



CLIMATE CHANGE POLICY

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Climate Change Policy

Vanachai Group Public Company Limited and Subsidiaries

Vanachai Group Public Company Limited and its subsidiaries (“the Company”), as a leading producer of sustainable wood-based materials, are firmly committed to taking decisive action to mitigate and adapt to the impacts of climate change. The Company supports the transition toward a low-carbon and climate-resilient economy through continuous improvement, innovation, and collaboration.

Recognizing that climate change is among the most urgent global challenges and represents a **Top Priority Material Issue** for the business, the Company views climate action and the management of greenhouse gas (GHG) emissions as a fundamental foundation for strengthening operational resilience, protecting biodiversity, and supporting a sustainable future.

This policy aligns with **the Company’s sustainability framework, “FOREST | FUTURE | TOGETHER – for a Sustainable Living,”** by integrating climate-related considerations into corporate strategy, investment planning, operations, and value chain management. The Company is committed to reducing greenhouse gas emissions, enhancing energy efficiency, increasing the share of renewable energy, and driving innovation in sustainable wood-based products to support low-carbon construction and the circular economy. In addition, the Company supports Thailand’s national climate objectives and contributes to global climate action in line with the Paris Agreement and the Science Based Targets initiative (SBTi).

Through this Climate Change Policy, the Company reaffirms its commitment to achieving **Net Zero Greenhouse Gas Emissions by 2050**, while strengthening climate resilience, conducting scenario analysis, and ensuring transparent disclosure. These efforts are intended to create long-term value for society, the environment, and all stakeholders.

1) Objectives

- Achieve **Net Zero Greenhouse Gas Emissions by 2050**, in alignment with Thailand’s national targets and the Paris Agreement.
- Set science-based targets (Science Based Targets initiative: **SBTi**) for 2030, 2038 and 2050 to ensure measurable progress in reducing greenhouse gas emissions in Scope 1, Scope 2 and relevant Scope 3 categories.
- Strengthen the Company’s **resilience to climate-related risks** through **scenario analysis** and adaptive strategies.
- Integrate **climate change management** into business strategy, operations, procurement, and investment planning, ensuring capital allocation supports the transition toward a **low-carbon business model**.
- Promote **collaboration with stakeholders** to accelerate the low-carbon transition and enhance **transparency** in climate-related performance and disclosure.

2) Policy Alignment and International Standards

- **FTSE Russell ESG Indicators:** ECC01–ECC78 (Climate Change Management, Energy Use, Greenhouse Gas Emissions, and Climate Policy & Governance)
- **United Nations Sustainable Development Goals (SDGs):** Goal 7 (Affordable and Clean Energy), Goal 12 (Responsible Consumption and Production), Goal 13 (Climate Action), and Goal 17 (Partnerships for the Goals)
- Paris Agreement and Thailand’s **Nationally Determined Contributions (NDCs)**
- **Science Based Targets initiative (SBTi)**
- **Task Force on Climate-related Financial Disclosures (TCFD):** Framework for climate-related financial risk and opportunity disclosure
- **Global Reporting Initiative (GRI):** Standards: GRI 103 (Energy 2025), GRI 102 (Climate Change 2025)
- ISO 14064: Greenhouse Gas Accounting and Verification

3) Scope

This policy applies to:

- The operations of the Company, its subsidiaries, and joint ventures under the Company’s operational control.
- Products, services, and logistics processes across all stages of the value chain.
- Suppliers, contractors, and business partners that contribute to greenhouse gas emissions or are affected by climate change impacts.

4) Definitions and References

- **Carbon Neutrality:** Achieving a balance between greenhouse gas emissions and removals within the value chain.
- **Net Zero:** Reducing greenhouse gas emissions to the lowest possible level and neutralizing any remaining emissions through carbon removal or offsetting.
- **SBTi (Science Based Targets initiative):** A global mechanism for setting science-based greenhouse gas reduction targets consistent with limiting global temperature rise to 1.5°C.
- **TCFD (Task Force on Climate-related Financial Disclosures):** A framework for disclosing climate-related financial risks and opportunities to enhance transparency and resilience.
- **Internal Carbon Pricing:** Assigning a monetary value to carbon emissions to support investment and decision-making that align with environmental and climate objectives.
- **Vanachai Integrated Materiality and Risk Assessment (V-IMRA):** An internal assessment process used by the Company to identify and prioritize sustainability-related issues by integrating impact and financial materiality perspectives, supporting enterprise risk management, strategic planning, and management decision-making.

