



THAI VEGETABLE OIL PUBLIC COMPANY LIMITED

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURE (TCFD) REPORT

2025



MESSAGE FROM OUR CEO



Pachai Chanpitaksa
Chief Executive Officer

Climate change is increasingly reshaping the global agricultural and food industry, affecting supply chain stability, resource availability, operating costs, and long-term business competitiveness. As a company operating within the global food and feed value chain, Thai Vegetable Oil Public Company Limited (TVO) recognizes the importance of strengthening climate resilience, enhancing adaptive capacity, and preparing for the transition toward a lower-carbon economy.

TVO continues to integrate climate-related risks and opportunities into governance, enterprise risk management, strategic planning, and operational decision-making. Through investments in energy efficiency, renewable energy, operational optimization, and climate adaptation initiatives, the Company aims to reduce greenhouse gas emissions, improve resource efficiency, strengthen operational resilience, and support sustainable long-term value creation.

This report reflects TVO's commitment to transparent climate-related disclosure aligned with the recommendations of the TCFD and evolving IFRS Sustainability Disclosure Standards, including IFRS S1 and IFRS S2, to support stakeholders' understanding of climate-related risks, opportunities, and long-term business resilience.

CONTENT

GOVERNANCE

03

STRATEGY

06

RISK MANAGEMENT

13

METRICS & TARGET

15

1. GOVERNANCE



1.1 Board’s Oversight of Climate-Related Risks and Opportunities

TVO integrates climate-related governance into its ESG and Enterprise Risk Management (ERM) framework through the Three Lines of Defense approach, ensuring accountability, cross-functional integration, and effective oversight across all levels of the organization.

This governance structure supports the management of climate-related risks and opportunities, strengthens operational resilience, and aligns climate-related decision-making with the recommendations of the TCFD and evolving IFRS Sustainability Disclosure Standards.



1. GOVERNANCE



1.2 Management’s Role in Assessing and Managing Climate-Related Risks and Opportunities

Management plays a critical role in translating climate strategy into action. Management plays a critical role in translating climate strategy into operational execution by integrating climate-related risks and opportunities into enterprise risk management, decision-making, and business operations.

CLIMATE RISK MANAGEMENT PROCESS



MANAGEMENT ROLES AND RESPONSIBILITIES



Chief Executive Officer (CEO)

- Oversees climate strategy and organizational performance
- Integrates climate considerations into decision-making and resource allocation
- Reviews climate-related KPIs and escalate key issues to the Board ESG Committee



Managing Director (MD)

- Oversees implementation of climate-related risk management and mitigation actions
- Ensures integration with ERM, strategic direction, and operational plans
- Monitors progress and reports risks and issues to the CEO and Board ESG Committee



Operational Working Groups

- Execute action plans across business operations
- Monitor regulatory developments and ensure compliance
- Provide data, insights, and performance information for management decision-making

MEETING FREQUENCY

At least 2 times per year

At least 4 times per year

At least 6 times per year

2. STRATEGY



2.1 The Climate-related Risks and Opportunities Identified over the Short, Medium and Long Term

TVO assesses climate-related risks and opportunities across short-, medium-, and long-term horizons in alignment with the recommendations of the TCFD. The assessment considers both physical and transition impacts of climate change that may affect the Company’s business operations, supply chain, strategic planning, financial performance, and long-term resilience, while also identifying opportunities arising from the transition toward a low-carbon economy.

Risk / Opportunity		Drivers	Scenario
	PHYSICAL RISK Risk arising from the physical impacts of climate change	Water-Related Physical Risks - Flooding and extreme rainfall - Water stress and scarcity - Climate variability affecting supply chain continuity	Below 2°C Scenario SSP1-2.6 Above 2°C Scenario SSP5-8.5
	TRANSITION RISK Risk arising from the transition to a low-carbon economy	Climate-related regulations and policies Carbon pricing and carbon tax	Below 2°C Scenario Net Zero Emission by 2050 (NZE) Above 2°C Scenario Standard Policies (STEPS)
	TRANSITION OPPORTUNITY Opportunities from the transition to a low-carbon economy	Changing market and stakeholder expectation Low-carbon products	Below 2°C Scenario Net Zero Emission by 2050 (NZE)

