



OSOTSPA TNFD Report 2025

OSOTSPA THE POWER TO ENHANCE LIFE

www.osotspa.com/new/en/home/

INTRODUCTION

Osotspa Public Company Limited (“Osotspa”) is committed to proactively addressing climate-related risks and opportunities in alignment with global sustainability goals and the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). As a leading beverage company in Thailand, we recognize the urgency of climate action and the critical importance of transitioning to a low-carbon economy. Osotspa has therefore developed and is implementing a clear decarbonization strategy to reduce greenhouse gas emissions across our operations and value chain. This strategy supports our long-term business resilience and aligns with evolving investor expectations and regulatory requirements related to climate transparency.

Nature and biodiversity are essential foundations for Osotspa’s business sustainability and resilience. The availability and quality of natural resources such as water, raw materials, and agricultural inputs upon which our manufacturing and supply chains heavily rely are intrinsically linked to the health of ecosystems. Degradation of biodiversity and ecosystems not only threatens these vital resources but also exposes the company to operational disruptions, regulatory challenges, and reputational risks. Recognizing these critical dependencies, Osotspa is committed to proactively managing its impacts and dependencies on nature to safeguard long-term business continuity and stakeholder value.

In alignment with this commitment, Osotspa has adopted the Taskforce on Nature-related Financial Disclosures (TNFD) framework, an internationally recognized guideline designed to help organizations identify, assess, and disclose nature-related risks and opportunities. Implementing TNFD enables Osotspa to increase transparency and accountability in managing biodiversity-related issues, integrate nature considerations into corporate strategy and governance, and respond effectively to evolving investor and regulatory expectations. Through this approach, Osotspa not only mitigates risks but also embraces opportunities for nature-positive innovation, contributing meaningfully to global efforts in biodiversity conservation and ecosystem restoration.



INTRODUCTION



ADOPTING THE TNFD FRAMEWORK

In line with global sustainability trends and stakeholder expectations, Osotspa has adopted the Taskforce on Nature-related Financial Disclosures (TNFD) framework to identify, assess, and disclose nature-related risks and opportunities in a transparent and structured manner.



SCOPE OF THIS REPORT

Osotspa's TNFD report primarily focuses on its operations in Thailand, with its analytical scope extending across the company's own operations as well as its upstream and downstream value chain. For a more comprehensive contextual understanding of specific risks, such as water risk mapping, the analysis may be extended to other geographies, including Myanmar. This approach ensures both consistency and transparency across all sustainability disclosures while maintaining a robust and holistic assessment of nature-related risks, impacts, dependencies, and opportunities.



GOVERNANCE



Governance

Effective climate governance is essential for Osotspa to effectively identify, integrate, and manage climate-related risks and opportunities within our business strategy. This section outlines the governance structures, controls, and processes that support our climate oversight and decision-making.

At Osotspa, the Board of Directors (BOD) holds ultimate accountability for embedding climate strategy within the company's governance framework. The Nomination, Remuneration, Corporate Governance and Sustainable Development Committee (NRCSD), serving as the board-level sustainability committee, regularly reviews critical climate-related issues and makes recommendations for the BOD's consideration.

Climate-related topics are systematically incorporated into risk management, strategic planning, and business performance monitoring. These matters are discussed at the management level on a weekly basis and escalated to the board at least twice annually. To ensure informed governance, the board engages in targeted climate-related training and consults external experts as necessary. Furthermore, climate competencies are integrated into ongoing board development and succession planning.

To reinforce our climate governance, Osotspa has established dedicated Sustainability Committees at both the board and management levels. These committees guide the company's proactive transition toward a climate-resilient business model. The Sustainability Working Team, composed of relevant management representatives, embeds climate considerations into decision-making processes and ensures appropriate resource allocation. Operational execution is supported by a cross-functional Climate Task Force, which collaborates with various departments to mainstream climate priorities throughout the organization.



BOARD OF DIRECTOR EXPERIENCE

Board Member	Position	Summary of related experience	Company website or AR or SR page	URL
1. Mr. Somprasong Boonyachai	Independent Director, Chairman of the Board of Directors and Chairman of the Nomination Remuneration Corporate Governance and Sustainable Development Committee	>10 Years of experience in Environment & Sustainability- Members of Osotspa’s NRCSD committee	247-248, 280-281,345-368	https://sustainability.osotspa.com/en/document/reports
2. General Surapong Suwana-adth	Independent Director, Vice Chairman of the Board of Directors and Member of the Nomination Remuneration Corporate Governance and Sustainable Development Committee	>10 Years of experience in Environment & Sustainability	247-248, 280-281,345-368	
3. Ms. Penchun Jarikasem	Independent Director and Chairman of the Audit Committee	>10 Years of Experience in Environment & Sustainability- Member of Committee, Working Group and Sub-committee in Energy sectors’ company	247-248, 280-281,345-368	
4. Mrs. Sinee Thienprasiddhi	Independent Director and Member of the Audit Committee	>10 Years of experience in Environment & Sustainability	247-248, 280-281,345-368	
5. Ms. Camille Ma	Independent Director, Member of the Audit Committee and Member of the Risk Management Committee	>10 Years of experience in Environment & SustainabilityMember of the Sustainability and Risk Management Oversight Committee	247-248, 280-281,345-368	
6. Mr. Niti Osathanugrah	Director, Member of the Executive Committee, Member of the Nomination Remuneration Corporate Governance and Sustainable Development Committee and Member of the Risk Management Committee	>10 Years of experience in Environment & Sustainability	247-248, 280-281,345-368	
7. Mr. Salin Pinkayan	Director Member of the Executive Committee and Member of the Risk Management Committee	>10 Years of experience in Environment & Sustainability	247-248, 280-281,345-368	
8. Mrs. Wannipa Bhakdibutr	Director, Member of the Executive Committee, Member of the Risk Management Committee and Chief Executive Officer	- Training in ESG Business & Trends	247-248, 280-281,345-368	

BOARD-LEVEL NATURE GOVERNANCE

Board Committee/Individual	Roles and Responsibilities	Meeting Frequency
Board of Directors	<p>Authorities, Duties and Responsibilities of the Board of Directors for Sustainability, Climate-related Risks and Opportunities:</p> <ul style="list-style-type: none">• To determine the Company’s vision, mission, targets, policies, strategies, directions, business plans, and annual budgets on Sustainability Target and Climate –related issues.• To continuously monitor the business performance of the Company and its subsidiaries to be in line with their respective operational plans and budgets on climate risks and opportunities management.• To consider establishing policies for risk management to cover all ranges of climate-related activities within the Company and to set up systems or processes for risk management, through proper, sufficient, and efficient contingency measures and control methods to lessen the potential impact on the Company’s business operations.• To appoint sub-committees and determine their scope of duties on climate related issue, so that such sub-committees can assist and support the Board of Directors in performing their responsibilities	<ul style="list-style-type: none">• Quarterly
Executive Committee	<p>Authorities and Responsibilities of the Executive Committee for Sustainability, Climate-related Risks and Opportunities:</p> <ul style="list-style-type: none">◦ Manage business affairs in its ordinary course of business, including to consider and set targets, policies, business plans, business strategies and directions as well as the annual budgets of the Company and those of companies within the Group as well as considering and scrutinizing any proposal made by the management before presenting it the Board of Directors for approval◦ To supervise business operations those, concern with climate risks and opportunities, and follow up on business operational results and financial condition of the Company to be in line with those policies, strategies, plans, targets and budgets as approved by the Board of Directors◦ Following up on business operational results with climate related issue concerned and financial condition of those companies within the Group, including considering the resource allocation and management in an efficient and effective manner, having regard to impact and development of resource through a value chain to sustainably achieve its objective and main targets and reporting the same on a regular basis to the Board of Directors	<ul style="list-style-type: none">• Basis on quarterly, and per-request matters

BOARD-LEVEL NATURE GOVERNANCE

Board Committee/Individual	Roles and Responsibilities	Meeting Frequency
Risk Management Committee	<p>Authorities and Responsibilities of the Risk Committee for Sustainability, Climate-related Risks and Opportunities:</p> <ul style="list-style-type: none">• To supervise and support on climate risk management measures so that risks can be managed successfully by way of evaluating all risk factors for appropriate decision making. The Risk Management Committee has the duty to follow and assess the Company’s compliance with the risk management framework. In addition, it shall also review the sufficiency of the risk management policies and systems and improve operational procedures with a view to continually minimizing risks to suit the business conditions of the Company• To communicate with the Audit Committee on significant climate risks in order to evaluate the adequacy of the Company’s internal control systems• To regularly report on the outcome of risk assessments and performance especially on climate risks, with acknowledgement by the Board of Directors. Any significant occurrence or issue on climate related matters that may have a material impact on the financial status and results of the Company’s performance must promptly be reported to the Board of Directors for consideration.	<ul style="list-style-type: none">• Basis on Bi-quarter, and per-request matters
Nomination, Remuneration, Corporate Governance and Sustainable Development Committee (NRCSD)	<p>Authorities and Responsibilities of the NRCSD for Sustainability, Climate-related Risks and Opportunities:</p> <ul style="list-style-type: none">• To determine appropriately policies, targets and key performance indicators of sustainable development works including being reviewed regularly• To monitor, review and evaluate the sustainable development performance including climate risk management and climate opportunities issue.• To drive the integration of sustainable development strategy into our business plans• To provide advice, encouragement, support, and the resources needed for material decision-making to the management team overseeing sustainable development operations• To authorize to appoint a sub-committee or the sustainable development working team as needed and determine their roles and responsibilities	<ul style="list-style-type: none">• Basis on Bi-annual, and per-request matters
Audit Committee	<p>Authorities and Responsibilities of the Audit Committee for Sustainability, Climate-related Risks and Opportunities:</p> <ul style="list-style-type: none">• To examine the internal controls and internal audit systems to the compliance with the Company’s measure and this also included climate-related issue, strategy, and target. In this regard, the Audit Committee assigns Internal Audit team to review the process and operation of the business to ensure that they follow the measures, policies, codes of conduct, authority, regulations and requirements of the supervisory agencies, and relevant laws.	<ul style="list-style-type: none">• At least twice a year

MANAGEMENT-LEVEL NATURE GOVERNANCE

Management Committee/Individual	Climate-related Roles and Responsibilities	Meeting Frequency
Chief Executive Officer (CEO)	<p>Authorities and Responsibilities of Chief Executive Officer for Sustainability, Climate-related Risks and Opportunities:</p> <ul style="list-style-type: none">• Advise the Board of Directors on matters concerning corporate wide-ESG and climate related issues.• Review the corporate wide-ESG and climate-related issues, monitoring and propose recommendation for revision to the Corporate Governance committee to continuously ensure consistency and compatibility with the businesses of the Company	<ul style="list-style-type: none">• Quarterly and per-request matters
Sustainability Working Team	<p>Authorities and Responsibilities of Sustainability Working Team for Sustainability, Climate-related Risks and Opportunities:</p> <p>§Lead by the Chief Executive Officer (CEO), the Sustainability Working Team is working on the development of Sustainability Framework, Policy, Strategy, and Operational Plans especially on climate related risk management and potential opportunities.</p> <ul style="list-style-type: none">• Review the corporate wide-ESG and climate-related issues, monitoring and propose recommendation for revision to the Chief Executive Officer (CEO) to continuously ensure consistency and compatibility with the businesses of the Company.• Leverage the sustainability projects included the climate related projects to Nomination, Remuneration, Corporate Governance and Sustainable Development Committee (NRCSD) for review and endorse the Sustainability Framework, Policy, Strategy, and Operational Plans.	<ul style="list-style-type: none">• Quarterly

