Wine Tasmania Industry Decarbonisation Framework

Appendix A: Industry Climate-Related Risks, Opportunities and Action Register

Version:	**1.0**
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Wine Tasmania: Industry Climate Risks Assessment

Risk Type	Risk	Description	Timeframe	Likelihood	Consequence	Rating
Physical	Bushfire Smoke Taint Risk	Smoke from bushfires contaminating grapes with smoke taint compounds, rendering fruit and wine unmarketable with no effective remediation available.	S, M	4	4	H
	Extreme Heat Events and Heatwave Risk	Increasing frequency and intensity of extreme heat events during growing season causing heat stress, accelerated ripening, reduced grape quality, vine damage, and increased water demand.	S, M, L	4	4	H
	Vintage Compression and Phenological Disruption Risk	Climate change causing earlier budburst, compressed growing season, and simultaneous ripening of multiple varieties, creating harvest logistics challenges, quality compromises, and increased vulnerability to weather events.	S, M	4	3	H
	Spring Frost Risk	Despite warming trends, spring frost risk may persist or increase due to earlier budburst exposing vulnerable shoots to late-season frost events, causing yield loss and vine damage.	S, M	3	4	H
	Water Scarcity and Drought Risk	Increased evaporation, reduced rainfall, and more frequent drought conditions threaten water availability for irrigation, particularly in regions dependent on surface water or with limited storage capacity.	M, L	3	3	M
	Increased Pest and Disease Pressure Risk	Climate change altering pest and disease dynamics, potentially introducing new threats or increasing pressure from existing pests, requiring additional management inputs and creating biosecurity risks.	M, L	3	4	H
	Storm Damage and Extreme Weather Events Risk	Increased frequency and intensity of severe weather events including storms, hail, high winds, and heavy rainfall causing physical damage to vines, fruit, infrastructure, and creating disease pressure.	S, M, L	3	4	H
	Sea Level Rise and Coastal Salinity Risk	Sea level rise and saltwater intrusion affecting coastal and low-lying vineyard sites through direct inundation, groundwater salinization, or increased soil salinity from storm surge and spray.	L	2	3	M
Transition	Market Access	Loss of access to key domestic and international markets due to inadequate carbon credentials or failure to meet decarbonisation requirements.	S, M	4	5	E
	Reputational Risk from Greenwashing	Damage to Tasmania's premium wine brand and loss of consumer trust due to perceived greenwashing or unsubstantiated carbon claims.	S, M	3	4	H
	Member Capacity and Adoption Risk	Insufficient member engagement or capacity to implement emissions reduction initiatives, leading to failure to meet desired transition.	S, M	4	4	H
	Supply Chain Decarbonisation Dependency Risk	Failure of key supply chain partners (especially glass manufacturers and freight providers) to decarbonise at pace required for desired transition.	M	3	3	M
	Data Quality and Verification Risk	Inability to establish robust, verifiable member emissions baselines and track progress due to lack of participation in measurement or insufficient data quality.	S	4	3	H
	Regulatory and Policy Risk	Unfavourable regulatory changes or insufficient government support undermine the viability of decarbonisation or creating compliance burdens.	S, M	3	4	H

Wine Tasmania: Industry Climate Opportunities Assessment

Opportunity	Description	Time Horizon
Premium Market Positioning and Price Premiums	Tasmania's Net Zero certification strengthens Tasmania's premium brand positioning and enables price premiums for Tasmanian produced wine.	**S, M**
Operational Cost Savings and Efficiency Gains	Emissions reduction initiatives deliver direct financial savings through reduced energy, fuel, and input costs, improving producer profitability.	**S, M**
Access to Climate Grants & Funds	Strong decarbonisation credentials attract grant funding, and preferential financing terms from sustainability-focused capital providers.	**S, M**
Supply Chain Innovation and Circular Economy	Decarbonisation drives innovation in packaging, transport, and inputs, creating new business models and competitive advantages.	**M, L**
Research Leadership and Knowledge Export	Tasmania establishes itself as the global centre for cool-climate viticulture climate adaptation research, creating knowledge export opportunities.	**M**
Enhanced Employee Attraction and Retention	Climate leadership attracts talented workers to the Tasmanian wine sector and improves employee satisfaction and retention.	**S, M**
Nature-Based Co-Benefits and Carbon Farming	Decarbonisation enables capture of nature-based solutions co-benefits including biodiversity, soil health, water quality, and potential carbon credit revenue.	**M, L**
Variety and Clonal Adaptation for Climate Resilience	Tasmania's warming climate creates strategic opportunities to diversify into premium varieties and clones that historically required warmer conditions, while maintaining cool-climate character through careful site selection and viticultural management. This positions Tasmania to produce distinctive wine styles unavailable to regions experiencing more severe warming.	**M, L**

Wine Tasmania: 2026-27 Climate-Related Action Register

Risk/Opportunity		Action Title	Description
Risk	Bushfire Smoke Taint Risk	Smoke taint risk app and sensor network	Develop and pilot a smoke-taint early warning app and sensor network including: site selection and governance, sensor procurement and calibration, data architecture and QA/QC, alert thresholds and forecasting logic, user interface design, and operational protocols for verification sampling and communications during smoke events.
		Fuel reduction impact	Establish a project to model the impact of fuel reduction fire activities with respect to reducing smoke taint risk.
Risk	Vintage Compression and Phenological Disruption Risk	Vintage compression program	Establish a program that aims to develop predictive models and decision support tools to help growers and winemakers anticipate and manage the increasing challenge of multiple grape varieties ripening simultaneously due to climate warming. This program will provide practical strategies for extending ripening windows through clonal selection, canopy management, and irrigation techniques, while also informing long-term vineyard planning decisions about variety mix and winery processing capacity investments.
Risk	Water Scarcity and Drought Risk	Water demand	Establish a project to determine the amount of available water required by vine at different growth stages to overlay on moisture graphs.
		Irrigation models	Establish a project to determine how irrigation models control berry size.
Risk	Member Capacity and Adoption Risk	Emission measurement and action plans	Expand the adoption and participation rates of the VinØ Carbon Action Program by members.
		Regulatory briefings	Provide expert briefings to relevant members on how to navigate new mandatory climate reporting laws.
Risk	Supply Chain Decarbonisation Dependency Risk	Light weight bottles	Continue to advocate and support industry solutions for lighter weight bottles.
Opportunity	Variety and Clonal Adaptation for Climate Resilience	Clone trials	Support the commencement of Chardonnay and Pinot Noir clones wine trials in Tasmania (Pinot Noir: Abel, 667, 828, 943, “Smart”).

	Consequence	Insignificant	Minor	Moderate	Major	Catastrophy
Likelihood		1	2	3	4	5
Almost Certain	5	5	10	15	20	25
Likely	4	4	8	12	16	20
Possible	3	3	6	9	12	15
Unlikely	2	2	4	6	8	10
Rare	1	1	2	3	4	5

	Consequence	Insignificant	Minor	Moderate	Major	Catastrophy
Likelihood		1	2	3	4	5
Almost Certain	5	Moderate	High	High	Extreme	Extreme
Likely	4	Moderate	Moderate	High	High	Extreme
Possible	3	Low	Moderate	Moderate	High	High
Unlikely	2	Low	Low	Moderate	Moderate	High
Rare	1	Low	Low	Low	Moderate	Moderate