall be	Suzhou Taicang Ecological Environment Bureau	2
identified (2 points)	Suchou Falcang Ecological Environment Bureau)	
identified. (2 points)	Evidences:	
	Procedures and records established based on AW/S standards	
	Ecolob donated Actigal (worth approximately PMP 05 760) and	
3.6.3	Disponsor (worth approximately PMP 12 400) to Liuijagang Middle	
A list of actions taken to support	School through the Taicang Industrial Park Management Committee	
the provision to stakeholders in the	in 2021 to fight COV/ID 10	
catchment of access to safe	Ecoloh depated epidemic provention materials to Wuhan Hespital and	5
drinking water, adequate sanitation	Taicang Police Station in 2020 to fight COVID-19	Ū
and hygiene awareness shall be		
identified. (5 points)	Evidences	
	Photos of the donation sites	
	Ecolah communicated with suppliers and required major suppliers to	
373	carry out water-saving training. A total of 12 suppliers submitted	6
0.7.0	feedback	Ŭ
	ICCUDAUN	



Actions taken to address water related risks and challenges related to indirect water use outside the catchment shall be documented and evaluated. (5-7 points)	Evidences: Records of water conservation training provided by suppliers	
3.9.6 Achievement of identified best practice related to targets in terms of good water governance shall be quantified. (8 points)	Ecolab has implemented AWS standards on its site. Ecolab has obtained ISO 14001: 2015 certification (EMS 731407, valid until August 10, 2023). Evidences: ISO 14001: 2015 certification (EMS 731407, valid until August 10, 2023)	8
3.9.7 Achievement of identified best practice related to targets in terms of sustainable water balance shall be quantified. (8 points)	Ecolab's industry category is the manufacture of daily chemical products. According to the general chemical industry cleaner production evaluation index system, Ecolab's unit product water consumption has reached the cleaner production Class I index (international leading level) Evidences: Cleaner Production Audit Report of Ecolab, Internal water consumption statistics and performance evaluation records	8
3.9.8 Achievement of identified best practices related to targets in terms of water quality shall be quantified. (8 points)	For internal control, Ecolab has defined the stricter discharge limits for its domestic wastewater, which are 90% of the permitted discharge levels. The testing report showed that all testing results are lower than 90% of the internal standards. Ecolab has achieved zero discharge of industrial wastewater Evidences: Wastewater testing records	8
3.9.10 Achievement of identified best practices related to targets in terms of WASH shall be quantified. (4 points)	Ecolab conducts WBCSD self-assessment to evaluate the level of onsite WASH, and the result reveals that WASH is met the requirement. Ecolab investigates the distribution of drinking water points and toilet facilities within the site, and analyses the adequacy of these facilities based on and the result shows that the requirements are fulfilled. Evidences: WBSCD self-assessment sheet	4
3.9.11 A list of efforts to spread best practices shall be identified. (3 points)	In April 2021, a 12-member delegation from Novozymes visited Ecolab to exchange Ecolab's experience in sustainable water management On June 10, 2021, 20 Mengniu Group delegations participated in the Ecolab Sustainable Development Workshop	3



	Evidences:	
	On-site photos of Ecolab sustainability activities	
3.9.12 A list of collective action efforts, including the organizations involved, positions of responsible persons of other entities involved, and a description of the role played by the site shall be identified. (8-14 points)	In June 2021, Ecolab teamed up with Taicang City Government, surrounding enterprises and communities to carry out the Water Resources Sustainability Day, and they exchanged views on sustainable development issues. And carry out the recruitment of volunteers in the local area, in order to continue to carry out environmental protection related public welfare activities Evidences: Water Resources Sustainability Day event information	8
4.1.4 A governance or executive-level review, including discussion of shared water challenges, water risks, and opportunities, and any water-related cost savings or benefits realized, and any relevant incidents shall be identified.	The Top management discussion of shared water challenges, water risks, and opportunities, and any water-related cost savings or benefits realized, and relevant incidents once per year. Evidences: 2021 Water Stewardship Plan Evaluate performance	3
4.3.2 The site's efforts to address shared water challenges shall be evaluated by stakeholders. This shall include stakeholder reviewing of the site's efforts across all five outcome areas, and their suggestions for continual improvement. (6 points)	Ecolab has completed stakeholders' satisfaction survey regarding water stewardship. Based on the Stakeholder Evaluation and Analysis Report, some suggestions for continual improvement is given by stakeholders. Evidences: Stakeholder satisfaction survey summary report	6
	Total	88
AWS Level F		Platinum



Assessment Non-conformities:

During the audit, no major non-conformity was raised. One minor non-conformity was raised, and one observation was identified.

Minor non-conformities:

	AWS	Description of	Client's response and Documentation	Auditors'
NO.	Expectations	non-conformity	provided	assessment
1	3.2.2	No facility for preventing liquid chemicals from flooding and spreading is available for the Sulfuric acid discharge port of waste water station.	Cause analysis: Didn't identify out the leak risk for the filling station during the project design. Corrections and Corrective Action: Install the secondary collecting cofferdam around the filling station of sulfuric acid tank. Proposed finished time: December 31, 2021	Accepted

Observations:

NO.	AWS Expectations	Description of non-conformity
1	3.2.2	The shower at the chemical storage tank is not equipped
		with a cofferdam to recover wastewater.



8. Summary and Conclusion of the Assessment

In assessment of the water stewardship performance of the Ecolab (Taicang) Technology Co., Ltd., it is apparent that the sites put considerable efforts to adopt the AWS standard into the management system.

One minor non-conformity was identified in this audit. Ecolab has been requested to make some improvement plans to address the non-conformity to be fully compliant to the standard.

One observation was issued during this audit. Auditors pointed out the areas that to be considered for improvement in the following implementation, however, no action is demanded during the audit cycle.

All evidences provided to TÜV Rheinland to address the non-conformity was reviewed and evaluated to ensure the compliance to the AWS standard. All actions were accepted as sufficient to close the non-conformity. Therefore, all AWS core criteria are satisfied.

The advance-level criteria evaluation was performed and the score is 88 point, which fulfils the requirement of Platinum Level (80 or more points).

In conclusion, Ecolab (Taicang) Technology Co., Ltd., met the AWS Standard (Version 2.0) Platinum Level.

9. Opportunity and Improvement

Ecolab has finished the indirect water consumption of the suppliers, and has an overview on its supplier chain's water consumption. In next step, Ecolab may select some core suppliers in the same catchment to improve the indirect water use, such as to raise their awareness about water environmental protection, encourage them to implement water-saving activities and share the good water-governance practise and experience.