MANAGEMENT INCENTIVES NATURE GOVERNANCE

Who is entitled to benefit from this incentive?	Type of incentive	Incentivized KPIs
Chief Executive Officer (CEO)	Monetary Rewards: <ul style="list-style-type: none">•Climate-related targets are part of the company’s corporate KPIs, which are tied to the variable compensation of the Chief Executive Officer (CEO). The CEO is responsible for the corporate KPIs, including Greenhouse Gas reduction, Energy reduction, and Renewable Energy increase. These metrics measure progress towards both the Sustainability Goals 2025 and the Carbon Neutrality Goal 2030.	<ul style="list-style-type: none">•Progress towards a climate-related target•Achievement of a climate-related target•Company performance against a climate-related sustainability index (e.g., DJSI, CDP Climate Change score etc.)
Chief Manufacturing Officer (CMO)	Monetary Rewards: <ul style="list-style-type: none">•The Chief Manufacturing Officer (CMO) is responsible for manufacturing performance and KPIs related to Greenhouse Gas reduction, Energy reduction, Renewable Energy increase, and energy efficiency improvement. These efforts contribute to achieving the Sustainability Goals 2025 and the Carbon Neutrality Goal 2030.	<ul style="list-style-type: none">•Reduction in absolute GHG emissions•Reduction in GHG emissions intensity•Reduction in total energy consumption•Energy efficiency improvement•Increased share of renewable energy in total energy consumption•Performance contribution against a climate-related sustainability index (e.g., DJSI, CDP, Climate Change score etc.)
Osotspa Employee	Monetary Rewards: <ul style="list-style-type: none">•The compensation of all employees, both staff and executives, is aligned to corporate KPIs that include the Sustainability Goals 2025 and the Carbon Neutrality Goal 2030.	<ul style="list-style-type: none">•Energy efficiency improvement•GHG offsetting activity•Performance contribution against a climate-related sustainability index (e.g., DJSI, CDP Climate Change score etc.)

STRATEGY



OSOTSPA'S STRATEGY FOR NATURE-RELATED FINANCIAL DISCLOSURES (TNFD)



Osotspa's strategy for nature-related financial disclosures is a comprehensive approach to integrating environmental stewardship into our core business model. This strategy is overseen by the board of directors, ensuring that risks such as water scarcity, biodiversity loss, and ecosystem degradation are treated as material business concerns with potential financial impacts. We use the TNFD's LEAP approach (Locate, Evaluate, Assess, Prepare) to systematically identify, assess, and manage our dependencies and impacts on nature across our value chain. This process helps us pinpoint our most significant risks, such as operational disruptions from water stress, while also uncovering opportunities for innovation and growth.

For instance, we are developing nature-positive products that utilize sustainably sourced ingredients and implementing robust water stewardship programs to not only reduce our environmental footprint but also enhance business resilience. To ensure accountability, we are committed to setting clear, measurable metrics and targets such as water usage and sustainable sourcing rates and disclosing our progress transparently in our reports. This integrated strategy positions Osotspa to effectively manage nature-related risks, create long-term value, and contribute to a nature-positive future.

OUR APPROACHES



- Avoid implementing business activities across value chain that may affect biodiversity and seek for opportunity to deploy biodiversity related project into significant conservation or biodiversity areas, such as UNESCO World Heritage Sites, wetlands listed under the Ramsar Convention, protected areas I-IV categories defined by IUCN, and protected areas defined by the local law.
- Operate business with concerns of no net loss in biodiversity or no net deforestation. Where negative impact is unavoidable, assess the potential impact and set remedial measures in place aligning with the biodiversity mitigation hierarchy, which includes avoid, reduce, restore, offset and transform.
- Review the processes and practices to ensure compliance with applicable regulations and/or mandatory standards.
- Conduct a comprehensive biodiversity risk assessment to identify critical importance of biodiversity conservation and the impact for Osotspa's operating site.
- Evaluate and monitor the risks of Osotspa's activities as well as monitor biodiversity value regularly.
- Communicate and engage with stakeholders to enhance our understanding and promote conservation efforts for driving positive change for the biodiversity.



Our Biodiversity and No-Deforestation Resolve

01

To be aware, protect, maintain, enhance, or conserve global and national important biodiversity and critical natural ecosystems.

02

To Apply the “Mitigation Hierarchy” into our operation: (avoid, minimize, restore & offset)

- **Avoid** – avoid creating impacts on biodiversity.
- **Reduce** – reduce the intensity of impact on biodiversity that is unable to avoid.
- **Restore** – rehabilitate degraded ecosystem.
- **Offset** – compensate for the loss of biodiversity
- **Transform** – change to the suitable method to avoid negative impact on nature

03

To comply with regulations, adopt the voluntary requirements and align with local and global standards that relate to environment and biodiversity protection to achieve “No Net Loss”.



BIODIVERSITY RISK ASSESSMENT

Osotspa conducted an initial assessment of its dependencies and impacts on nature using the Taskforce for Nature- related Financial Disclosure (TNFD)'s **LEAP framework**. This framework guided the company in Locating, Evaluating, Assessing, and Preparing to address its nature-related issues.

OSOTSPA'S VALUE CHAIN

Osotspa has mapped out and assess the value chain components to identify which sectors are involved throughout Osotspa's value chain.

Upstream - Supplier

- Responsible Consumption of Natural Resources o Sustainable Sourcing

Direct Operations

- Healthy & Responsible Consumption
- Recycling and Recovery
- Manufacturing Efficiency & Packaging Intelligence o Innovative Distribution

Downstream- Customer/ Sustainable Partnerships with Retailers

- Sector classification systems such as the Global Industry Classification Standard ("GICS") is used to determined the sector and sub-industry selection **(which is also used in the ENCORE tool)**.



L - Locate

Location sensitivity summary

Third party global open-source data sets are used to determine the state of nature and asset red flags for sensitivity locations using GIS analysis with key indicators mentioned below:

Four criteria to be evaluated:



Biodiversity Importance



Ecosystem Integrity



Water Stress



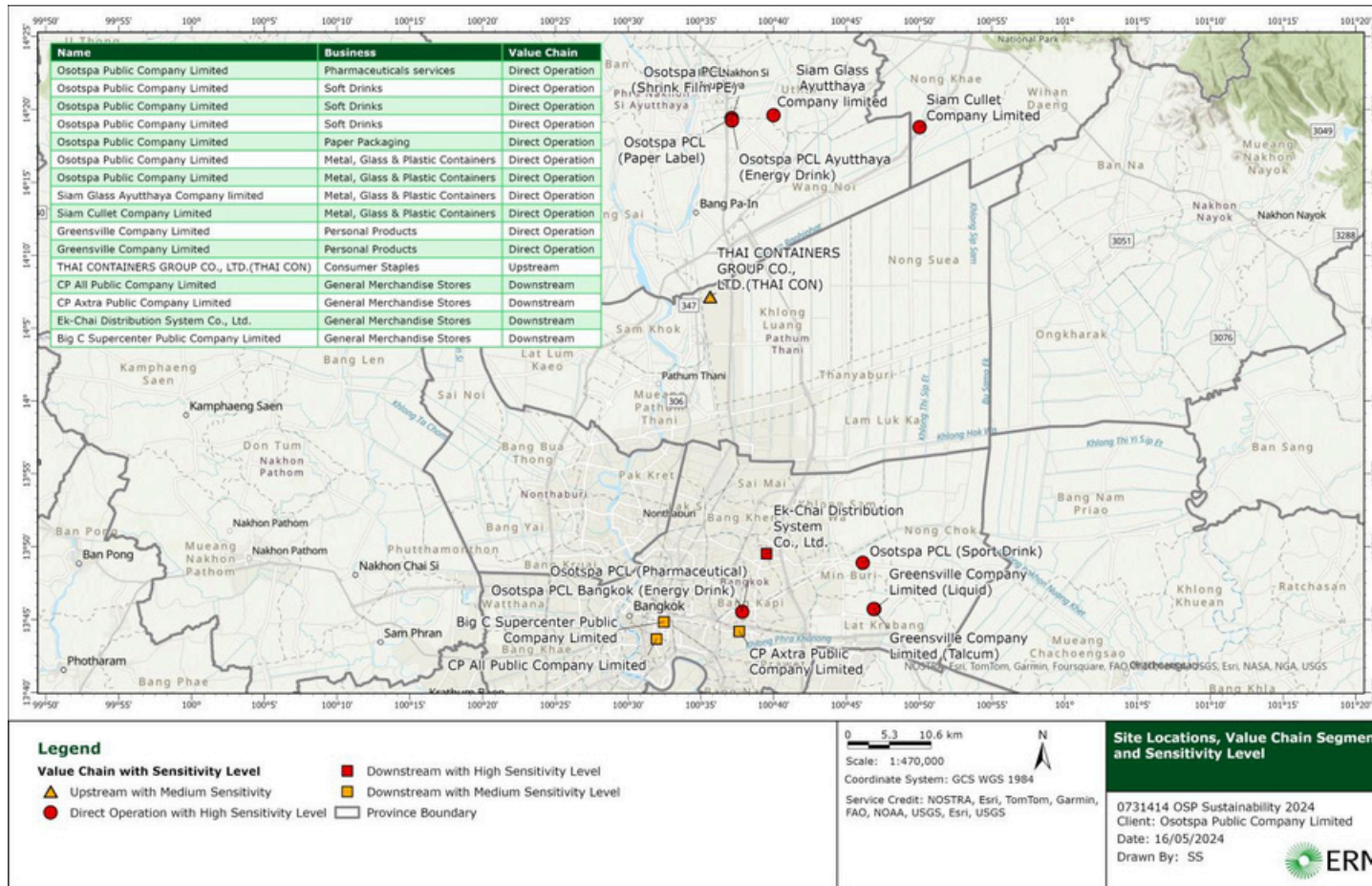
Ecosystem service delivery importance

Sites are prioritized based on:

- High water stress
- High current biodiversity importance
- High ecosystem integrity
- High Ecosystem service delivery importance

Buffer zones are added to analysis the nature condition of adjacent areas.

Sites are analyzed in detail and prioritized to determine high-value or high-risk habitats to align with leading frameworks.



Value Chain	Number of Sites Assessment		
	Low	Medium	High
Direct Operation	1	-	11
Upstream	5	1	-
Downstream	-	3	1
Total	6	4	12

The medium to high sensitivity location in terms of nature-related issues are the first- order prioritization of site locations and are registered in the **WWF risk assessment**.