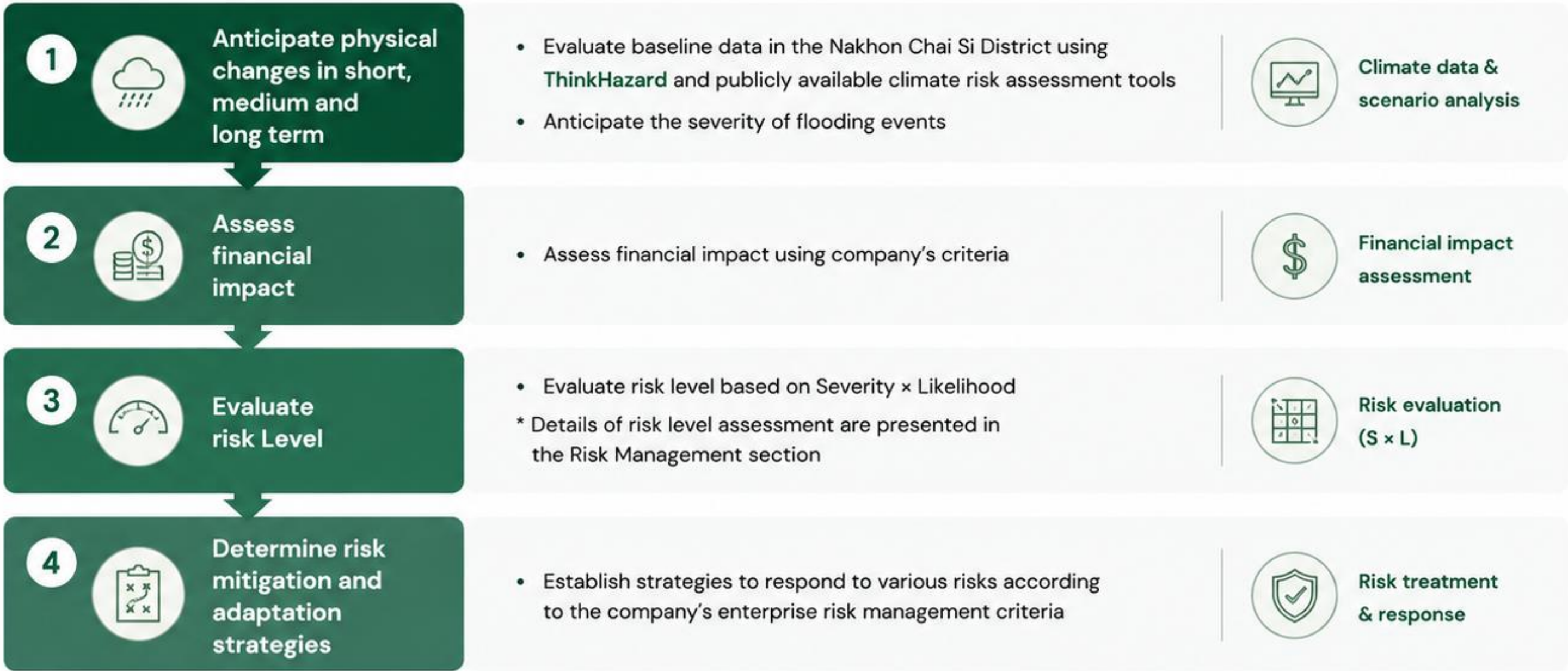
2. STRATEGY



2.2 Physical Risk

TVO integrates climate-related physical risks into its Enterprise Risk Management (ERM) framework through a structured assessment process covering short-, medium-, and long-term horizons. Climate-related risks are assessed alongside other business risks using the Company’s established risk assessment criteria, supporting consistent risk evaluation, management response, and strategic decision-making across the organization.

Our Physical Risk Assessment Process



2. STRATEGY



2.2.1 Water-Related Physical Risks Across the Value Chain

TVO assesses water-related physical risks across the value chain to understand potential impacts on business operations and implement targeted risk management and adaptation measures.

	 UPSTREAM Raw Material Sourcing & Transportation	 OPERATIONS Production & Utilities	 DOWNSTREAM Logistics & Customer Delivery
 Climate-Related Risks & Potential Impacts	- Flooding, water stress, and climate variability may affect soybean cultivation, raw material quality, and river transportation for raw material delivery to the production facilities. Potential impacts: supply disruption, increased raw material price volatility, logistics disruption, and higher procurement costs.	- Flooding and water availability constraints may disrupt production operations, affect utilities, and increase water treatment and operating costs. Potential impacts: operational shutdown, increased maintenance costs, and potential asset or inventory damage.	- Flooding and extreme weather may disrupt transportation routes and logistics networks, affecting product delivery and customer continuity. Potential impacts: increased logistics costs, delivery delays, customer dissatisfaction, and potential loss of sales opportunities.
 Risk Management Strategies and Actions	- Promote climate-resilient and water-efficient agriculture practices - Diversify suppliers and sourcing regions - Assess supplier water risks using WRI Aqueduct - Prepare contingency plans for river transportation disruption - Improve forecasting and supply planning	- Improve water efficiency and reduce water withdrawal - Invest in water recycling and reuse projects - Enhance flood prevention infrastructure and drainage systems - Develop and test BCP/BCM for operational continuity - Monitor water availability and adjust operations accordingly	- Optimize logistics networks and transportation modes - Develop alternative logistics routes and transportation options - Strengthen logistics flexibility and continuity planning - Improve demand planning and customer communication - Enhance coordination with logistics partners and customers

2. STRATEGY



2.2.2 Physical Risk Assessment Results

Focus Risk: Flooding & Extreme Rainfall in operational area

Assessment results for the most significant physical risk identified across TVO’s operations and value chain.

1. RISK EXPOSURE



Flooding & Extreme Rainfall

Acute physical risk

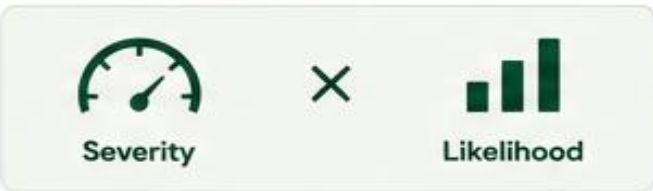
Key Exposure Areas

- Raw material transportation via river
- Production operations and utilities
- Facilities, infrastructure and assets
- Product delivery and customer continuity

2. RISK LEVEL BY TIME HORIZON

Time Horizon	Risk Level*
Short Term 0 – 2 years	HIGH
Medium Term 2 – 10 years	EXTREME
Long Term 10+ years	EXTREME

Assessment Method



Risk level is evaluated based on
Severity × Likelihood in each time horizon.

*Risk level criteria: Low / Medium / High / Extreme

3. POTENTIAL FINANCIAL IMPACT

Revenue Loss

Disruption of river transportation may interrupt raw material supply, potentially resulting in production downtime and lost sales.

Increased Operating Costs

Production interruption may result in idle labor, equipment downtime, maintenance, water treatment, and restart costs.

Customer & Market Impact

Delivery delays may result in contractual penalties, reputational impacts, and potential loss of future orders.

Estimated Financial Impact Before Action

THB 400 million

4. ADAPTATION & RESILIENCE PLAN

Climate Risk Monitoring

Monitor physical climate risks and periodically update flood risk assessments.

Business Continuity

Maintain and test BCP/BCM for flooding and raw material transportation disruption.

Supply & Logistics Resilience

Prepare alternative raw material transportation routes and logistics arrangements to ensure supply continuity.

Infrastructure Resilience

Implement flood prevention and protection measures for exposed facilities and infrastructure.

Long-Term Adaptation

Assess long-term options to reduce dependency on vulnerable transportation routes and strengthen operational resilience.

5. ADAPTATION PLAN COVERAGE & IMPLEMENTATION

100% — Existing Operations Covered

by physical climate risk assessment and adaptation plans.

Estimated Cost of Adaptation Measures.

