

Recommended Disclosures (from the TCFD Consortium-issued TCFD Guidance 3.0)

Related Information

2023

Governance: Disclose the organization’s governance around climate-related risks and opportunities.

- a) Describe the board’s oversight of climate-related risks and opportunities.
- b) Describe management’s role in assessing and managing climate-related risks and opportunities.

[Link to Governance information](#)

Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning where such information is material.

- a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.
- b) Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.
- c) Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario and, where relevant to the organization, scenarios consistent with increased physical climate-related risks.

[Identification and assessment of Climate-related Risks and Opportunities](#)

[Impacts of Climate-related Risks and Opportunities on Financial Planning](#)

[Strategies for Climate-related Risks and Opportunities](#)

Risk Management: Disclose how the organization identifies, assesses, and manages climate-related risks.

- a) Describe the organization’s processes for identifying and assessing climate-related risks.
- b) Describe the organization’s processes for managing climate-related risks.
- c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.

[Risk Management](#)

Metrics and Targets: Disclose the metrics and targets used to assess and manage climate-related risks and opportunities, where such information is material.

- a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
- b) Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse (GHG) emissions, and the related risks.
- c) Describe the targets used by the organization to manage climate-related risks and opportunities and their performance against targets.

[Metrics and Targets](#)

2023 Summary of Climate-related Disclosures Based on TCFD Recommendations



In 2023, we have disclosed the climate-related scenario analyses for the building and industrial equipment, water infrastructure, and solid waste treatment market-facing businesses. Including the scenario analyses for the oil and gas and semiconductor manufacturing markets, we have now completed climate-related scenario analyses for all key business segments.

A key management strategy in the long-term vision of the EBARA Group, E-Vision 2030, is to further refine ESG-focused management. We conducted climate-related scenario analyses and manage climate-related risks and opportunities in line with the TCFD recommendations. The results of the scenario analyses were reflected in the medium-term management plan launched in 2023, [E-Plan 2025](#) (covering the years 2023 to 2025).

Strengthening Climate-related Governance

In 2023, we reorganized the business structure of the group to an in-house company system for each face-to-face market. With regard to climate-related needs, we will strive for further growth through business that helps our customers solve their issues by grasping the challenges they face with climate change.

Beginning in 2023, the Sustainability Committee's will now review review activities and progress toward non-financial targets, including those related to climate, due to change in operating policy.

Also in 2023, the Carbon Neutral Project, which has been responsible for aggregating issues the Group faces on the road to carbon neutrality, has been designated as a permanent organization under the CRO (Chief Risk Officer). We will promote activities to resolve issues aggregated by the project.

Climate-related Strategies in the New Medium-Term Management Plan

We conducted climate-related scenario analyses for each target market from the second half of 2021. This has enabled us to make assumptions about market changes due to the impact of climate change, identify risks and opportunities relevant to our business, estimate the financial impact, and consider countermeasures. The findings of the climate-related scenario analyses were reflected in our new medium-term management plan, E-Plan 2025, which began in 2023, and all internal companies formulated climate-related strategies.

Establishment of Mechanisms for Managing Climate-Related Risks and Opportunities

Important risks and opportunities identified by climate-related scenario analysis are monitored by the Management Issue Action Plan Monitoring Committee. The committee is chaired by the President, Representative Executive Officer, CEO / COO, and the presidents of each internal company report on the progress and outcomes of action plans for financial and non-financial metrics. The committee can then observe the impact of financial and non-financial matters at the same time and on a parallel basis. Climate-related risks and opportunities are monitored as non-financial metrics and the achievement and progress of activities are reviewed regularly. Financial impact is reviewed at meetings to monitor financial indicators. The overall progress of non-financial indicators and targets, including those related to climate, is reported to the Sustainability Committee and reviewed.

Establishment of Climate-Related Metrics and Targets

In December 2022, we announced the [Carbon Neutrality Goals for the EBARA Group](#). We have set a target of reducing Scope 1 and Scope 2 GHG emissions by 55% from 2018 levels by 2030, as well as a target to reduce Scope 3 emissions by approximately 100 million tons in terms of CO₂ conversion by 2030. Measures to achieve these targets are incorporated into E-Plan 2025 action plans by the in-house companies and their subordinate group companies and divisions, and are promoted by setting divisional goals and measures.

Furthermore, based on the results of scenario analyses for each major target market, each in-house company formulated a non-financial management issue action plan that includes metrics and targets related to energy conservation, carbon neutrality, and climate change adaptation.