Number of site exposure to significant biodiversity impact

	Number of sites	Total areas (Hectares)
Number of sites of own operation	12	54.3569
Number of sites for Biodiversity Impact Assessment	12	54.3569
Number of site exposure to significant biodiversity impact	11	40.9769
Number of sites with a biodiversity management plan	11	40.9769

E - Evaluate

Theevaluationofsector-level impact and dependency scores isconductedwith the ENCORE tool. In order to use the ENCORE tool to assess impact and dependency scores, Osotspa activities were translated into the Global International Classification Standard (GICS) nomenclature used in **ENCORE** ([Link ↗](https://encore.naturalcapital.finance/en/data-and-methodology/sectors) **https://encore.naturalcapital.finance/en/data-and-methodology/sectors**)

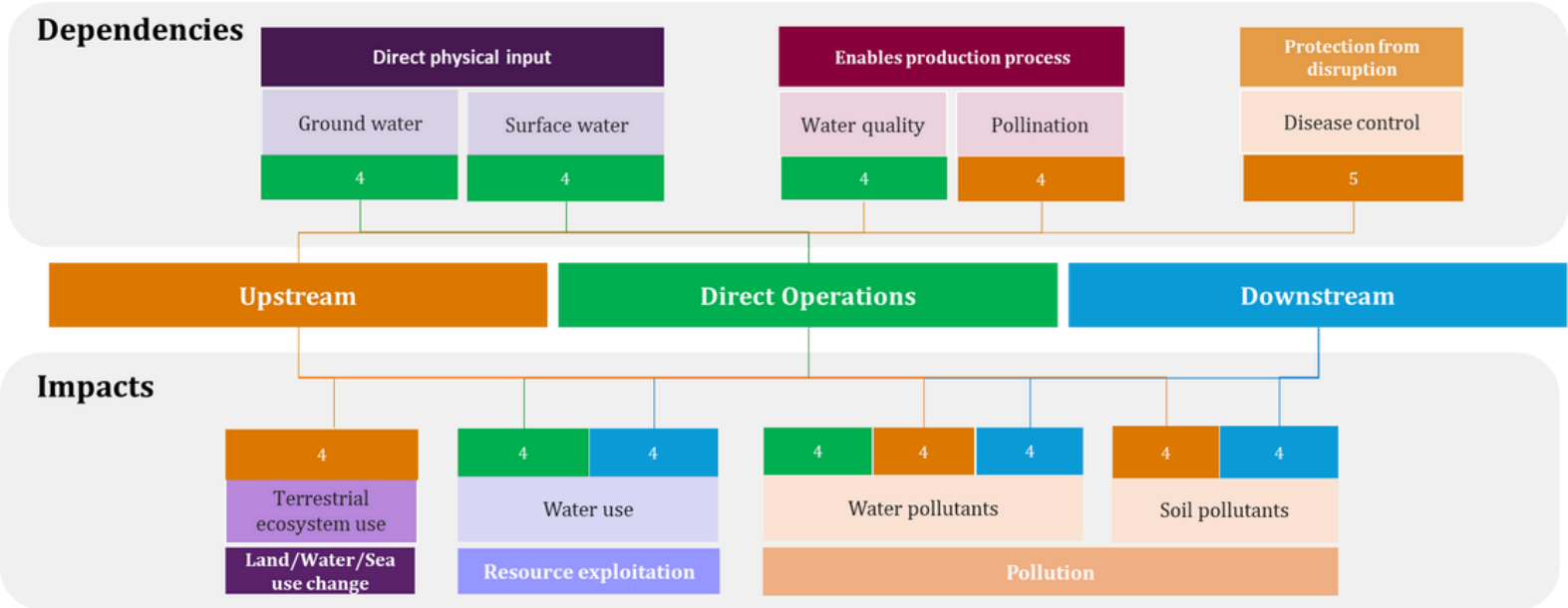
GICS encompasses 11 broad sectors, broken down into 158 sub-industries.



Ex: the Materials, Consumer Staples, and Health Care sectorcomprises 5 sub-industries



The diagram shows nature-related impacts and dependencies that have been identified as priority to Osotspa business based on the ENCORE sector-level assessment along with the adjustment from Osotspa business model and current concerns.



A - Assess



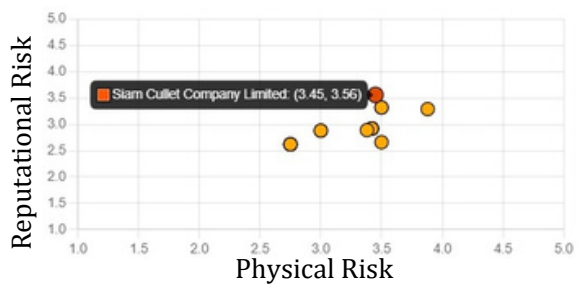
WWF biodiversity risk filter (WWF BRF) is used as a tool to assess the potential biodiversity risks from Osotspa operation and value chain as a location-specific approach. The risks assessed involved both impact- and dependency-related biodiversity risks.

Number of Sites by Risk type



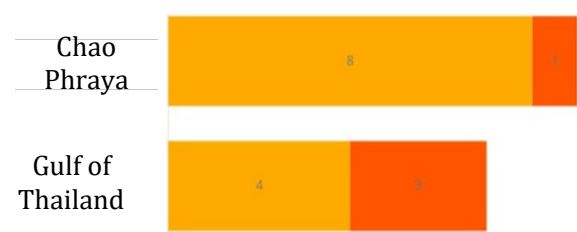
This graphic shows the distribution of the number of sites at different risk levels for all selected sites

Physical Risk vs Reputational Risk



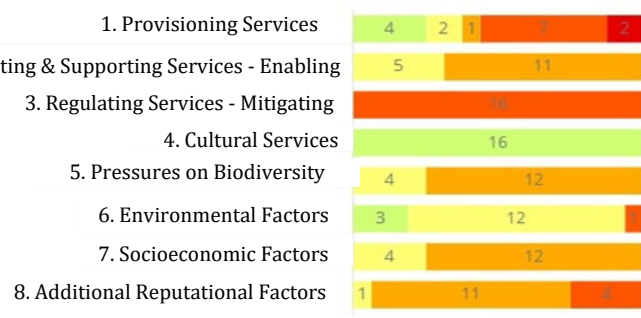
This graphic compares physical risk scores vs reputational risk scores for all selected sites

Number of Sites by Land- or Seascape



This graphic shows, up to 10 land- or seascapes with the highest number of sites and displays the number of sites associated with physical risk scores.

Number of Sites by Risk Category



This graphic shows the distribution of risk across the 8 risk categories for all selected sites

	Low risk	Medium risk	High risk
Physical risk	<ul style="list-style-type: none">Land, Freshwater and Sea Use Change	<ul style="list-style-type: none">Air Condition	<ul style="list-style-type: none">Water ScarcityLimited Wild Flora & Fauna AvailabilityWater ConditionFire HazardPlant/Forest/Aquatic Pests and DiseasesExtreme HeatTropical CyclonesPollution
Reputational risk	<ul style="list-style-type: none">Protected/Conse rved AreasOther Important Delineated AreasEcosystem Condition	<ul style="list-style-type: none">Key Biodiversity AreasLabor/ Human Rights	<ul style="list-style-type: none">Resource ScarcityMedia Scrutiny

Osotspa grouped and considered nature-related risks identified into 2 main risks types that are integrated into Company-wide risk management system which are;

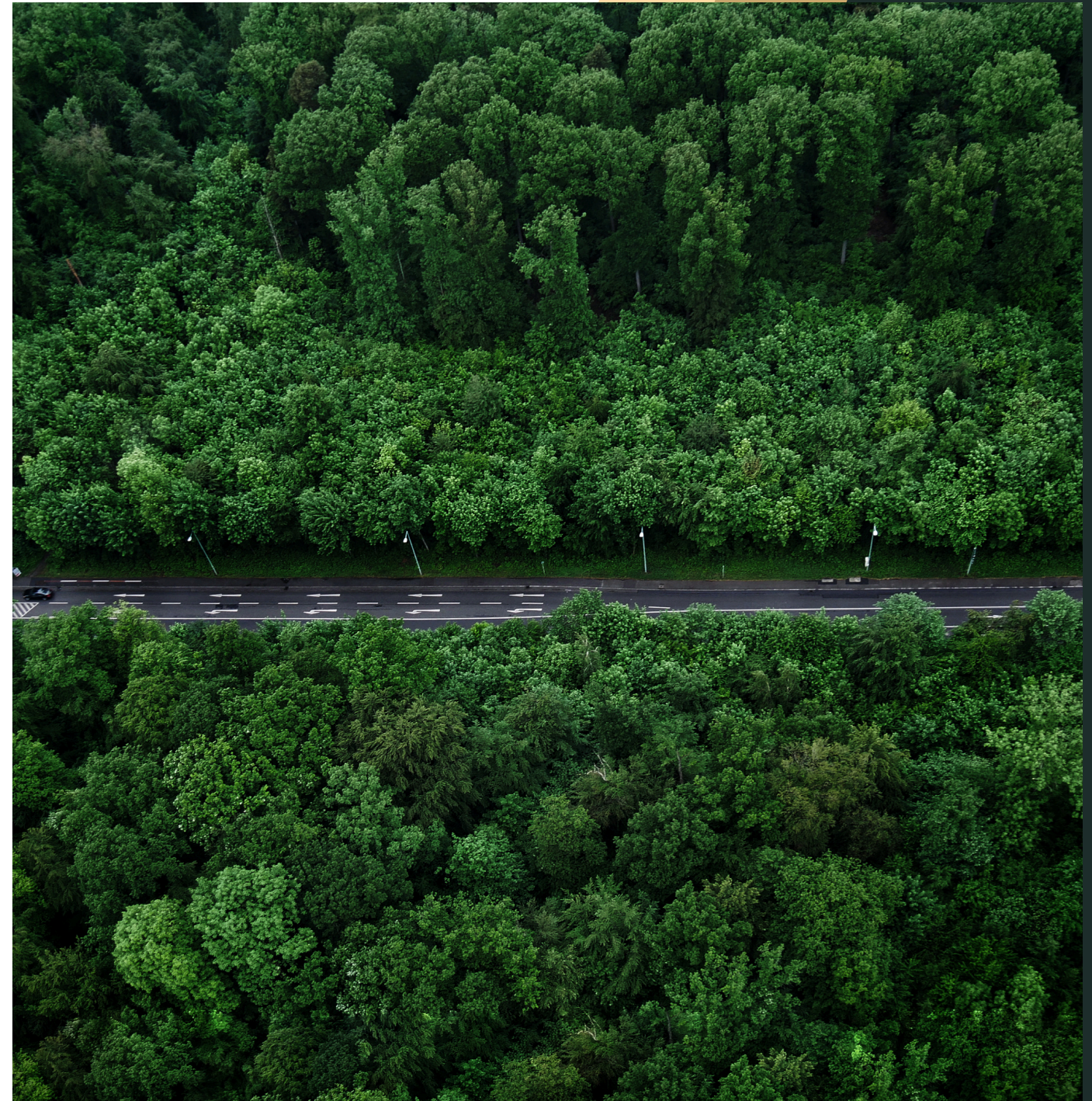
- Biodiversity related risks including (1) water scarcity and low-quality water condition and (2) scarcity in natural resources including flora and fauna.
- Emerging risks (the other identified risks from the tool)

P - Prepare

As part of the TNFD's LEAP framework, the "Prepare" stage focuses on building a strong foundation for nature-related risk and opportunity management, ensuring readiness for effective disclosure. For Osotspa, this involves the following key actions:

