

Toppan recognizes the scale of the impact of climate change on the Company's business operations and considers climate change to be an important management issue. In 2019, Toppan announced its support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), which was established by the Financial Stability Board. In 2020, Toppan commenced scenario analysis based on the recommendations.

### ■ Basic Approach to Climate Change

In 1992, Toppan formulated the Toppan Printing Declaration on the Global Environment, which set out the Company's basic philosophy on environmental conservation activities. In April 2009, Toppan revised the declaration to create the Toppan Group Declaration on the Global Environment, a basic philosophy for Groupwide activities. Based on this declaration, Toppan has taken a more proactive approach to advancing business activities with consideration for environmental conservation.

In November 2019, Toppan formulated the *TOPPAN*

*SDGs STATEMENT* and announced that the Company would integrate the SDGs into management. Toppan aims to support the realization of "fulfilling, sustainable living" through SDG initiatives. Toppan has set out Companywide Materiality, which supports the business foundation, and Business Materiality, in which initiatives are addressed through business operations. For each, Toppan has selected environmental issues, including climate change. In this way, Toppan is advancing initiatives to address climate change from both Companywide and business perspectives.

### ■ Addressing the TCFD

The Task Force on Climate-related Financial Disclosures (TCFD) was established in 2015 by the Financial Stability Board at the request of the G20. It considers how climate-related information should be disclosed and how it should be handled by financial institutions. The final report issued by the TCFD in June 2017 recommended that companies and other organizations disclose information about risks and opportunities related to climate change in four thematic areas—governance, strategy, risk management, and metrics and targets. In particular, the report recommends disclosure

of the resilience of the organization's strategies in an easy-to-understand manner.

Toppan announced its support for the TCFD in 2019. From 2020, the Company has implemented scenario analysis based on the recommendations, and has started to disclose information based on that analysis. In the future, based on the disclosed information, the Company will continue to drive a cycle in which feedback from stakeholders is linked to strengthening management strategy pertaining to climate change.

### ■ Governance Structure for Climate Change

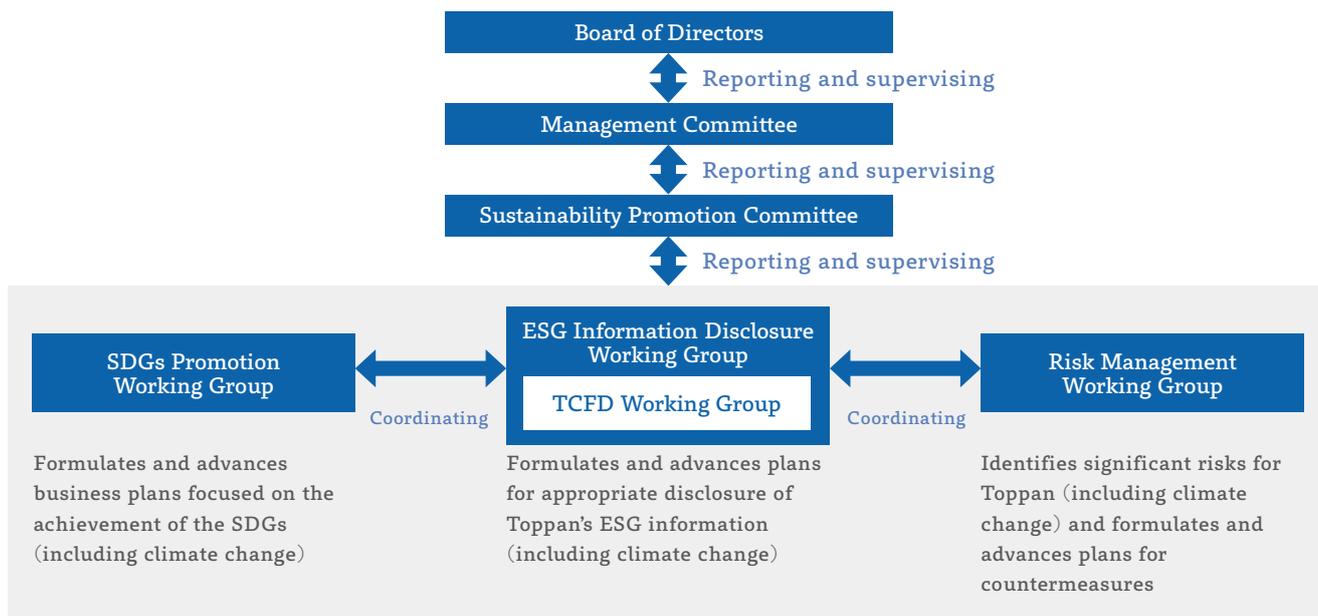
In its Medium Term Plan, which takes fiscal 2021 as its first year, Toppan has announced "expanding ESG initiatives" as one of its priority measures under the concept of "Digital & Sustainable Transformation," and the Company is strengthening governance related to ESG issues, including climate change.

The Board of Directors has delegated the handling of climate-related issues to the Sustainability Promotion Committee, which is chaired by the President & Representative Director. The Sustainability Promotion Committee has established multiple working groups and coordinates climate-related issue assessments and countermeasures. Through the Management Committee, the Board of Directors receives reports from the Sustainability Promotion Committee regarding the assessment and status of climate-related issues as well as target management. The Board of Directors implements

comprehensive decision-making with regard to such matters as management strategy, taking climate-related issues into account.

Risks that could have an especially significant impact on management are identified as "significant risks" by the Risk Management Working Group (administered by the Compliance Department of the Legal Affairs & Intellectual Property Division). With regard to climate change, Toppan identifies significant risks, and in coordination with Companywide risk management activities, the responsible head office divisions spearhead efforts to formulate countermeasures and implement comprehensive management measures. Information regarding the status of those measures is collected and reported to the Board of Directors to ensure appropriate supervision by the Board of Directors.