Major Climate-Related Business Strategies under Medium-term management plan E-Plan 2025 (2023-2025)

Major target markets	In-house company	Main Products	Main functions and value provided to the market	Primary locations*	Key Climate-Related Strategies in E-Plan 2025
Building and industrial equipment market	Building Service & Industrial	Pumps (standard and custom), blowers, chillers, heating and cooling equipment, fans, etc.	<ul style="list-style-type: none"> • Providing water supply, drainage, water for fire fighting, ventilation, exhaust, heating/cooling, and supply/exhaust of air of buildings and commercial facilities, apartments, and factories for various industries • Transfer of liquids other than clean water, such as chemicals and foodstuff • Air conditioning of large-scale facilities, cooling of industrial processes, temperature control of industrial facilities, etc. 	Japan, China, Italy, Brazil	<ul style="list-style-type: none"> • Review manufacturing bases and supply chain management based on geopolitical risks, regulations in each region, and desired quality from customers. • Energy conservation proposals and the rationalization of equipment in accordance with customer operation conditions. • Provide solutions for energy-use and environmental impact reduction in response to the demand for decarbonization.
Energy market	Energy	Custom Pumps, Compressors, Turbines, Cryogenic products* (pumps/expanders) *Products handling cryogenic fluids that range below -250°C, etc.	<ul style="list-style-type: none"> • LNG (liquefied natural gas) related facilities and transport • Gas processing in petroleum refining, petrochemical production, etc. (downstream), gas compression and liquid pressure transmission • CO₂ injection and transfer at CCS/CCUS plants • Transfer of liquid hydrogen and hydrogen gas at hydrogen-related facilities • Ammonia transfer within ammonia co-firing thermal power plants 	Japan, the United States of America, India, China	<ul style="list-style-type: none"> • Work with customers to establish sustainable businesses that lead decarbonization efforts and the creation of sustainable societies. • Provide low-carbon products for LNG marketplace in the short to medium term. • Looking ahead to 2025 and beyond, the company will develop products for CCUS, the ammonia market, as well as hydrogen- and geothermal power generation.
Water infrastructure market	Infrastructure	Pumping facilities (clean water and sewerage, irrigation, rainwater, etc.), ventilation equipment (tunnels), aeration equipment (sewage), electrical equipment, etc.	<ul style="list-style-type: none"> • Pumping, transporting, and draining water from water supply and sewage facilities • Water intake and drainage from rivers, and prevention and control of flood damage • Road ventilation, exhaust, smoke exhaust • Etc. 	Japan, Vietnam	<ul style="list-style-type: none"> • Contribute to the National Land Resilience Plan especially regarding aging infrastructure facilities and flood damage prevention • Provide high-value-added pumping systems through overseas bases for engineering technologies that have been highly evaluated in Japan for flood, drought, and irrigation demand in Southeast Asia and other countries and regions where we have sales bases.
Solid waste treatment market	Environmental Solutions	Municipal waste treatment plants, industrial waste disposal plants, woody biomass power generation plants, etc.	<ul style="list-style-type: none"> • Intermediate processing of solid waste (including incineration) • Provision of resource recycling solutions based on LCA • Provision of low-carbon electricity to our group and local governments • Recycling of incinerator ash, etc. 	Japan, China	<ul style="list-style-type: none"> • As the world moves toward circular economies and decarbonization, the amount of waste incinerated is predicted to decrease year by year. We will shift to chemical recycling in which gas and oil are recovered from waste plastics and recycled into petroleum and petrochemical raw materials.
Semiconductor manufacturing market	Precision and electronics	Dry vacuum pumps, chemical mechanical polishing systems, gas abatement systems, ozonized water generators, etc.	<p>During the semiconductor manufacturing process</p> <ul style="list-style-type: none"> • Provide a clean vacuum environment • Surface processing of wafers with ultra-high precision • Detoxification of perfluorocarbons (PFCs), which have a global warming potential several thousand times greater than that of CO₂, etc. 	Japan, Taiwan, China, Korea, the United States of America, Europe, Singapore, Malaysia	<ul style="list-style-type: none"> • Contribute to the decarbonization of the customer's semiconductor manufacturing process. • As a member of the Semiconductor Climate Consortium, we will lead decarbonization in semiconductor manufacturing. • Reduce GHG emissions through development vacuum exhaust systems for EUV Lithography Equipment.

*In order of scale