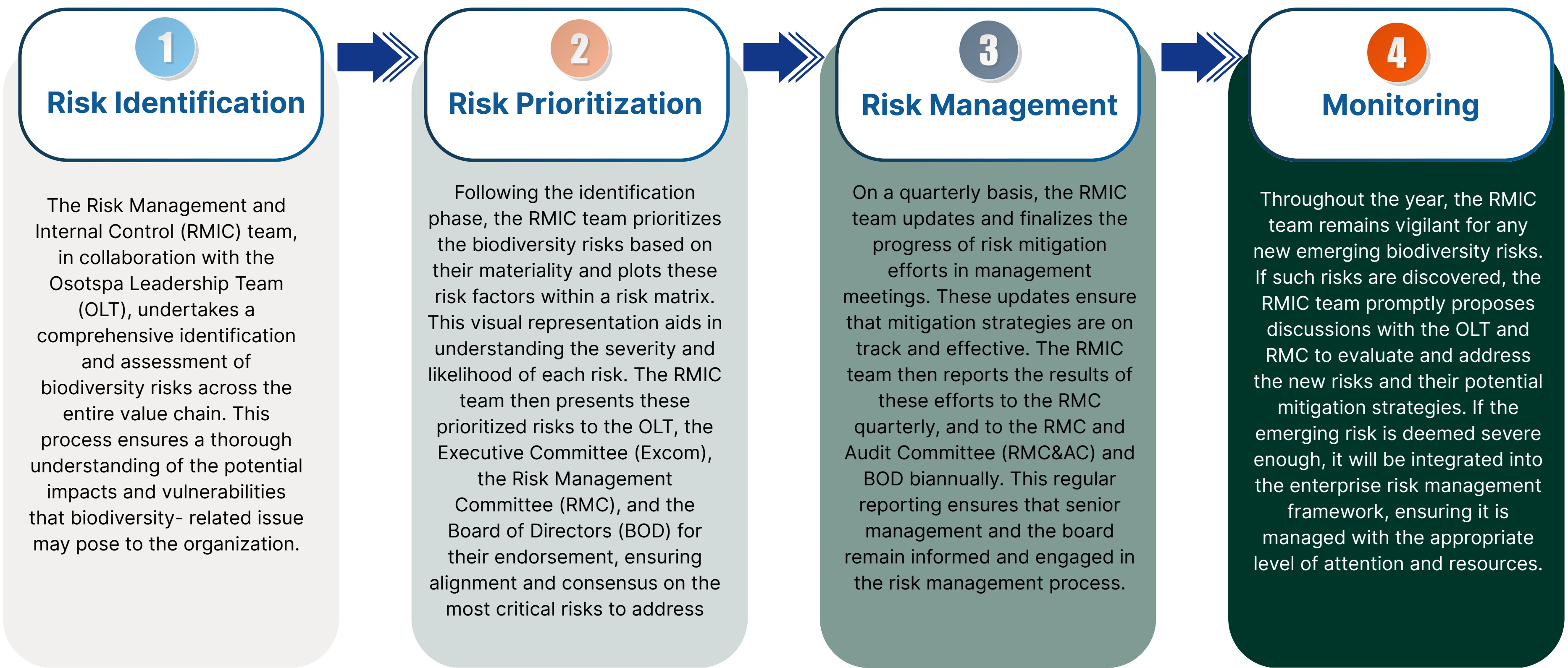
1. **Data Collection and Consolidation** – Gather comprehensive data on nature-related dependencies, impacts, risks, and opportunities from relevant departments, ensuring alignment with TNFD disclosure recommendations.
2. **Stakeholder Engagement** – Engage with internal and external stakeholders, including suppliers, community representatives, regulators, and NGOs, to understand their perspectives, concerns, and expectations regarding nature-related issues.
3. **Preliminary Analysis and Risk Assessment** – Analyze collected information to identify material nature-related risks, dependencies, and opportunities, guided by Osotspa's biodiversity and no-deforestation commitments.
4. **Drafting the TNFD Report** – Develop an initial draft incorporating insights from the LEAP assessment process, ensuring that findings are clearly linked to strategic business implications.
5. **Internal Review and Feedback** – Circulate the draft among cross-functional teams for technical review, ensuring accuracy, completeness, and alignment with Osotspa's governance and risk management frameworks.
6. **Board-Level Review** – Present the draft to the Board of Directors for strategic input, validation, and approval.
7. **Finalization and Quality Assurance** – Revise the report based on feedback from the Board and stakeholders, conduct pre-publication quality checks, and ensure compliance with TNFD disclosure principles.
8. **Design, Formatting, and Approval** – Finalize the report's design, ensure clarity of presentation, and obtain formal sign-off from the Board of Directors.
9. **Publication and Communication** – Publish the TNFD report through official channels and communicate key messages to stakeholders via press releases, social media, investor updates, and sustainability platforms.

RISK MANAGEMENT



Risk Management

Integrating Biodiversity issues into COSO: Enterprise Risk Management Framework



OSOTSPA’s Nature- Related Risk

Physical Risk

Risk	
Scape Physical Risk	
1. Provisioning Services	
• Water Scarcity	Dependency
• Limited Wild Flora & Fauna Availability	Dependency
2. Regulating & Supporting Services - Enabling	
• Water Condition	Dependency
• Air Condition	Dependency
3. Regulating Services - Mitigating	
• Fire Hazard	Dependency
• Plant/Forest/Aquatic Pests and Diseases	Dependency
• Extreme Heat	Dependency
• Tropical Cyclones	Dependency
5. Pressures on Biodiversity	
• Land, Freshwater and Sea Use Change	Impact
• Pollution	Impact

Transition Risk

Risk	I/D
Scape Reputational Risk	
6. Environmental Factors	
• Protected/Conserved Areas	Impact
• Key Biodiversity Areas	Impact
• Other Important Delineated Areas	Impact
• Ecosystem Condition	Impact
7. Socioeconomic Factors	
• Resource Scarcity: Food - Water – Air	Impact
• Labor/Human Rights	Impact
8. Additional Reputational Factors	
• Media Scrutiny	Dependency

NOTE ON THE TERM “SCAPE”
IN THIS REPORT, THE TERM “SCAPE” REFERS TO LANDSCAPE OR SEASCAPE, AS USED IN THE WWF BIODIVERSITY RISK FILTER (BRF) FRAMEWORK.

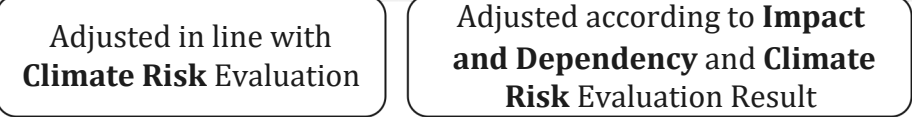
Scape Physical Risk

1. Provisioning Services

- 1: very low
- 2: low
- 3: medium
- 4: high
- 5: very high
- ND: this indicator is not applicable to this sector

	Site name	Water Scarcity	Limited Wild Flora & Fauna Availability
Own Operation	Greensville Company Limited (Liquid)	3.95	ND
	Greensville Company Limited (Talcum) Osotspa PCL	3.95	ND
	(Bottle Glass) Osotspa PCL (Paper Label) Osotspa PCL	3.85	3
	(Shrink Film PE)	3.85	3
	Osotspa PCL Phra Nakhon Si Ayutthaya (Energy Drink)	3.85	3
	Osotspa PCL (Pharmaceutical)	4.35	4
	Osotspa PCL Bangkok (Energy Drink)	3.95	4
	Osotspa PCL (Sport Drink)	4.45	4
	Siam Cullet Company Limited	4.45	4
	Siam Glass Ayutthaya Company Limited	3.9	3
Upstream	Thai Containers Group Co., Ltd. (THAI CON)	3.85	3
	Big C Supercenter PCL	3.75	3
Downstream	CP All PCL	2.75	ND
	CP Aextra PCL	2.75	ND
	Ek-Chai Distribution System Co., Ltd.	2.75	ND
		2.95	ND

	Relevant to OSP	TNFD risk category		Overall Risk level	Overall Risk After*	Own Operation		Upstream		Downstream	
						Risk level	After Adjustment*	Risk level	After Adjustment*	Risk level	After Adjustment*
1. Provisioning Services											
1.1 Water Scarcity	Yes	Physical risk	Chronic	High	Very high	High	Very high	High	Very high	Medium	Very high
1.2 Forest Productivity and Distance to Markets	No										
1.3 Limited Wild Flora & Fauna Availability	Yes	Physical risk	Chronic	High	High	High	High	Medium	Medium		
1.4 Limited Marine Fish Availability	No										



*After adjustment with results from I&D and Climate Risk Evaluation

Scape Physical Risk

2.Regulating&Supporting Services - Enabling

- 1: very low
- 2: low
- 3: medium
- 4: high
- 5: very high
- ND: this indicator is not applicable to this sector

	Site name	Water Condition	Air Condition
Own Operation	Greensville Company Limited (Liquid)	3	3
	Greensville Company Limited (Talcum)	3	3
	Osotspa PCL (Bottle Glass)	3	3
	Osotspa PCL (Paper Label)	3	3
	Osotspa PCL (Shrink Film PE)	3	3
	OsotspaPCLPhraNakhonSiAyutthaya(Energy Drink)	3.5	3
	Osotspa PCL (Pharmaceutical)	3.5	2.5
	Osotspa PCL Bangkok (Energy Drink)	4	3
	Osotspa PCL (Sport Drink)	4	3
	Siam Cullet Company Limited	3.5	3
	Siam Glass Ayutthaya Company Limited	3	3
Upstream	Thai Containers Group Co., Ltd. (THAI CON)	3.5	3
Downstream	Big C Supercenter PCL	3	2.5
	CP All PCL	3	2.5
	CP Aextra PCL	3	2.5
	Ek-Chai Distribution System Co., Ltd.	3	2.5

	Relevant to OSP	TNFD risk category			Overall Risk level	Overall Risk After*	Own Operation After Adjustment		Upstream After Adjustment		Downstream After Adjustment	
2. Regulating & Supporting Services - Enabling												
2.1 Soil Condition	No											
2.2 Water Condition	Yes	Physical	risk	Chronic	Medium	High	Medium	Very high	High	High	Medium	Medium
2.3 Air Condition	Yes	Physical	risk	Chronic	Medium	Medium	Medium	Medium	Medium	Medium	Low	Low
2.4 Ecosystem Condition	No											
2.5 Pollination	No											

*After adjustment with results from I&D and Climate Risk Evaluation

Adjusted according to **Impact and Dependency** Evaluation Result

Scape Physical Risk

3.RegulatingServices - Mitigating

- 1: very low
- 2: low
- 3: medium
- 4: high
- 5: very high
- ND: this indicator is not applicable to this sector

	Site name	Fire Hazard	Plant/Forest/ Aquatic Pests and Diseases	Extreme Heat	Tropical Cyclone
Own Operation	Greensville Company Limited (Liquid)	3.5	ND	3.5	3.5
	Greensville Company Limited (Talcum)	3.5	ND	3.5	3.5
	Osotspa PCL (Bottle Glass)	3.5	ND	4	3.5
	Osotspa PCL (Paper Label)	3.5	ND	4	3.5
	Osotspa PCL (Shrink Film PE)	3.5	ND	4	3.5
	OsotspaPCLPhraNakhonSiAyutthaya(Energy Drink)	3.5	4	4	3.5
	Osotspa PCL (Pharmaceutical)	3.5	4	3.5	3.5
	Osotspa PCL Bangkok (Energy Drink)	3.5	4	3.5	3.5
	Osotspa PCL (Sport Drink)	3.5	4	3.5	3.5
	Siam Cullet Company Limited	3.5	ND	3.5	3.5
	Siam Glass Ayutthaya Company Limited	3.5	ND	4	3.5
Upstream	Thai Containers Group Co., Ltd. (THAI CON)	3.5	ND	4	3.5
Downstream	Big C Supercenter PCL	3.5	ND	4	3.5
	CP All PCL	3.5	ND	4	3.5
	CP Aextra PCL	3.5	ND	4	3.5
	Ek-Chai Distribution System Co., Ltd.	3.5	ND	3.5	3.5

	Relevant to OSP	TNFD risk category				Own Operation		Upstream		Downstream	
						Risk level	After I&D consideration	Risk level	After I&D consideration	Risk level	After I&D consideration
3.RegulatingServices - Mitigating											
3.1 Landslides	No										
3.2 Fire Hazard	Yes	Physical	risk	Acute	High	High	High	High	High	High	High
3.3 Plant/Forest/Aquatic Pests and Diseases	Yes	Physical	risk	Acute	High	High	High				
3.4 Herbicide Resistance	No										
3.5 Extreme Heat	Yes	Physical	risk	Acute	High	High	High	High	High	High	High
3.6 Tropical Cyclones	Yes	Physical	risk	Acute	High	High	High	High	High	High	High