- Flood Protection Infrastructure — THB 1 million
- Long-Term Site Resilience — Under Feasibility Assessment

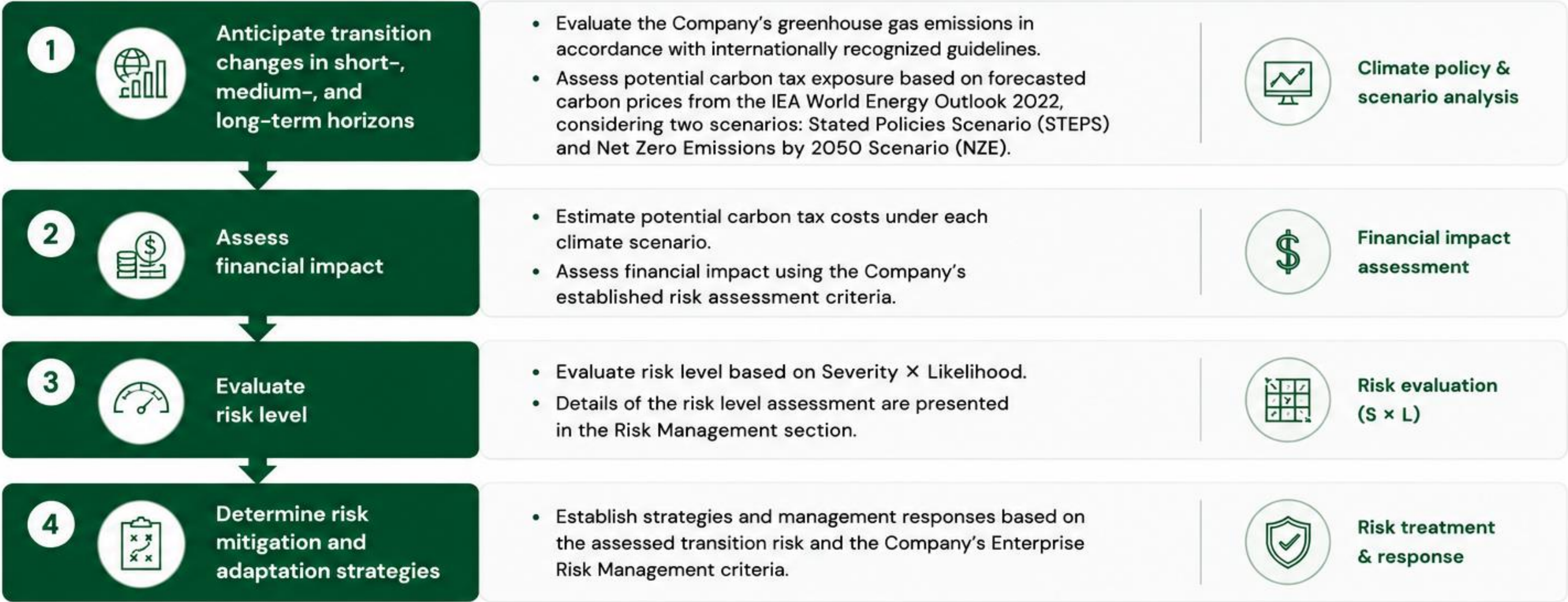
2. STRATEGY



2.3 Transition Risk

TVO integrates climate-related transition risks into its Enterprise Risk Management (ERM) framework through a structured assessment process covering short-, medium-, and long-term horizons. Transition risks are assessed alongside other business risks to evaluate potential financial impacts arising from the transition toward a low-carbon economy and support risk-informed decision-making.

| Our Transition Risk Assessment Process



2. STRATEGY



2.2.1 Transition Risk Assessment Results

Focus Risk: Regulatory Changes and Carbon Pricing

Assessment results for the most significant transition risk arising from the shift toward a low-carbon economy

1. RISK EXPOSURE



Carbon Pricing & Regulatory Changes

Policy & Legal Transition Risk

Key Exposure Areas

- Greenhouse gas emissions
- Carbon tax and carbon pricing mechanisms
- Production and operating costs
- Capital investment requirements

2. RISK LEVEL BY TIME HORIZON

Time Horizon	Risk Level*
Short Term 0 – 2 years	HIGH
Medium Term 2 – 10 years	HIGH
Long Term 10+ years	HIGH

Assessment Method



*Risk level criteria: Low / Medium / High / Extreme

3. POTENTIAL FINANCIAL IMPACT

Operating Cost Inflation

Implementation of carbon pricing may directly increase production costs and reduce operating margins.

Capital Expenditure Increasing

Investment in emission-reduction technologies and projects may increase capital requirements and affect cash flow and asset allocation.

Profit Margin Compression

Higher carbon-related operating expenses and capital requirements may reduce profitability and potentially affect dividend capacity and investor confidence.

Estimated Financial Impact Before Action

THB 70 million

4. ADAPTATION & RESILIENCE PLAN

Regulatory Monitoring

Continuously monitor climate-related policies, carbon pricing mechanisms, and applicable laws and regulations.

GHG Management

Assess the Company's carbon footprint and monitor GHG emissions to anticipate future carbon-related exposure.

Emission Reduction

Implement initiatives and projects to reduce greenhouse gas emissions and improve operational efficiency.

Low-Carbon Investment

Assess and invest in technologies and projects that support the transition toward lower-carbon operations.

Long-Term Transition Planning

Integrate carbon pricing considerations and climate scenarios into long-term business and investment planning.

5. TRANSITION PLAN & IMPLEMENTATION

GHG Emissions Coverage : Scope 1 & Scope 2

GHG emissions monitored to assess carbon-related exposure and support transition planning.

Estimated Cost of Action

THB 620,000 / year : CFO certification and data platform supporting GHG measurement, monitoring, and management.

2. STRATEGY

2.3 Transition Opportunity Assessment Results

Focus Risk: Low-Carbon Products 1-Liter Angoon Soybean Oil
TVO identifies its 1-liter Angoon soybean oil, with product carbon footprint reduction initiatives, as a focus product for assessing opportunities arising from growing demand for lower-carbon products and the transition toward a low-carbon economy.