5) Governance and Accountability

- **Board of Directors:** Approves this policy and oversees the Company’s climate strategy, targets, and progress.
- **Sustainability Committee:** Serves as the policy owner, reports to the Board of Directors and Managing Director, responsible for integration and performance monitoring.

- **Sustainable Development Task Force:** Reviews climate risk assessments, ensures alignment with the TCFD framework, and monitors the accuracy and quality of climate-related data.
- **Management:** Integrates climate targets into business operations, investment planning, and decision-making processes.
- **Employees and Suppliers:** Are required to comply with this policy, reduce their carbon footprint, and participate in climate-related initiatives.
- **Executive Accountability:** Climate-related performance indicators are incorporated into executive KPIs and remuneration systems.

6) Commitments and Principles

6.1 Greenhouse Gas Reduction, Energy Efficiency and Decarbonisation Strategy (ECC01, ECC31, ECC38, ECC39, ECC77):

- Commit to **achieving net-zero greenhouse gas emissions by 2050**.
- Reduce greenhouse gas emissions in alignment with **science-based targets (SBTi)** by establishing the Company targets greenhouse gas emissions reduction in alignment with its Net Zero 2050 Roadmap, using 2024 as the base year. Vanachai aims to reduce Scope 1, Scope 2 and relevant Scope 3 emissions by approximately 50% by 2030, achieve more than 65% reduction by 2038, and reach Net Zero greenhouse gas emissions by 2050, with residual emissions neutralized through verified high-integrity removals.

3-phase target structure

Phase	Period	Strategic focus
Short Term	2025-2029	Foundation, data quality, GHG mapping, BCP, climate risk integration, LCA/EPD readiness
Medium Term	2030-2037	Integration, CAPEX/OPEX linkage, supplier and logistics resilience, product carbon data
Long Term	2038-2050	Transformation, Net Zero 2050, carbon removal, Bio-CCS/BECCS, verified carbon value

Greenhouse Gas Emissions Target Table

Year	Absolute Scope 1, 2 and relevant Scope 3 GHG emissions (tCO ₂ e/year)	% reduction relative to 2024	Status / target
2024 (Scope 1 & 2)	246,329	n/a	Scope 1+2 market-based baseline
2024 (base year)	885,523	n/a	Baseline for Net Zero Roadmap
2025	744,822	-15.9%	2025 Scope 1+2 actual 173,299 tCO ₂ e 29.6% reduction from 2024 Scope 1, 2
2030	≈ 442,762	-50.0%	Scope 1, 2 and relevant Scope 3: Approximately 50% reduction
2038	≈ 309,933	-65.0%	More than 65% reduction and Plus CCS scale-up to at least 10,000 tCO ₂ /year
2050	≈ 44,276	-95.0%	Net Zero GHG emissions: Residual emissions neutralized through verified high-integrity removals

- Improve **energy efficiency by 20% by 2030** (compared with the 2020 base year) by maintain a high share of renewable electricity and heat energy, building from 71.6% in 2025, while expanding feasible renewable and low-carbon energy options including solar rooftop, biomass optimization, Green Tariff, and other credible low-carbon procurement mechanisms.

Energy Intensity per Unit of Production Table

Year	Energy intensity	Explanation / Remarks
2024 baseline	3.24 GJ/tonne	2024 performance baseline
2025 actual	3.57 GJ/tonne	Increased from 2024, requiring stronger process control
2030 target	<= 2.59 GJ/tonne	If retaining 20% reduction from 2024 baseline
2038 target	<= 2.27 GJ/tonne	Approx. 30% improvement from 2024 baseline
2050 target	<= 1.94 GJ/tonne	Approx. 40% improvement from 2024 baseline

The Group targets average improvements in energy efficiency (reduced GJ per unit of production) of approximately 3–4% per year during 2024–2030, then maintaining an improvement rate of around 1.5–2% per year through 2038 and at least 1% per year through 2050, alongside increasing the share of renewable energy and deploying Bio-CCS/BECCS technologies, in order to achieve greenhouse gas reductions of 50% by 2030 and 95% by 2050 in line with the SBTi framework

- Implement **low-carbon technologies** and **eco-efficient process designs** to reduce the carbon intensity of operations and products.