Scape Physical Risk

5. Pressures on Biodiversity

- 1: very low
- 2: low
- 3: medium
- 4: high
- 5: very high
- ND: this indicator is not applicable to this sector

	Site name	Land, Freshwater and Sea Use Change	Pollution
Own Operation	Greensville Company Limited (Liquid)	2	4
	Greensville Company Limited (Talcum)	2	4
	Osotspa PCL (Bottle Glass)	2.5	4
	Osotspa PCL (Paper Label)	2.5	4
	Osotspa PCL (Shrink Film PE)	2.5	4
	Osotspa PCL Phra Nakhon Si Ayutthaya (Energy Drink)	2.5	3.5
	Osotspa PCL (Pharmaceutical)	2	4
	Osotspa PCL Bangkok (Energy Drink)	2	3.5
	Osotspa PCL (Sport Drink)	2	3.5
	Siam Cullet Company Limited	2	4
	Siam Glass Ayutthaya Company Limited	2.5	4
Upstream	Thai Containers Group Co., Ltd. (THAI CON)	2.5	4
Downstream	Big C Supercenter PCL	2.5	3.5
	CP All PCL	2.5	3.5
	CP Axtra PCL	2.5	3.5
	Ek-Chai Distribution System Co., Ltd.	2	3.5

	Relevant to OSP	TNFD risk category		Overall Risk level	Overall Risk After*	Own Operation		Upstream		Downstream	
						Risk level	After I&D consideration	Risk level	After I&D consideration	Risk level	After I&D consideration
5. Pressures on Biodiversity											
5.1 Land, Freshwater and Sea Use Change	Yes	Physical risk	Chronic	Low	Medium	Low	Low	Low	High	Low	Low
5.2 Tree Cover Loss	No										
5.3 Invasives	No										
5.4 Pollution	Yes	Physical risk	Chronic	High	High	High	High	High	High	High	High

*After adjustment with results from I&D and Climate Risk Evaluation

Adjusted according to **Impact and Dependency** Evaluation Result

Remarks: Note that 4. Cultural Service is not applicable to OSP

Potential Impact on OSP: Scape Physical Risk

			Impact Level	Potential Financial Impacts
Scape Physical Risk	Provisioning Services	Water Scarcity	Very high	<ul style="list-style-type: none"> Shortage of water leads to disruptions in production processes, manufacturing, or service delivery resulting in lost revenue, increased costs, and potential financial penalties for failing to meet contractual obligations Water-related costs will increase, which can significantly impact their operating expenses and profit margins
		Limited Wild Flora& Fauna Availability	High	<ul style="list-style-type: none"> Cost of obtaining raw materials could increase due to scarcity and higher demand which impacts the operating expenses and profit margins of products relied on natural resources
	Regulating & Supporting Services Enabling	Water Condition	Very high	<ul style="list-style-type: none"> Polluted or contaminated water sources require more extensive and expensive treatment processes before the water can be used for industrial or commercial purposes particularly in beverage industry Governments and regulatory bodies may impose stricter water quality standards, discharge limits, or environmental regulations in response to poor water conditions, resulting in fines, penalties, lawsuits, or even the revocation of operating licenses if the company fails to comply with the standards.
		Air Condition	Medium	<ul style="list-style-type: none"> Exposure to air pollutants can pose significant health risks to employees, customers, and local communities leading to increased healthcare costs, absenteeism, legal liabilities, and potential disruptions in operations due to illness or injury

Potential Impact on OSP: Scape Physical Risk

			Impact Level	Potential Financial Impacts
Scape Physical Risk	Regulating Services - Mitigating	Fire Hazard	High	<ul style="list-style-type: none"> Fires can cause extensive damage or destruction to a company's physical assets, such as buildings, equipment, inventory, and infrastructure resulting in significant financial losses due to the cost of repairing or replacing damaged assets, as well as potential business interruption and revenue losses Companies with a history of fire incidents or those operating in high-risk industries may face higher insurance premiums due to the increased risk of property damage, business interruption, and liability claims
		Plant/Forest/Aquatic Pests and Diseases	High	<ul style="list-style-type: none"> Pest infestations or plant diseases can significantly reduce crop yields, leading to substantial financial losses for agricultural companies, farmers, and food producers Companies may need to invest in pest and disease control measures, such as pesticides, fungicides, or biological control methods, which can significantly increase production costs and impact profit margins
		Extreme Heat	High	<ul style="list-style-type: none"> Extreme heat can lead to a surge in energy demand for cooling and air conditioning, resulting in higher energy costs for businesses Extended periods of intense heat can cause harm to tangible company resources like tools, machines, structures, and facilities resulting in expenditures for repairs or replacements Extreme heat poses potential safety and health risks to employees
		Tropical Cyclones	High	<ul style="list-style-type: none"> Tropical cyclones can bring extreme wind and flooding, which can harm infrastructure and endanger worker safety. Disruptions to production and logistic operations from severe storms can affect revenue and/or increase costs.
	Pressures on Biodiversity	Land, Freshwater and Sea Use Change	Low	<ul style="list-style-type: none"> Land use changes, such as conversion of land for urbanization or conservation purposes, can result in restricted access to natural resources, raw materials, or areas previously used for business activities which can increase resource scarcity and drive up costs for companies.
		Pollution	High	<ul style="list-style-type: none"> Violation of environmental regulations on pollution can lead to fines, penalties, or legal action from regulatory bodies Pollution incidents may necessitate the company to cover the costs of environmental cleanup and remediation efforts

Scape Reputation Risk

6. Environmental Factors

1: very low
 2: low
 3: medium
 4: high
 5: very high
 ND: this indicator is not applicable to this sector

	Site name	Protected/ Conserved Areas	Key Biodiversity Areas	Other Important Delineated Areas	Ecosystem Condition
Own Operation	Greensville Company Limited (Liquid)	2	3	1.5	2.5
	Greensville Company Limited (Talcum)	2	3	1.5	2.5
	Osotspa PCL (Bottle Glass)	2	3.5	1.5	2
	Osotspa PCL (Paper Label)	2	3.5	1.5	2
	Osotspa PCL (Shrink Film PE)	2	3.5	1.5	2
	Osotspa PCL Phra Nakhon Si Ayutthaya (Energy Drink)	2	3.5	1.5	2
	Osotspa PCL (Pharmaceutical)	2	3	1.5	2.5
	Osotspa PCL Bangkok (Energy Drink)	2	3	1.5	2.5
	Osotspa PCL (Sport Drink)	2	3	1.5	2.5
	Siam Cullet Company Limited	3.5	3	3.5	2.75
	Siam Glass Ayutthaya Company Limited	2	3.5	1.5	2
Upstream	Thai Containers Group Co., Ltd. (THAI CON)	2	3.5	1.5	1.62
Downstream	Big C SupercenterPCL	1	3	1	1.12
	CP All PCL	1	3	1	1.12
	CP Aextra PCL	1	3	1	1.12
	Ek-Chai Distribution System Co., Ltd.	1	2.5	1	2

						Own Operation		Upstream		Downstream	
	Relevant to OSP	TNFD risk category			Overall Risk level	Risk level	After I&D consideration	Risk level	After I&D consideration	Risk level	After I&D consideration
6. Environmental Factors											
6.1 Protected/Conserved Areas	Yes	Transition	risk	Liability	Low	Low	Low	Low	Low	Very low	Very low
6.2 Key Biodiversity Areas	Yes	Transition	risk	Policy	Medium	Medium	Medium	High	High	Medium	Medium
6.3 Other Important Delineated Areas	Yes	Transition	risk	Policy	Very low	Very low	Very low	Very low	Very low	Very low	Very low
6.4 Ecosystem Condition	Yes	Transition	risk	Reputational	Low	Low	Low	Very low	Very low	Very low	Very low
6.5 Range Rarity	No										

*After adjustment with results from I&D and Climate Risk Evaluation

Scape Reputation Risk

7. Socioeconomic Factors

- 1: very low
- 2: low
- 3: medium
- 4: high
- 5: very high
- ND: this indicator is not applicable to this sector

	Site name	Resource Scarcity: Food - Water - Air	Labor/Human Rights
Own Operation	Greenville Company Limited (Liquid)	2.45	3
	Greenville Company Limited (Talcum)	2.45	3
	Osotspa PCL (Bottle Glass)	2.35	3
	Osotspa PCL (Paper Label)	2.35	3
	Osotspa PCL (Shrink Film PE)	2.35	3
	Osotspa PCL Phra Nakhon Si Ayutthaya (Energy Drink)	2.85	3
	Osotspa PCL (Pharmaceutical) Osotspa PCL Bangkok (Energy Drink)	2.45	3
	Osotspa PCL (Sport Drink)	2.95	3
	Siam Cullet Company Limited	2.95	3
	Siam Glass Ayutthaya Company Limited	2.4	3
Upstream	Thai Containers Group Co., Ltd. (THAI CON)	2.35	3
Downstream	Big C Supercenter PCL	2.25	3
	CP All PCL	ND	3
	CP Aextra PCL	ND	3
	Ek-Chai Distribution System Co., Ltd.	ND	3

	Relevant to OSP	TNFD risk category		Overall Risk level	Overall Risk After*	Own Operation		Upstream		Downstream	
						Risk level	After I&D consideration	Risk level	After I&D consideration	Risk level	After I&D consideration
7. Socioeconomic Factors											
7.1 Indigenous Peoples (IPs); Local Communities (LCs) Lands and Territories											
7.2 Resource Scarcity: Food -Water -Air	Yes	Transition risk	Market	Low	Medium	Low	High	Low	Low		
7.3 Labor/Human Rights	Yes	Transition risk	Reputational	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
7.4 Financial Inequality											

Adjusted due to high water scarcity risk as Osotspa highly depends on the water resource

*After adjustment with results from I&D and Climate Risk Evaluation

Scape Reputation Risk

8. Additional Reputational Factors

<div><div></div>1: very low</div> <div><div></div>2: low</div> <div><div></div>3: medium</div> <div><div></div>4: high</div> <div><div></div>5: very high</div> <div><div></div>ND: this indicator is not applicable to this sector</div>	Site name				Media Scrutiny						
	Own Operation		Greensville Company Limited (Liquid)			3.5					
			Greensville Company Limited (Talcum)			3.5					
			Osotspa PCL (Bottle Glass)			4					
			Osotspa PCL (Paper Label)			4					
			Osotspa PCL (Shrink Film PE)			4					
			OsotspaPCLPhraNakhonSiAyutthaya(Energy Drink)			4.5					
			Osotspa PCL (Pharmaceutical)			2.5					
			Osotspa PCL Bangkok (Energy Drink)			4.5					
			Osotspa PCL (Sport Drink)			4.5					
			Siam Cullet Company Limited			4					
			Siam Glass Ayutthaya Company Limited			4					
		Upstream		Thai Containers Group Co., Ltd. (THAI CON)			4				
	Downstream		Big C Supercenter PCL			3.5					
			CP All PCL			3.5					
		CP Aextra PCL			3.5						
		Ek-Chai Distribution System Co., Ltd.			3.5						

	Relevant to OSP	TNFD risk category			Overall Risk level	Own Operation		Upstream		Downstream	
						Risk level	After I&D consideration	Risk level	After I&D consideration	Risk level	After I&D consideration
8. Additional Reputational Factors											
8.1 Media Scrutiny	Yes	Transition risk	Reputational	High	High	High	High	High	High	High	High
8.2 Political Situation	No										
8.3 Sites of International Interest	No										
8.4 Risk Preparation											

*After adjustment with results from I&D and Climate Risk Evaluation

Potential Impact on OSP: Scape Reputational Risk

			Impact Level	Potential Financial Impacts
Scape Reputational Risk	Environmental Factors	Protected/Conserved Areas	Low	<ul style="list-style-type: none"> Corporations operating in or around Protected/Conserved/Key Biodiversity Areas face the risk of negative publicity if their activities are perceived as harmful to the environment or wildlife which can lead to a tarnished brand image, loss of consumer trust, and ultimately, a decrease in sales and market share Public opposition to corporate activities in Protected/Conserved/Key Biodiversity Area can escalate into legal battles, including lawsuits from environmental groups, affected communities, or government agencies. Legal expenses and potential damages awarded in such cases can have significant financial implications for corporations.
		Key Biodiversity Areas	Medium	
		Other Important Delineated Areas	Very low	
		Ecosystem Condition	Low	
	Socioeconomic Factors	Resource Scarcity: Food-Water-Air	High	<ul style="list-style-type: none"> Shareholders may divest from companies perceived as unsustainable, leading to lower stock prices and difficulty in raising capital. Negative perceptions can lead to consumer backlash, boycotts, and decreased brand loyalty, impacting sales and market share
		Labor/Human Rights	Medium	
	Additional Reputational Factors	Media Scrutiny	High	<ul style="list-style-type: none"> Negative media coverage can influence company's brand and customer trust.