1. OPPORTUNITY EXPOSURE



Low-Carbon Products

Products & Market Opportunity

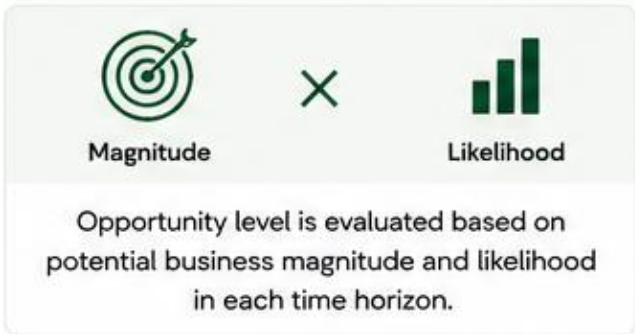
Key Opportunity Drivers

- Growing demand for lower-carbon products
- Increasing environmental awareness among consumers
- Product carbon footprint transparency
- Market differentiation through lower-carbon performance

2. OPPORTUNITY LEVEL BY TIME HORIZON

Time Horizon	Opportunity Level*
Short Term 0 – 2 years	MEDIUM
Medium Term 2 – 10 years	MEDIUM
Long Term 10+ years	MEDIUM

Assessment Method



*Opportunity level criteria: Low / Medium / High / Extreme

3. POTENTIAL FINANCIAL OPPORTUNITY

Revenue Growth Potential

Growing demand for lower-carbon products may create opportunities to expand sales and reach environmentally conscious customer segments.

Market Differentiation

Carbon footprint reduction and certification may strengthen product positioning and competitiveness in response to evolving customer expectations.

Profit Growth Potential

Development and promotion of lower-carbon products may generate incremental sales and contribute positively to the Company’s profitability.

Estimated Potential Profit Impact

THB 11 million

4. OPPORTUNITY REALIZATION PLAN

Product Carbon Footprint Assessment

Assess and monitor the carbon footprint of products to identify emission reduction opportunities.

Carbon Footprint Reduction

Implement initiatives to reduce greenhouse gas emissions across product life cycles and improve carbon performance.

Low-Carbon Product Development

Explore technologies, processes, and product improvements that support the development of lower-carbon products.

Certification & Transparency

Maintain relevant carbon footprint certifications and communicate verified environmental performance.

Market Development

Leverage improved carbon performance to strengthen market positioning and respond to evolving customer expectations.

Estimated Cost of Action

THB 500,000/year

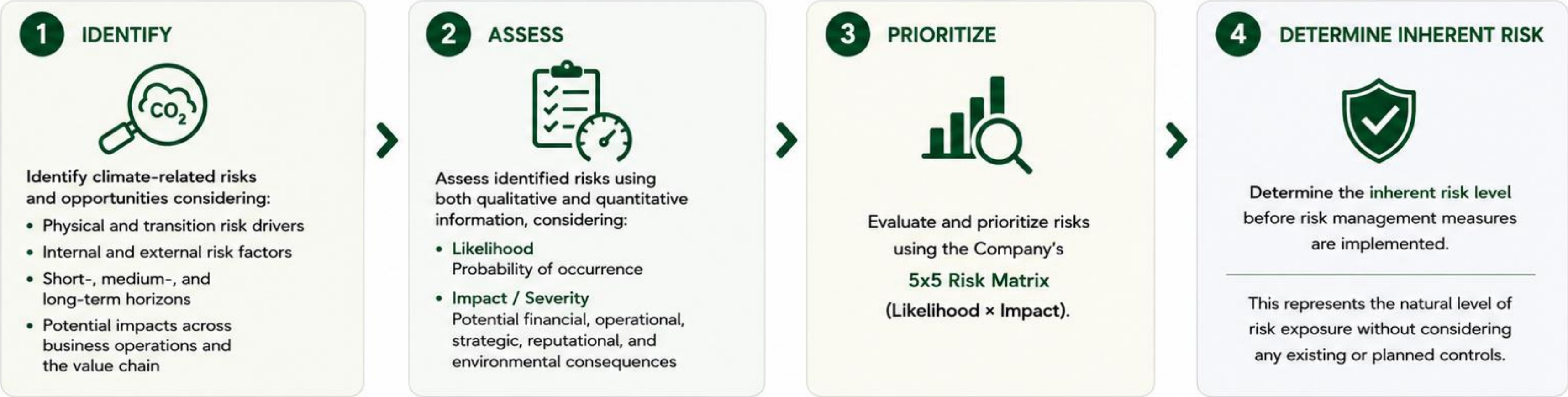
CFP certification and related activities supporting carbon footprint measurement and management

3. RISK MANAGEMENT



3.1 Climate Risk Identification & Assessment

TVO integrates climate-related risks into its Enterprise Risk Management (ERM) process. Climate risks are identified, assessed, and prioritized alongside other business risks using the Company’s established risk criteria.



RISK LEVEL CLASSIFICATION

★ EXTREME

Intolerable risks; immediate action is required through the Corporate risk management.

◇ HIGH

Unacceptable risks; urgent management action is required through the Functional risk management.

○ MEDIUM

Acceptable level; close monitoring is required.

□ LOW

Acceptable level; annual review is required.

IMPACT (CONSEQUENCE)