6.2 Climate Resilience, Scenario Analysis and Risk Management (ECC05, ECC43, ECC44, ECC45, ECC50):

- Conduct comprehensive **climate risk assessments**, covering both **physical risks** and **transition risks**, across all business operations and throughout the supply chain.
- Perform **scenario analysis** under **1.5°C and 2°C pathways** to evaluate potential impacts, risks, and opportunities, and to develop appropriate adaptation strategies.
- Integrate the results of climate risk assessments into the Company's **enterprise risk management system** and **long-term investment planning**.
- Develop **adaptation measures and response plans** to safeguard business continuity and strengthen climate resilience.

6.3 Supply Chain and Product Innovation

- Develop and **promote low-carbon and environmentally friendly products** and materials to support green construction and a low-carbon supply chain.
- Encourage suppliers to measure, manage, and reduce greenhouse gas emissions, while increasing the use of circular or recovered and sustainably certified materials.
- Promote the use of **sustainable and low-carbon wood-based products** to advance **sustainable construction practices**.
- Increase the proportion of circular or recovered and sustainably certified materials in products by 30% by 2035.

6.4 Climate Governance, Internal Carbon Pricing and Financial Integration (ECC51, ECC76, ECC78):

- Align **investment direction and capital expenditure (CapEx)** with the climate objectives of the **Paris Agreement**, supporting the transition toward a **low-carbon economy**.
- Assess and implement **Internal Carbon Pricing (ICP)** mechanisms to guide **investment decisions** and **risk management** related to climate impacts.
- Disclose **climate-aligned investments** and financial performance in the **Vanachai Sustainability Move Report** in accordance with international reporting standards.

6.5 Stakeholder Engagement and Alignment with Trade Associations (ECC73, ECC74):

- Collaborate with **government agencies, regulators, non-governmental organizations (NGOs)**, and **industry partners** to drive collective action in addressing climate change.
- Engage with **local communities** to support initiatives that enhance **climate resilience** and adaptive capacity.
- Ensure that the Company's **climate commitments and positions** are consistent with those of the **trade associations** to which it belongs. In cases of misalignment, the Company will **disclose, review its membership**, and, if necessary, **consider withdrawal** to uphold integrity and transparency.

6.6 Disclosure, Assurance and Transparency (ECC14, ECC15, ECC41, ECC42, ECC49, ECC76; GRI 102: Climate Change 2025; GRI 103: Energy 2025; TCFD / IFRS S2):

- Disclose **greenhouse gas emissions data (Scope 1, Scope 2, and relevant Scope 3) annually**, verified by an independent third party.
- Report performance and progress in accordance with **GRI, FTSE Russell, and TCFD** standards.
- Disclose details of **engagements with trade associations** to ensure consistency with the Company's Climate Change Policy and maintain transparency in advocacy and alignment.

7) Risk, Impact, and Dependency Management

The risks, impacts, and dependencies associated with the matters addressed in this policy are identified, analyzed, and prioritized through the Company's Vanachai Integrated Materiality and Risk Assessment (V-IMRA) process. V-IMRA is an internal assessment framework that considers both impact materiality and financial materiality across the value chain.

- **The results of V-IMRA** are integrated into the Enterprise Risk Management (ERM) system to support policy formulation, strategic decision-making, the setting of risk appetite, and the creation of long-term sustainable value.
- Identify, analyze, and assess **climate-related risks**, including both **transition risks** and **physical risks**, in accordance with the **TCFD framework**.
- **Apply TCFD and IFRS S2-aligned climate risk management processes**, including the identification, assessment, prioritization and management of physical and transition risks, supported by climate scenario analysis and integration into enterprise risk management, strategic planning and capital allocation.

- Integrate the outcomes of risk assessments into the Company's **enterprise risk management system, strategic planning, and supply chain management** processes.
- Consider risks arising from **resource availability**, such as the supply of raw materials and **renewable energy sources**, which may be affected by climate change.