Overall result – Nature Related

Results of nature-related risks from WWF Biodiversity Tool that are related to Osotspa business

	Water Scarcity	Limited Wild Flora & Fauna Availability	Water Condition	Air Condition	Fire Hazard	Plant/Forest/Aquatic Pests and Diseases	Extreme Heat	Tropical Cyclones	Land, Freshwater and Sea Use Change	Pollution	Protected/Conserved Areas	Key Biodiversity Areas	Other Important Delineated Areas	Ecosystem Condition	Resource Scarcity: Food - Water - Air	Labor/Human Rights	Media Scrutiny
Greensville Company Limited (Liquid)	High	ND	Medium	Medium	High	ND	High	High	Low	High	Low	Medium	Very Low	Low	Low	Medium	High
Greensville Company Limited (Talcum)	High	ND	Medium	Medium	High	ND	High	High	Low	High	Low	Medium	Very Low	Low	Low	Medium	High
Osotspa PCL (Bottle Glass)	High	Medium	Medium	Medium	High	ND	High	High	Low	High	Low	High	Very Low	Low	Low	Medium	High
Osotspa PCL (Paper Label)	High	Medium	Medium	Medium	High	ND	High	High	Low	High	Low	High	Very Low	Low	Low	Medium	High
Osotspa PCL (Shrink Film PE)	High	Medium	Medium	Medium	High	ND	High	High	Low	High	Low	High	Very Low	Low	Low	Medium	High
Osotspa PCL Phra Nakhon Si Ayutthaya (Energy Drink)	Very high	High	High	Medium	High	High	High	High	Low	High	Low	High	Very Low	Low	Medium	Medium	Very high
Osotspa PCL (Pharmaceutical)	High	High	High	Low	High	High	High	High	Low	High	Low	Medium	Very Low	Low	Low	Medium	Low
Osotspa PCL Bangkok (Energy Drink)	Very high	High	High	Medium	High	High	High	High	Low	High	Low	Medium	Very Low	Low	Medium	Medium	Very high
Osotspa PCL (Sport Drink)	Very high	High	High	Medium	High	High	High	High	Low	High	Low	Medium	Very Low	Low	Medium	Medium	Very high
Siam Cullet Company Limited	High	Medium	High	Medium	High	ND	High	High	Low	High	High	Medium	High	Medium	Low	Medium	High
Siam Glass Ayutthaya Company Limited	High	Medium	Medium	Medium	High	ND	High	High	Low	High	Low	High	Very Low	Low	Low	Medium	High
Thai Containers Group Co., Ltd. (THAI CON)	High	Medium	High	Medium	High	ND	High	High	Low	High	Low	High	Very Low	Very Low	Low	Medium	High
Big C Supercenter PCL	Medium	ND	Medium	Low	High	ND	High	High	Low	High	Very Low	Medium	Very Low	Very Low	ND	Medium	High
CP All PCL	Medium	ND	Medium	Low	High	ND	High	High	Low	High	Very Low	Medium	Very Low	Very Low	ND	Medium	High
CP Aextra PCL	Medium	ND	Medium	Low	High	ND	High	High	Low	High	Very Low	Medium	Very Low	Very Low	ND	Medium	High
Ek-Chai Distribution System Co., Ltd.	Medium	ND	Medium	Low	High	ND	High	High	Low	High	Very Low	Low	Very Low	Low	ND	Medium	High

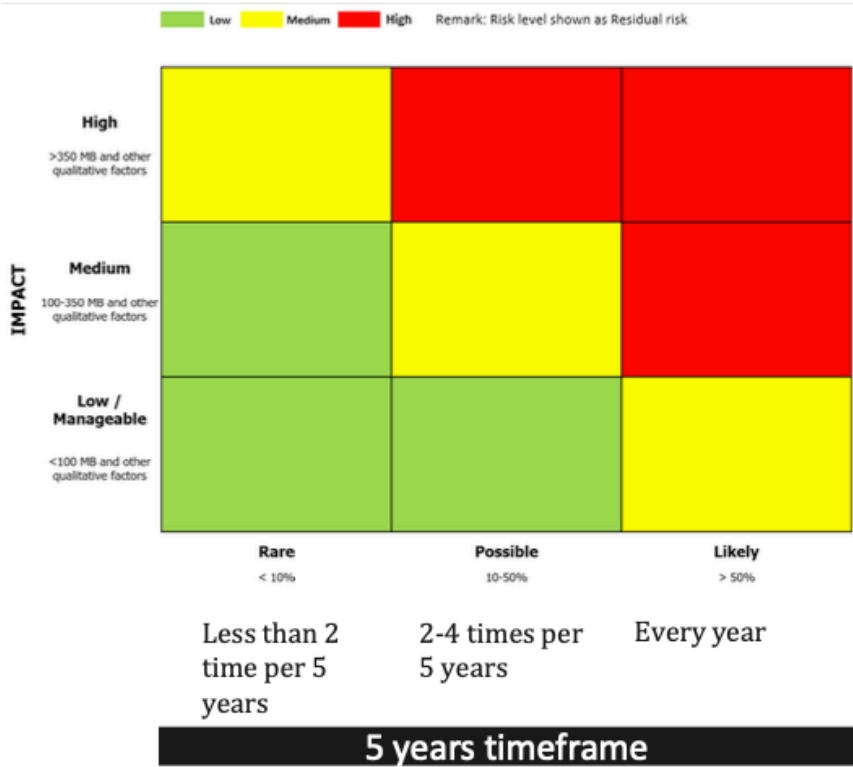
Steps for Risk Validation

- 1 Identify events/circumstances of the risk on Osotspa's business profile in the past
- 2 Evaluate likelihood level from history records
- 3 Identify existing mitigation actions for each risks
- 4 Adjust risk level based on existing mitigation actions (Residual Risk)

	History records	Impact	Likelihood	Risk level	Current Mitigation	Risk level (After Mitigation Action)
Scape Physical Risk						
1. Provisioning Services						
1.1 Water Scarcity		3	2	High		
1.3 Limited Wild Flora & Fauna Availability		3	1	Medium		
2. Regulating & Supporting Services - Enabling						
2.2 Water Condition		3	2	High		
2.3 Air Condition		2	2	Medium		
3. Regulating Services - Mitigating						
3.2 Fire Hazard		3	2	High		
3.3 Plant/Forest/Aquatic Pests and Diseases		3	1	Medium		
3.5 Extreme Heat		3	2	High		
3.6 Tropical Cyclones		3	2	High		
5. Pressures on Biodiversity						
5.1 Land, Freshwater and Sea Use Change		1	1	Low		
5.4 Pollution		3	3	High		
Scape Reputational Risk						
6. Environmental Factors						
6.1 Protected/Conserved Areas		1	1	Low		
6.2 Key Biodiversity Areas		2	1	Low		
6.3 Other Important Delineated Areas		1	1	Low		
6.4 Ecosystem Condition		1	1	Low		
7. Socioeconomic Factors						
7.2 Resource Scarcity: Food - Water - Air		3	2	High		
7.3 Labor/Human Rights		2	2	Medium		
8. Additional Reputational Factors						
8.1 Media Scrutiny		3	3	High		

Summary: TNFD categorization and Financial Impact

	I/D	TNFD risk category		Overall Risk level	Own Operation Risk level	Own Operation After Adjustment	Impact	Likelihood (5 years timeframe)	Risk level
Scape Physical Risk				Medium	High	High			
1. Provisioning Services				Medium	High	High			
1.1 Water Scarcity	Dependency	Physical risk	Chronic	High	High	Very high	3	2	High
1.3 Limited Wild Flora & Fauna Availability	Dependency	Physical risk	Chronic	High	High	High	3	1	Medium
2. Regulating & Supporting Services - Enabling				Medium	Medium				
2.2 Water Condition	Dependency	Physical risk	Chronic	Medium	Medium	Very high	3	2	High
2.3 Air Condition	Dependency	Physical risk	Chronic	Medium	Medium	Medium	2	2	Medium
3. Regulating Services - Mitigating				High	High	High			
3.2 Fire Hazard	Dependency	Physical risk	Acute	High	High	High	3	2	High
3.3 Plant/Forest/Aquatic Pests and Diseases	Dependency	Physical risk	Acute	High	High	High	3	1	Medium
3.5 Extreme Heat	Dependency	Physical risk	Acute	High	High	High	3	2	High
3.6 Tropical Cyclones	Dependency	Physical risk	Acute	High	High	High	3	2	High
5. Pressures on Biodiversity				Medium	Medium	Medium			
5.1 Land, Freshwater and Sea Use Change	Impact	Physical risk	Chronic	Low	Low	Low	1	1	Low
5.4 Pollution	Impact	Physical risk	Chronic	High	High	High	3	3	High
Scape Reputational Risk				Medium	Medium	Medium			
6. Environmental Factors				Low	Low				
6.1 Protected/Conserved Areas	Impact	Transition risk	Liability	Low	Low	Low	1	1	Low
6.2 Key Biodiversity Areas	Impact	Transition risk	Policy	Medium	Medium	Medium	2	1	Low
6.3 Other Important Delineated Areas	Impact	Transition risk	Policy	Very low	Very low	Very low	1	1	Low
6.4 Ecosystem Condition	Impact	Transition risk	Reputational	Low	Low	Low	1	1	Low
7. Socioeconomic Factors				Medium	Medium				
7.2 Resource Scarcity: Food - Water - Air	Impact	Transition risk	Market	Low	Low	High	3	2	High
7.3 Labor/Human Rights	Impact	Transition risk	Reputational	Medium	Medium	Medium	2	2	Medium
8. Additional Reputational Factors				Medium	Medium				
8.1 Media Scrutiny	Dependency	Transition risk	Reputational	High	High	High	3	3	High



Emerging Risk : Biodiversity Related Risk

Emerging Risk	Potential Impact	Mitigation Plan
<p>Unseen Climate Effects: Climate change may cause unforeseen disasters, potentially damaging company assets and endangering worker safety, such as extreme heat, cyclones, and fire hazards.</p>	<ul style="list-style-type: none"> • Sudden environmental disasters those may disrupt company's business continuity by damaging company's assets and natural resources' supply. • Damage from natural disasters may cause asset & property losses and human injuries and fatalities • High temperature can cause significant health issues of workers such as heat exhaustion, heat stroke, and other heat stress related illnesses. • High temperature can increase the levels of air pollution and harmful exposures to workers, such as fine particulate matter (PM) pollution, the buildups of air pollution due to air stagnation, etc. • High temperature and humidity can decrease product quality, changes in nutrient composition, color and texture during production, storage and transportation 	<ul style="list-style-type: none"> • Study and Evaluate company's existing properties for create the potential plan to upgrade the existing assets' structure, facilities and equipment as needed based on company's evaluation. • Create the appropriate fire buffer zone between community and operational site and Implementing fire-resistant building materials into building structure. • Establish and enhance the Heat Safety Policies and guidelines on the provision of adequate water supplies, rest breaks, and access to cooler areas for breaks. • Establish the Mandatory Training & Education to build awareness of company's workers in climate change situation and the best practices for preventive measures.