	1	2	3	4	5
5	◇	◇	★	★	★
4	○	○	◇	★	★
3	□	○	○	◇	★
2	□	○	○	○	◇
1	□	□	□	○	○

LIKELIHOOD

Risk Level □ Low ○ Medium ◇ High ★ Extreme

KEY POINT

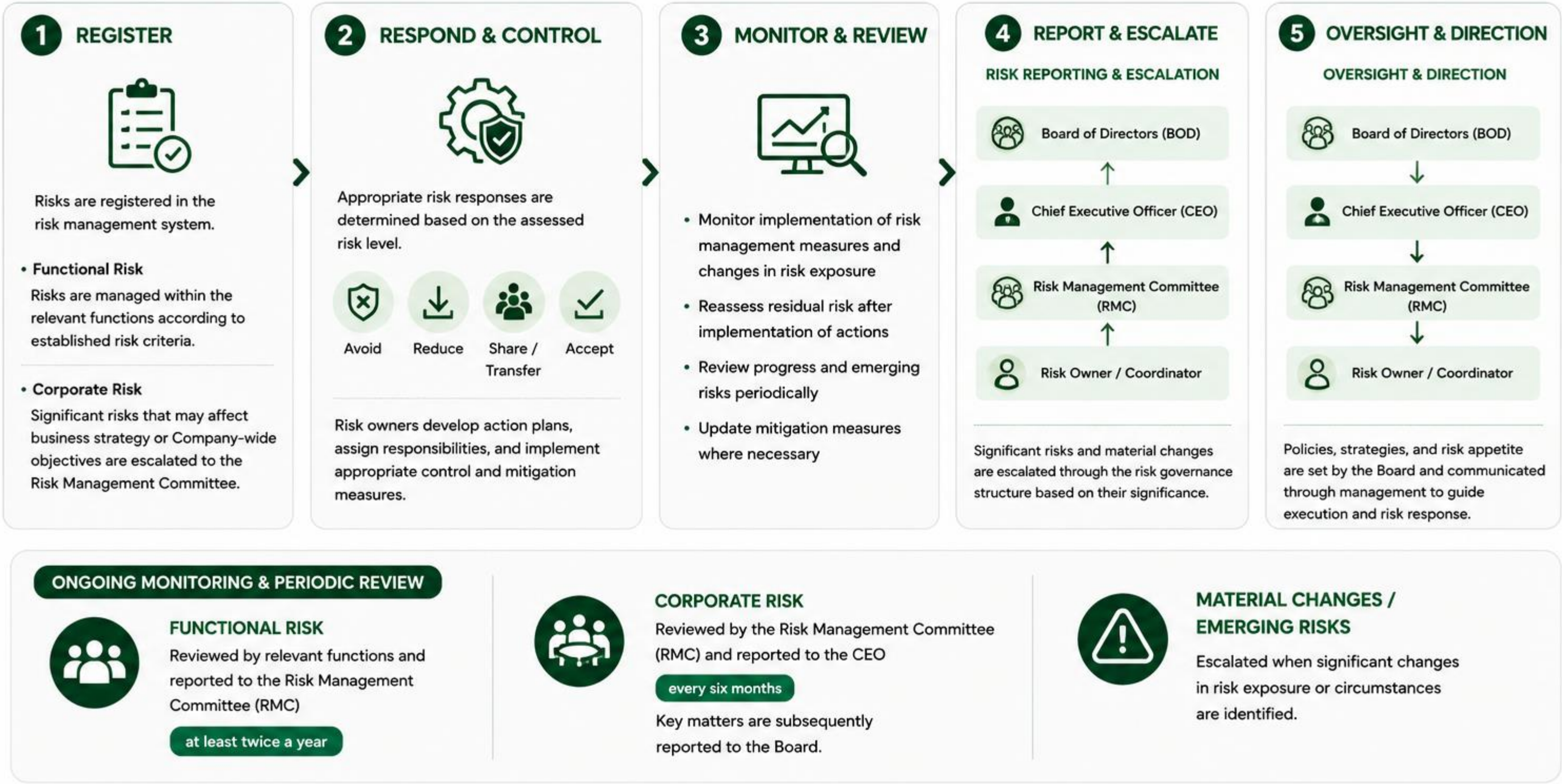
Climate-related risks are assessed using the same governance and risk assessment criteria as other enterprise risks, supporting consistent prioritization across the organization.

3. RISK MANAGEMENT



3.2 The Organization’s Processes for Managing Climate-Related Risks

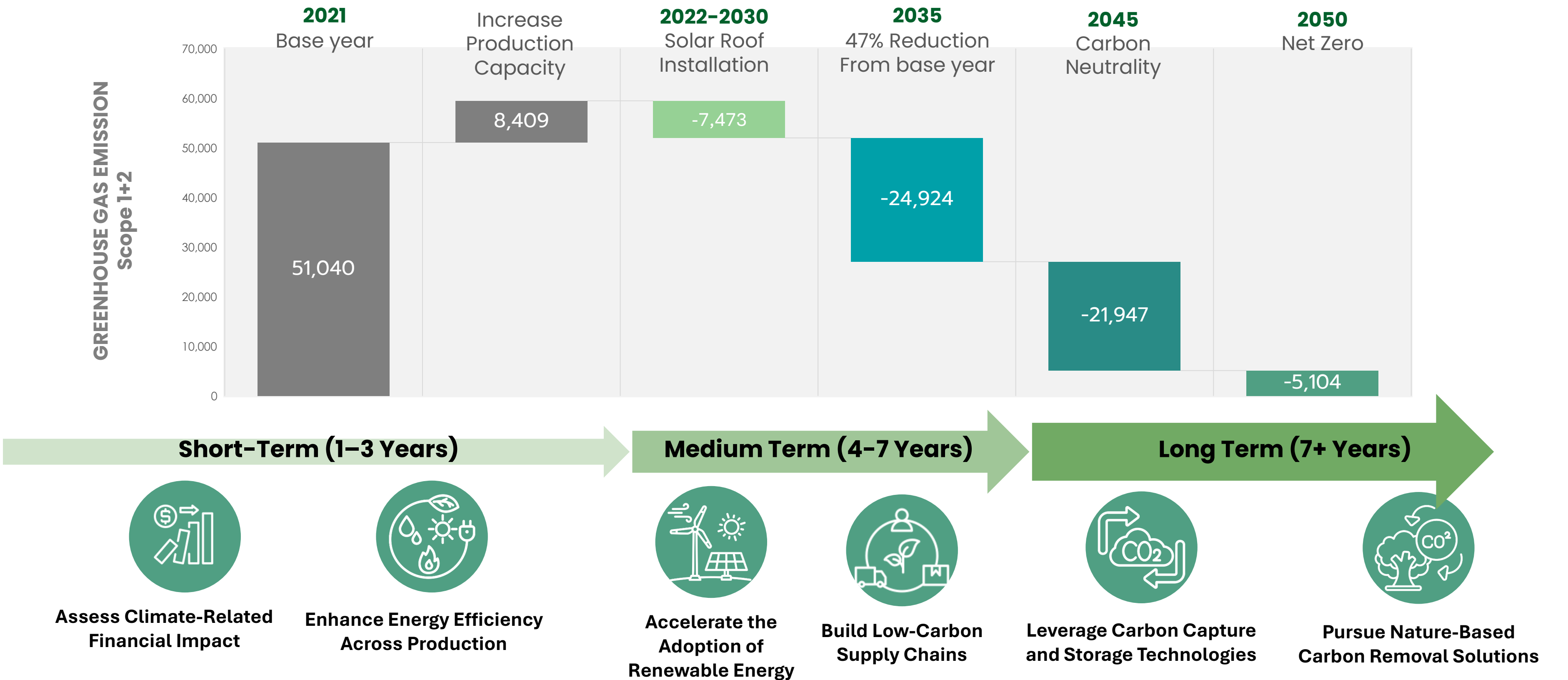
Climate-related risks identified through the assessment process are registered, managed, monitored, and escalated through TVO’s Enterprise Risk Management framework based on their significance.