8) Targets and Metrics

- The Company aims to achieve Net Zero greenhouse gas emissions by 2050, using 2024 as the base year. The Group's 2024 baseline covers total Scope 1, Scope 2 and relevant Scope 3 emissions of 885,523 tCO₂e, including Scope 1 and Scope 2 market-based emissions of 246,329 tCO₂e. Vanachai targets an approximately 50% reduction in Scope 1, Scope 2 and relevant Scope 3 emissions by 2030, more than 65% reduction by 2038, and Net Zero greenhouse gas emissions by 2050, with residual emissions neutralized through verified high-integrity removals.
- The Company will continue improving energy productivity from the 2024 energy intensity baseline of 3.24 GJ per tonne of production and will maintain a long-term energy intensity reduction pathway. Vanachai will also maintain a high share of renewable electricity and heat energy, building from 71.6% in 2025, while expanding feasible renewable and low-carbon energy options.
- For water stewardship, the Company will reduce water-use intensity year-on-year, maintain zero water withdrawal or consumption from water-stressed areas, and increase wastewater recycling and reuse toward at least 90% by 2026.
- For waste and resource efficiency, the Company will maintain 100% waste reduction or avoidance performance, maintain zero non-hazardous waste disposed by landfill, recover at least 90% of hazardous waste through recycling, reuse, and energy recovery, and move toward near-zero waste disposal over the long term.
- The Company will publicly disclose greenhouse gas reduction performance, energy performance, water performance, waste performance, and climate-related progress annually through the Vanachai Sustainability Move Report and relevant communication channels.

9) Supply Chain and Partner Responsibility

- Require suppliers and contractors to establish **greenhouse gas reduction targets** aligned with **Science Based Targets (SBTi)** principles.
- Conduct **supplier audits** and provide **training programs** to build capacity and enhance understanding of **low-carbon operations**.
- Prioritize **procurement from suppliers** with certified **environmental and climate management standards** in accordance with recognized international frameworks.

10) Integration with Corporate Strategy (ECC44, ECC50, ECC51, ECC77, ECC78; GRI 102: Climate Change 2025; GRI 103: Energy 2025; TCFD / IFRS S2):

- The Company integrates climate change management into corporate strategy, business planning, investment decision-making, operations, product development, and enterprise risk

management to support a low-carbon and climate-resilient business model. Climate-related risks, opportunities, targets, and performance are incorporated into the Company's Net Zero Roadmap, annual business plans, capital allocation, product innovation, and long-term value creation.

- The Company will align capital expenditure, operating expenditure, procurement decisions, and major investment projects with its greenhouse gas reduction targets, the Paris Agreement, and the objective of achieving Net Zero by 2050. Internal Carbon Pricing may be applied as a management tool to support investment appraisal, project prioritization, and climate-related risk management. The Company will also promote low-carbon wood-based products, energy efficiency, renewable and low-carbon energy, circular design, product carbon data readiness, Life Cycle Assessment, and Environmental Product Declaration readiness.
- Climate resilience shall be integrated into business continuity planning, site-level risk management, logistics planning, supply security, and infrastructure investment. Progress on climate strategy implementation, greenhouse gas reduction, energy performance, climate-related risks and opportunities, and climate-aligned investment shall be disclosed annually through the Vanachai Sustainability Move Report and relevant communication channels.

11) Implementation and Management Tools

- Integrate climate action into the Company's **sustainability framework "FOREST | FUTURE | TOGETHER – for a Sustainable Living"**, as follows:
 - **FOREST:** Protect and restore ecosystems through carbon sequestration and sustainable forest management.
 - **FUTURE:** Drive innovation, low-carbon technologies, and circular design to advance climate solutions.
 - **TOGETHER:** Foster collaboration with communities, regulatory agencies, and industry partners to achieve shared climate goals.

12) Monitoring, Reporting and Transparency

- Integrate the **climate strategy** into the Company's **Environmental Management System (EMS)** in accordance with **ISO 14001** standards.
- Conduct **training and awareness programs** for employees, suppliers, and business partners on **greenhouse gas reduction practices** and climate action.
- Allocate adequate **financial, human, and technological resources** to support the achievement of the Company's **energy efficiency and greenhouse gas reduction targets**.

13) Review and Continuous Improvement

- Review this policy **every two years**, or earlier if required due to changes in laws, market conditions, or stakeholder expectations.
- Strengthen the Company's **commitments and targets** in response to developments in **science, technology**, and evolving **global climate frameworks**.

- Promote **research, innovation, and cross-functional collaboration** to enhance the Company's **long-term organizational resilience to climate change**.

14) Climate Change Policy Revision History

Version	Date	Policy Owner	Approved by	Key Changes / Comments
1.0	11 November 2025	Sustainability Committee	Board of Directors	Developed the first Climate Change Policy in alignment with the FTSE Russell ESG Criteria (ECC01–ECC78), covering climate risk management under the TCFD framework, implementation of Internal Carbon Pricing (ICP), supplier engagement, and integration with the corporate sustainability strategy "FOREST FUTURE TOGETHER – for a Sustainable Living."

This policy is approved and issued for acknowledgement and implementation by all relevant parties.