Biodiversity Risk 1: Water Scarcity and Low Quality Water Condition

Risk Item	Mitigation Plan
<p>BD1: Water scarcity and low-quality water condition may lead to disruption in production costs of Beverage, PC HCC and OEM Businesses.</p> <p>Risk level: Low</p> <p>Likelihood: Low</p>	<ul style="list-style-type: none">• Regular monitoring the pumping rate and amount of water sources• Regular water treatment/real time monitoring on water quality• Initiate Water reduction & Water efficiency programs to support the efficiency of water usage• Identify alternative sources of water and prepare for Business Continuous Plan (BCP) in case of water shortage• Study about Deep well license and opportunity to get more licenses for prevent the water shortage

Biodiversity Risk 2: Scarcity in natural resources (Flora and Fauna)

Risk Item	Mitigation Plan
<p>BD2: Scarcity in natural resources (flora and fauna) may lead to key raw material shortage and mainly impact to production costs of Beverage products</p> <p>Risk level: Medium</p> <p>Likelihood: Low</p>	<p>Change</p> <ul style="list-style-type: none">• Sourcing and Qualifying the additional suppliers for key materials.• Seek for alternative sources for key materials supply with different in country of origin.• Seek for substitute supplier to support key raw material supply or replace the key suppliers <p>Collaborate</p> <ul style="list-style-type: none">• Closely monitoring the key material suppliers, sources and market trend to ensure the market supply situation.• Ensure proper inventory level for key materials using in production.• Material usage forecast with the production plan to obtain the accurate data for the best material sourcing plan. <p>Reduce</p> <ul style="list-style-type: none">• Reformulate products' composition to seek the potential of less key materials usage

Mitigating Actions



Avoidance - Avoid creating impacts on biodiversity



Reduction - Reduce the intensity of impact on biodiversity that is unable to avoid



Restoration/Regeneration - Rehabilitate degraded ecosystem



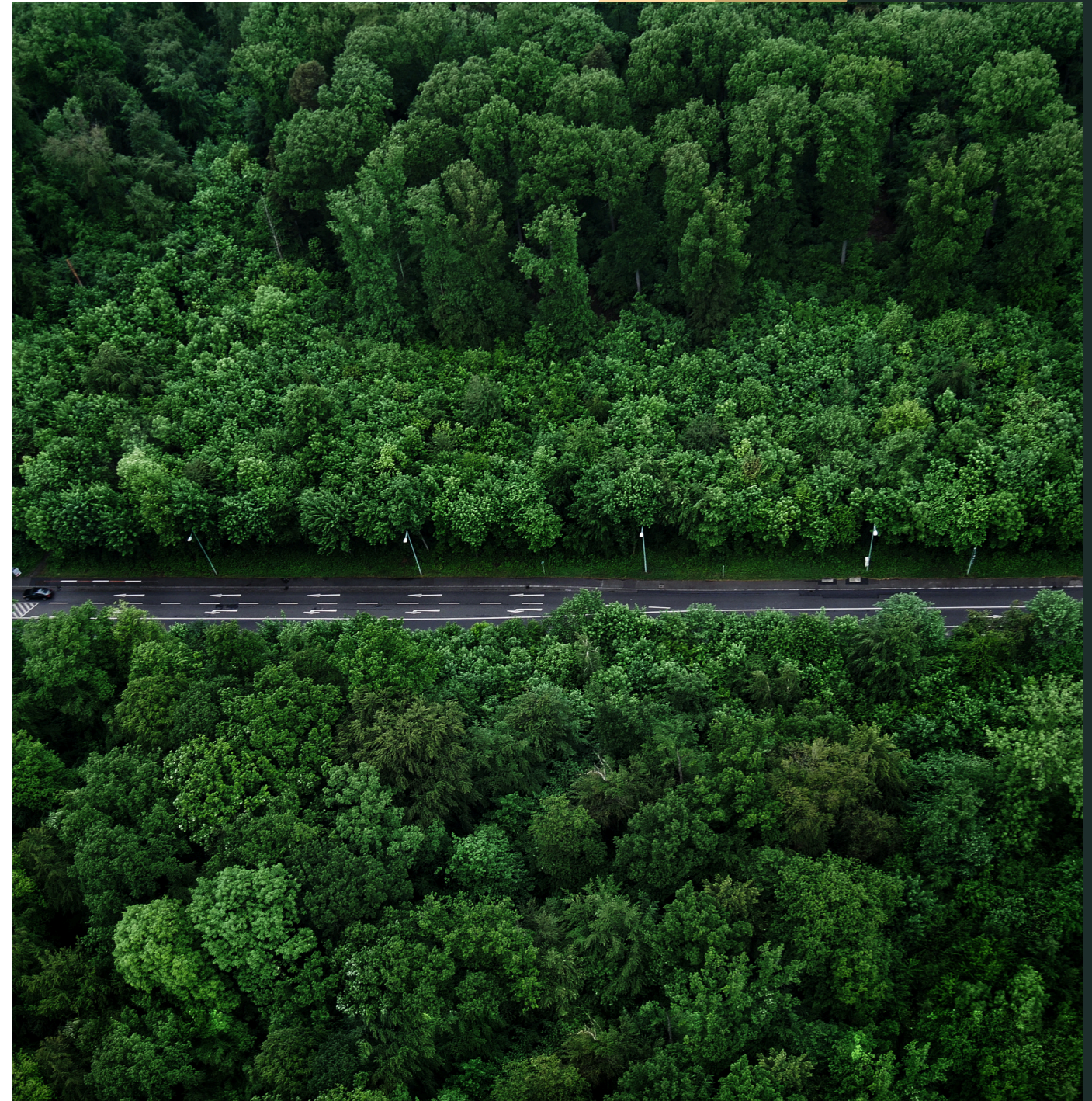
Offset - Compensate for the loss of biodiversity



Transform - change to the suitable method to avoid negative impact on nature



METRICS AND TARGETS



Water Risk Assessment by WRI's AQUEDUCT AQUEDUCT

As a leading beverage company in Thailand, Osotspa recognizes that effective water management is key to mitigating operational risk. The Company hence conducts water risk analysis using WRI's AQUEDUCT water risk tool to evaluate changes in water availability, assess water-related risk, and identify water stress locations.

In 2024, Osotspa improved the water resources risk assessment by conducting an exploration survey of the physical characteristics and social contexts of the main production areas in Phra Nakhon Si Ayutthaya. We also broadened the scope of the risk assessment to include social dimensions, sufficiency tendency, surface and ground water resource quality, and water consumption needs. This data will be used to plan operations and determine appropriate risk management measures.

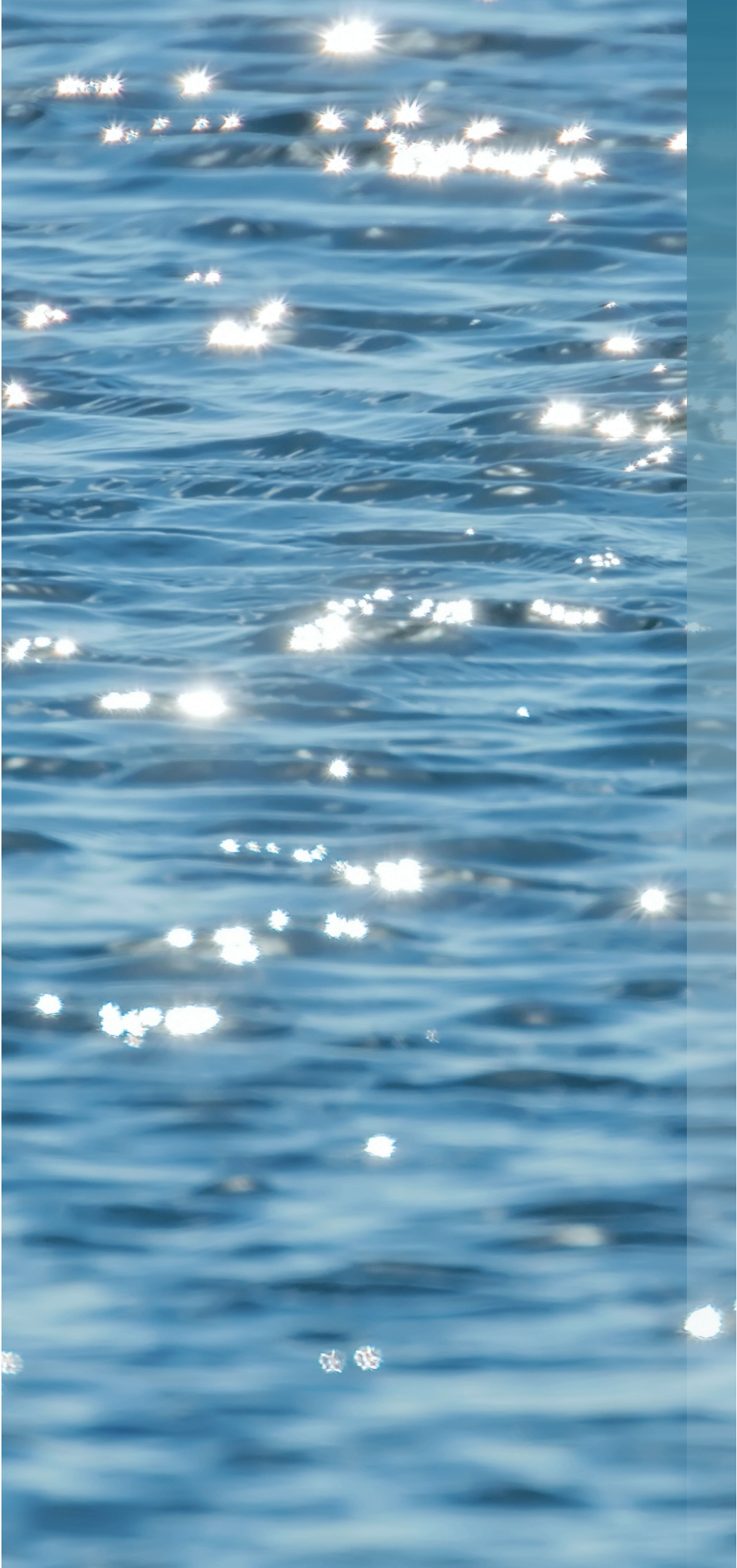
% of factories in water stressed locations based on number of factories	91.67%
% of factories in water stressed locations based on COGS	91.67%
% of factories in water stressed locations based on Revenue	91.67%

Current Action:

These results serve as Osotspa’s baseline year for water-related risk monitoring. While no water reduction target is currently set for high-risk areas, the company commits to:

- 1. Annual monitoring of water stress exposure for all operating sites.
- 2. Integrating water risk data into business continuity planning and supplier engagement.
- 3. Evaluating feasibility of setting quantitative water stewardship targets for high-risk sites by 2026.