4. METRICS & TARGET



4.1 Climate Targets & Net-Zero Roadmap

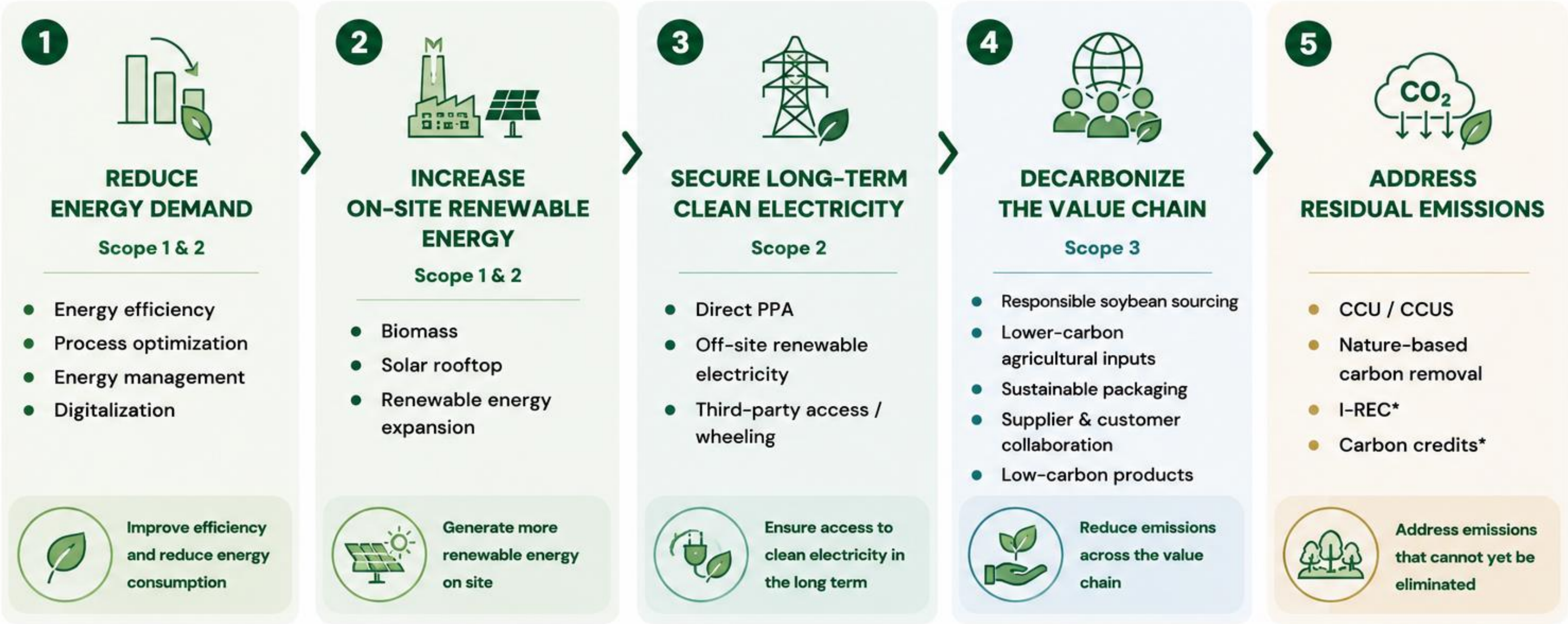


4. METRICS & TARGET



4.2 Net Zero Transition Plan

TVO’s transition plan sets out the key decarbonization levers to support the achievement of its 2035 GHG reduction target, Carbon Neutrality by 2045, and Net Zero by 2050.



These five decarbonization levers work together to drive measurable emission reductions across our operations and value chain, bringing us closer to **Carbon Neutrality in 2045** and **Net Zero in 2050**.

4. METRICS & TARGET



4.3 Transition Plan Implementation and Investment

TVO translates its transition plan into concrete projects and investments across operations and the value chain to drive measurable progress toward Net Zero by 2050. The strategic investment and actions are prioritized o maximize emissions reductions while building a resilient, low-carbon business for the long term.

01

ENERGY EFFICIENCY

Production Energy Efficiency Program



Planned Investment

>100

Million THB

- Improve energy efficiency across production processes
- Optimize energy and resource utilization
- Implement energy efficiency improvement initiatives
- Support operational GHG emission reductions



Implementation

2027 – 2028

02

RENEWABLE ENERGY

Solar Rooftop Expansion



Installed / Planned Capacity

>8

MW

- Expand on-site renewable electricity
- Reduce purchased grid electricity
- Support Scope 2 emission reduction





Implementation

2026 – 2028

03

OPERATIONAL DECARBONIZATION

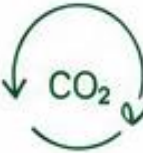
Energy & Process Efficiency



- Cold-to-Warm Dehulling
- Process optimization
- Energy management system
- Resource efficiency and waste reduction
- Digitalization and automation



Improve Energy Efficiency



Reduce GHG Emissions



Optimize Resources Use

04

VALUE CHAIN DECARBONIZATION

Low-Carbon Soybean Oil Initiative



Responsible Raw Materials

- Deforestation-free soybean sourcing
- Promote the use of low-carbon agricultural inputs (e.g. low-carbon nitrogen)



Sustainable Packaging

- Reduce 1L bottle weight 35g → 28g
- Eliminate cap seal
- 100% recycled paper carton
- Reusable 200L industrial packaging with customers



Low-Carbon Products

- Low-Carbon Soybean Oil
- Carbon footprint assessment and continuous improvement



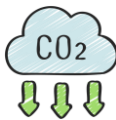
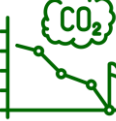
Extending decarbonization beyond our operations across the value chain from source to consumer.

4. METRICS & TARGET



4.4 Climate-Related Targets and Progress

TVO established climate-related target to support its long-term transition toward Net Zero. Progress is monitored through key environmental and operational indicator covering GHG emissions, resource efficiency, renewable energy, and low-carbon products.

Climate-Related Target	Target	Latest Performance	Status
 GHG Emissions Reduction	47% reduction by 2035 from 2021 base year	48,076 tCO ₂ e	In Progress
 Carbon Neutrality	2045	Long-term target	In Progress
 Net Zero	2050	Long-term target	In Progress
 Carbon Footprint of Product	Carbon Reduction Label for ANGOON 1-Litre by 2026	Implementation in progress	In Progress
 Waste Utilization	100%	100%	Achieved
 Water Consumption	< 0.91 m ³ /ton soybean	0.97 m ³ /ton soybean	In Progress
 Energy Consumption	< 1.50 GJ/ton soybean	1.51 GJ/ton soybean	In Progress
 Renewable Energy	> 85%	84.5%	In Progress

4. METRICS & TARGET



4.5 GHG Emission and Performance

TVO measures and reports Scope 1, Scope 2, and relevant Scope 3 GHG emissions in accordance with the Carbon Footprint for Organization (CFO) requirements of the Thailand Greenhouse Gas Management Organization (TGO). The Company monitors its GHG performance to track progress toward its climate-related targets.

GHG EMISSIONS PERFORMANCE TREND (Metric tons CO ₂ e)	Unit	2021 (Base Year)	2023	2024	2025 (Latest Year)	Target 2025
Raw Material	Ton	1,432,123	1,352,883	1,363,241	1,458,506	–
Scope 1 (Direct Emissions)	Ton CO ₂ e	9,986	10,235	8,848	12,222	9,803
Scope 2 (Indirect Emissions – Location-based)	Ton CO ₂ e	41,054	35,780	35,373	35,854	39,213
Total Scope 1 + 2 (Location-based)	Ton CO ₂ e	51,040	46,015	44,221	48,076	49,016
Scope 3 (Other Indirect Emissions)	Ton CO ₂ e	722,072	691,677	660,150	744,219	–
Total Scope 1 + 2 + 3	Ton CO ₂ e	773,112	737,692	704,371	792,295	–
Concentration of greenhouse gas emission (scope 1 and 2)	Ton CO ₂ e/ Ton Soybean	0.0356	0.0330	0.0329	0.0336	–

KEY HIGHLIGHT (2025)

5.81%

GHG REDUCTION

Scope 1 & 2 vs. 2021
(Base Year)

2025 Scope 1 & 2 emissions
remained below the 2021
base year.

NOTES

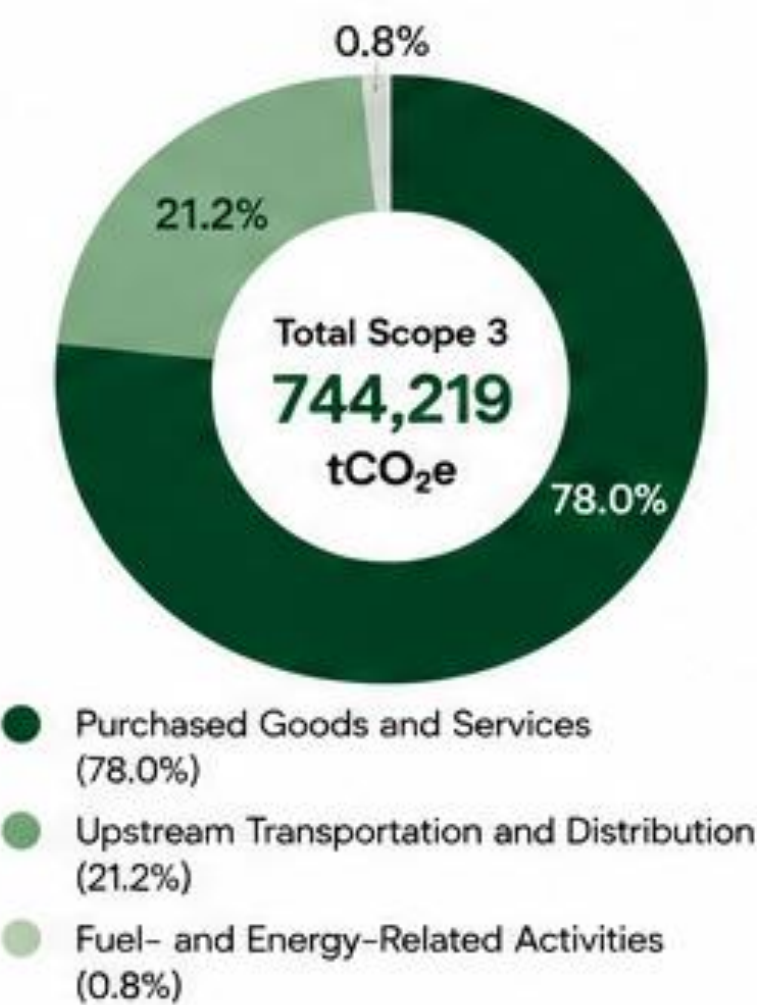
- Increase in Scope 1 emissions in 2025 was primarily due to higher fossil fuel use to support increased production capacity and operational reliability.
- Scope 2 emissions remained stable, supported by the continued use of renewable energy.
- Scope 3 emissions increased mainly from Purchased Goods and Services, in line with higher raw material procurement.
- TVO remains committed to improving energy efficiency, expanding renewable energy use, and enhancing supply chain engagement to drive long-term emission reduction.

4. METRICS & TARGET



4.5 GHG Emission and Performance

TVO assesses and reports relevant Scope 3 GHG emissions in accordance with the Carbon Footprint for Organization (CFO) requirements of the Thailand Greenhouse Gas Management Organization (TGO). The assessment identifies key emission sources across the value chain to support climate-related actions and long-term emission reduction efforts.