Reference Tool: WRI Aqueduct Water Risk Atlas (2024 assessment).

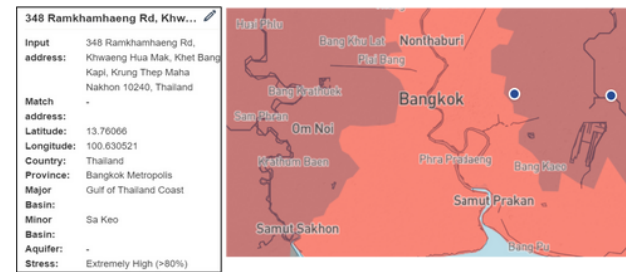


Value chain segment	Site name / Company name	Abbreviation	Asset Type (e.g., factory, logistic center, warehouse, office, etc.)	No.of factories	Address	Description of the asset and activities undertaken (if applicable)	Address		Water Stress rating
							Latitude	Longitude	(Aqueduct tool)
Direct operations	Osotspa Public Company Limited	OSP HM	Office/ factory	2	348 Ramkhamhaeng Road., Hua Mak, Bang Kapi, Bangkok 10240 Thailand	Pharmaceutical, Energy Drink, Functional Drink (non-alcoholic beverages)	13.76066	100.630521	Extremely High (>80%)
Direct operations	Osotspa Plublic Company Limited	OSP AY	Warehouse / Factory	4	48 Moo.7 Asian Highway Road, Khlong Suan Plu, Phra Nakhon Si Ayutthaya 13000 Thailand	Energy Drink, Functional Drink (non-alcoholic beverages), Paper Label, Shrink film PE	14.3229632	100.6028082	Extremely High (>80%)
Direct operations	Osotspa Plublic Company Limited	OSP	Factory	1	53 Moo.4 , Saen Saep, Min Buri, Bangkok 10510 Thailand	Sport Drink, Functional Drink (non-alcoholic beverages)	13.8044266	100.766163	Extremely High (>80%)
Direct operations	Siam Glass Ayutthaya Company limited	SGI AY	Factory	1	99 Moo.9 Kanham, Authai, Phra Nakhon Si Ayutthaya 13210 Thailand	Bottle Glass	14.3294349	100.6538809	Extremely High (>80%)
Direct operations	Siam Cullet Company Limited	SCL	Factory	1	88 Moo.2 Phahonyothin Road., Phai Tam, Nong Khae, Saraburi 18140 Thailand	Cullet	14.3171641	100.8381175	Extremely High (>80%)
Direct operations	Greensville Company Limited	GVL	Factory	2	31,33,34 Soi Chalongkrung 31, Ladkrabang Industrial Estate, Lamplatiew,Ladkrabang, Bangkok 10520 Thailand	Baby Care, Beauty Care, Grooming (Talcum, Liquid)	13.7591545	100.7847583	Extremely High (>80%)
Direct operations	Advanz Beverage Manufacturing	ABM	Factory	1	BF-1, Thilawa SEZ Zone B, Yangon Region, Myanmar	Energy Drink (non-alcoholic beverages)	16.6747448	96.2672154	Medium to High (20-40%)

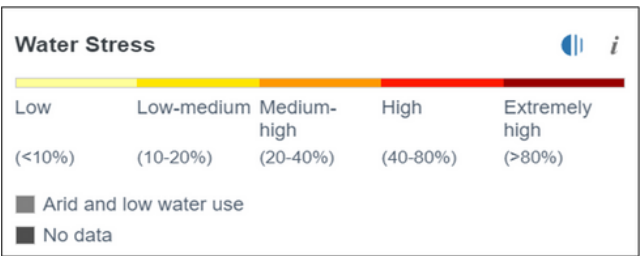
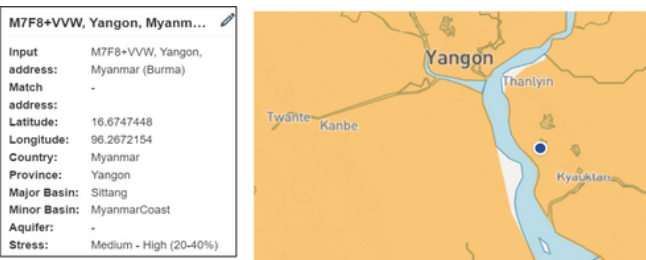
Water Risk Assessment by WRI's AQUEDUCT

Water Stress measurement

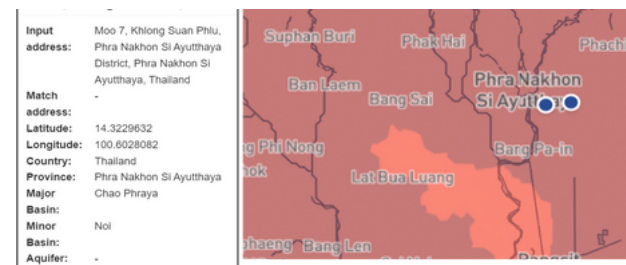
OSP Huamak



ABM



OSP AY



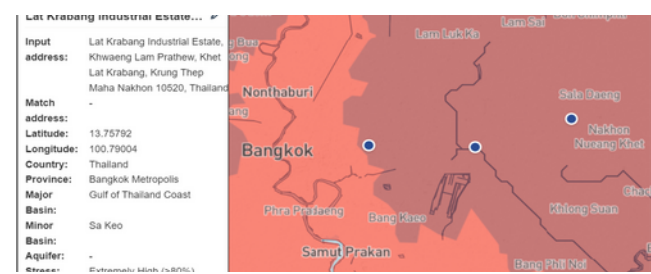
SGI AY



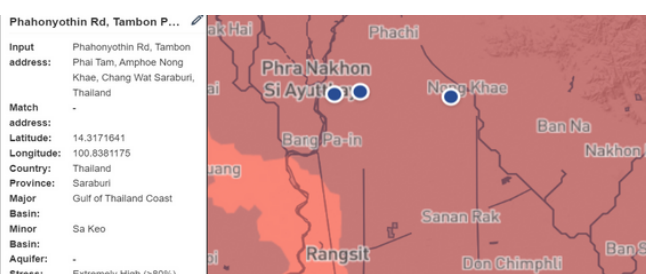
OSP Minburi



GVL



SCL



Nature-related Action Plans and Key Projects

4Rs
Management
Guidelines of
the Water
Conservation
Project in 2024

4Rs Management Guidelines	Implementation of the Water Conservation Project in 2024	Production Plant
Reduce Reducing water usage	Reducing the frequency of water filters (Ultra Filter) and carbon filters in the water production process has resulted in lower water usage and shorter cleaning cycles while maintaining the same production standards.	Beverage Production Plant, Huamak
	Reduced the cleaning time of the Reverse Osmosis (RO) system from 30 minutes to just 15 minutes on non-production days, which decreased the amount of water used for system cleaning.	Beverage Plant, Min Buri
	Reduced water usage for bottle conveyor belt lubrication by controlling the friction level and preventing bottle tipping.	Beverage Plant, Min Buri
	Reduced water usage through a softening process in systems used for product sterilization.	Beverage Production Plant, Huamak
	Reduced tap water consumption in glass production by reusing water and monitoring electrical conductivity levels to ensure water quality remained suitable for the production process.	Siam Glass Industry, Ayutthaya
Reuse Reusing Water	Reused hot water (condensate) from the production process in steam boilers by installing a heat transfer system in the bottle washing machine.	Beverage Production Plant, Huamak
Recycle Using recycled water	Recycled RO water is used instead of RO water produced from fresh water, thus reducing overall water usage in the production process.	Beverage Production Plant, Huamak
	Recycled water is used instead of fresh water in the boiler and waste steam generation system.	Beverage Plant, Ayutthaya
	Recycled soft water is used in the wet scrubber system.	Beverage Plant, Ayutthaya
Replacement Replacement of used water	Changed the use of RO water in the second bottle washing machine to soft water through testing and without affecting the quality of the bottles.	Beverage Plant, Ayutthaya
	Changed the use of hot water in the bottle washing machine to a recirculating water system.	Beverage Plant, Ayutthaya

Nature-related Action Plans and Key Projects



BIOMASS STEAM BOILER INSTALLING

In 2024, Osotspa invested over 55 million THB to install a horizontal biomass steam boiler with a single drum and a traveling chain grate, using palm kernel shells as fuel. It has production capacity of 15 tons per hour and an efficiency of over 90%, to promote use of clean energy in line with sustainable development goals.

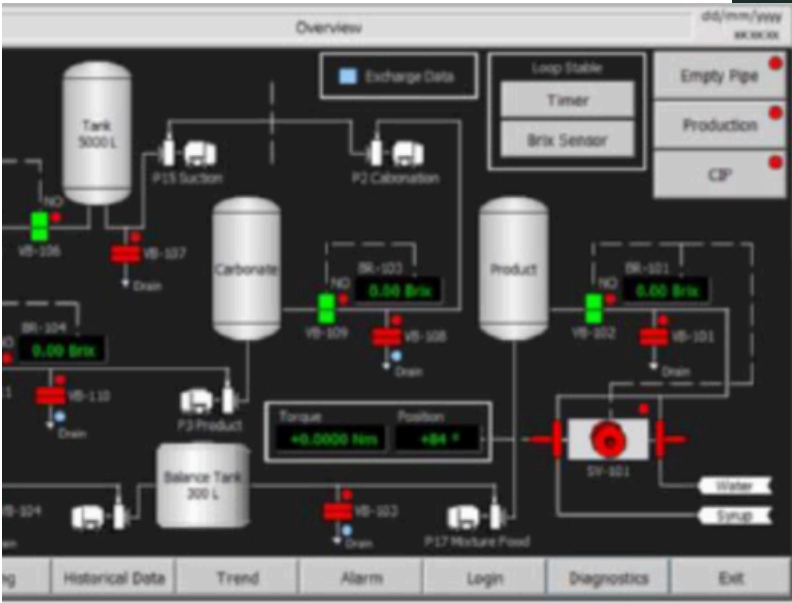


FOOD LOSS TRACKING AND RECORDING SYSTEM FOR THE MANUFACTURING PROCESS

In 2023, the Company's manufacturing factories set a goal to control waste in the production process by reducing 2% of the total loss in 2022, equivalent to 180,118 kilograms. The actual reduction amounted to 874,143 kilograms, representing a substantial decrease of 9.71

In 2024, a number of projects to reduce product losses in the manufacturing process have been initiated, aiming to enhance cooperation among all production units throughout the manufacturing value chain to decrease production losses consistently and effectively. After a brainstorming session and project presentations focused on reducing food loss during the manufacturing process, 36 projects were given the green light. These projects are expected to result in a 3% reduction in production losses compared to the previous year, representing 243,952 kilograms.

Nature-related Action Plans and Key Projects



WASTE REDUCTION, TECHNOLOGY ADAPTATION

Osotspa has invested over 1.5 million baht in manufacturing operations, integrating automatic product quality measurement technology and an automated control system to replace manual labor. This has resulted in reduced product loss and decreased time spent on quality inspection processes at the start of production. Leading to a decrease in product loss of 287,014 Kg per Year.



RESTORATION AND OFFSET

Osotspa planted a total of 2,510 trees: 1,649 were planted at Triangular Park next to Piya Phirom Park, 161 were planted on the median strip of the Yellow Line BTS Skytrain from Yaek Lam Sali Station to Kalantan Station, and 690 were planted at the Tree Bank; habitat restoration in high-value areas.

Thank You