Scope 3 Category	Emissions in the reporting year (Metric tons CO ₂ e)	% of Scope 3	Remark
1. Purchased Goods and Services	580,462	78.0%	Use Emission factor
2. Capital Goods	-	-	Emissions cannot be quantified as the data is in monetary value.
3. Fuel- and Energy-Related Activities (not included in Scope 1 or 2)	6,129	0.8%	Use Emission factor
4. Upstream Transportation and Distribution	157,627	21.2%	Use Emission factor
5. Waste generated in operations	-	-	Not Significant
6. Business travel	-	-	Not Significant
7. Employee commuting	-	-	Not Significant
8. Upstream leased assets	-	-	No activities in this category
9. Downstream transportation and distribution	-	-	Not Significant
10. Processing of sold products	-	-	No activities in this category
11. Use of sold products	-	-	No activities in this category
12. End of life treatment of sold products	-	-	Not Significant
13. Downstream leased assets	-	-	No activities in this category
14. Franchises	-	-	No activities in this category
15. Investments	-	-	No activities in this category

Scope 3 emissions were assessed based on the relevance and materiality of each emission source. Relevant Scope 3 emissions are quantified and reported in accordance with the Carbon Footprint for Organization (CFO) guidelines of the Thailand Greenhouse Gas Management Organization (TGO). Scope 3 emissions increased mainly from Purchased Goods and Services, in line with higher raw material procurement.

APPENDIX

- 01** Estimation of Financial Impact from Physical Risk
- 02** Estimation of Financial Impact from Transition Risk
- 03** Certificate of Carbon Footprint Organization

Appendix 1



Estimation of Financial Impact from Physical Risk

	RCP 2.6					RCP 8.5				
	2025	2030	2040	2050	2060	2025	2030	2040	2050	2060
MSL (Highest average)	2.98	3.51	4.89	4.89	5.6	2.98	4.13	7.21	8.36	8.94
Level at TVO's Port	- (41-51)	- (11-20)	+40	+40	+70	- (41-51)	+10	> +100	> +100	> +100
implication	- Unable to tow the cargo vessel carrying soybean seeds into TVO's port. - Change unloading place to Port in Sam Phran.	- Shutdown TVO1 - Change unloading place to Port in Samut Sakhon	- Shutdown TVO1 and 3 - Change unloading place to Port in Samut Sakhon - Warehouse flooding - Unable to sell all products	- Shutdown TVO1 and 3 - Change unloading place to Port in Samut Sakhon - Warehouse flooding - Unable to sell all products	- Shutdown TVO1 and 3 - Change unloading place to Port in Samut Sakhon - Warehouse flooding - Unable to sell all products	- Unable to carrying soybean seeds into TVO's port. - Change unloading place to Port in Sam Phran.	- Shutdown TVO 1 and TVO 3 (1 unit) - Costs for flood prevention preparations at other locations.	- Shutdown TVO1 and 3 - Unable to carrying soybean seeds into TVO's port. - Costs for. Unable to sell all products	- Shutdown TVO1 and 3 - Unable to carrying soybean seeds into TVO's port. - Costs for. Unable to sell all products	- Shutdown TVO1 and 3 - Unable to carrying soybean seeds into TVO's port. - Costs for. Unable to sell all products
Financial Loss (MB)	0.5	135	460	460	460	377	460	460	460	460
ประเมินระดับความเสี่ยง										
ความรุนแรง	1	4	5	5	5	5	5	5	5	5
Likelihood	5	5	5	5	5	5	5	5	5	5
Risk level	High	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme

Estimation of Financial Impact from Transition Risk

Assumption		Unit	2030	2040	2050
Carbon Emission	Estimated Emission before taking action	ton CO2e	11,400	11,400	11,400
	Estimated Emission after taking action	ton CO2e	10,542	9,145	9,145
Stated Policies Scenario (STEPS)					
Carbon price	According to the World Energy Outlook 2022, Table B.2, Chile and Colombia were selected because their economies are comparable in size to Thailand's.	USD/Ton	13	21	29
Total Tax	Before taking action	MB	5.11	8.25	11.40
	After taking action	MB	4.72	6.63	9.15
Net Zero Emissions by 2050 Scenario (NZE)*					
Carbon price	According to the World Energy Outlook 2022, Table B.2, Chile and Colombia were selected because their economies are comparable in size to Thailand's.	USD/Ton	25	85	180
Total Tax	Before taking action	MB	9.80	33.40	70.70
	After taking action	MB	9.01	26.72	56.79

Note: The company has been continuously monitoring the Climate Change Act and will reassess transition risks once a clear draft of Thailand's carbon tax framework is available.

Appendix 2



Estimation of Financial Impact from Transition Risk

	STEPS				NZE			
	2030	2040	2050	2060	2030	2040	2050	2060
Carbon Tax (MB/Yr)	4.72	6.63	9.15	9.15	9.01	26.72	56.79	56.79
Risk Level								
Consequence	1	1	1	1	1	2	2	2
Likelihood ³	5	5	5	5	5	5	5	5
Risk level ⁴	H15	H15	H15	H15	H15	H25	H25	H25

Appendix 3

Certificate of Carbon Footprint Organization



THAILAND
GREENHOUSE GAS
MANAGEMENT
ORGANIZATION
(Public Organization)

CERTIFICATE NUMBER
TGO CFO FY26-1058



องค์กร
rganization

CERTIFICATE
AWARDED TO

Thai Vegetable Oil Public Company
Limited

Thailand Greenhouse Gas Management Organization certifies
that the quantity of Greenhouse Gas of the above organization has been verified
by an independent **Third-Party**, ECEE Co., Ltd.
and found to be in accordance with the requirements of the standard detailed below.

STANDARD

TGO GUIDANCE OF THE CARBON FOOTPRINT FOR ORGANIZATION
in accordance with ISO14064-1:2018 and GHG Protocol

The primary objective of this certificate is to provide independent, third-party assurance
that an organization's Greenhouse Gas (GHG) inventory—its carbon footprint—is accurate,
consistent, transparent, and compliant with standards.

VERIFICATION PERIOD	Direct emissions (Scope 1)	12,222	tonCO ₂ e
[01/01/2568 - 31/12/2568]	Energy indirect emissions (Scope 2)	35,854	tonCO ₂ e
	Other indirect emissions (Scope 3)	744,219	tonCO ₂ e

THE AGREED LEVEL OF ASSURANCE IS
Limited, at materiality of 5%

REGISTRATION DATE
22 August 2026

Nakorn.

Mr.Nakorn Tangavirapat
Executive Director
Thailand Greenhouse Gas Management Organization
(Public Organization)



120 Ratthaprasansabhakti Building,
9th Fl The Government Complex Commemorating His Majesty,
Chaeng Wattana Road, Laksi, Bangkok 10210 Thailand



TGO