Sustainability Promotion Structure for Addressing Climate Change and Other ESG Issues



■ Scenario Analysis

For the implementation of scenario analysis, Toppan has established the TCFD Working Group under the Sustainability Promotion Committee, which is chaired by the President & Representative Director. Related head office departments participate in this working group, which has identified important climate-related risks and opportunities and evaluated impacts, primarily financial impacts.

This was Toppan's first implementation of scenario analysis, and the Company utilized two scenarios: the 2°C scenario (partially incorporating a 1.5°C scenario), where the increase in the global average temperature at the end of the century is limited to 2°C in comparison with pre-industrial levels, and the 4°C scenario, in which the increase is approximately 4°C. The scenarios were applied to the entire value chain, including R&D, procurement, production, and product supply, centered on Japan, where the majority of Toppan's operations are conducted, and long-term forecasts up to 2050 were considered.

Under the 2°C/1.5°C scenario, Toppan reconfirmed

that there are risks of increased costs accompanying the introduction of a carbon tax and higher prices for purchased energy, and that there are opportunities for increased sales of low-carbon-emission products and services, based on changes in consumer consciousness, and for gains in corporate value.

Under the 4°C scenario, it is possible that higher atmospheric temperatures could lead to such risks as an increase in wind and flood damage, resulting in a stoppage at major plants supporting operations, or pollution from chemical substance discharge. However, Toppan is advancing countermeasures, such as BCP formulation.

This analysis and the examination and implementation of countermeasures were implemented based on the discussions of the Sustainability Promotion Committee, which received reports from the TCFD Working Group.

By continuing to implement scenario analysis, Toppan will increase accuracy and further advance integration with management strategies, thereby increasing resilience in an uncertain future.

Climate Change: Opportunity/Risk Evaluation and Countermeasures

2°C (partially incorporating 1.5°C) Scenario There will be impacts such as regulations and new tax burdens, but new business opportunities will be created by needs arising from the increase in people's environmental consciousness.				
	Expected situation	Item	Impact	Countermeasures
Transition risks	<ul style="list-style-type: none"> <li>Introduction of carbon tax on fossil fuels, introduction of carbon border tax, and discontinuance of subsidies as a result of strengthened policies for the transition to a low-carbon society</li> </ul>	<ul style="list-style-type: none"> <li>Increase in manufacturing costs due to imposition of carbon tax on CO<sub>2</sub> emissions from the utilization of energy derived from fossil fuel use</li> </ul>	<p>Medium</p> <p>(Estimating Scope 1 + Scope 2 financial impact of approximately 4.7 billion yen/year in fiscal 2030<sup>*1</sup>)</p>	<ul style="list-style-type: none"> <li>By fiscal 2030, advance energy-saving measures and achieve 6.5% ratio of electricity derived from renewable energy sources (Estimating that the Scope 1 + Scope 2 financial impact resulting from these countermeasures will be a reduction of approximately 200 million yen/year in fiscal 2030<sup>*1</sup>)                             <ul style="list-style-type: none"> <li>▶Toppan Group medium-and-long-term environmental targets for fiscal 2030</li> </ul> </li> <li>By fiscal 2050, achieve 100% ratio of electricity derived from renewable energy sources, together with other measures achieve virtually zero Scope 1 + Scope 2 CO<sub>2</sub> emissions                             <ul style="list-style-type: none"> <li>▶Toppan Group Environmental Vision 2050</li> </ul> </li> <li>Monitoring of systems and renewable energy technologies from long-term viewpoint</li> </ul>
		<ul style="list-style-type: none"> <li>Increase in manufacturing costs due to imposition of carbon tax on thermal recycling of waste (plastic) arising in manufacturing</li> </ul>	Small	<ul style="list-style-type: none"> <li>By fiscal 2030, achieve material recycling ratio of 65% for waste plastic from production processes                             <ul style="list-style-type: none"> <li>▶Toppan Group medium-and-long-term environmental targets for fiscal 2030</li> </ul> </li> <li>Monitor systems and recycling markets from long-term viewpoint</li> </ul>
		<ul style="list-style-type: none"> <li>Increase in procurement costs as suppliers pass the cost of adapting to a low-carbon society on to selling prices</li> </ul>	Small	<ul style="list-style-type: none"> <li>Research suppliers, develop new suppliers, research/consider alternatives</li> <li>Monitor systems and markets from long-term viewpoint</li> </ul>
	<ul style="list-style-type: none"> <li>Increase in electricity prices due to increase in adjustability resulting from rise in renewable energy ratio</li> </ul>	<ul style="list-style-type: none"> <li>Increase in manufacturing costs due to rise in purchased energy prices</li> </ul>	Medium	<ul style="list-style-type: none"> <li>Advance energy-saving measures and expand introduction of renewable energy for self-consumption</li> </ul>
	Expected situation	Item	Impact	Securing opportunities
Transition opportunities	<ul style="list-style-type: none"> <li>Growing needs for eco-friendly products due to increase in people's environmental consciousness, shift in consumer awareness from owning to sharing</li> </ul>	<ul style="list-style-type: none"> <li>Increased sales opportunities through the provision of low-carbon-emission products and services</li> </ul>	Large	<ul style="list-style-type: none"> <li>Reduction in CO<sub>2</sub> emissions due to customer digital transformation and reductions in movement, operational burdens, and time resulting from Toppan DX "Erhoeht-X™" initiatives</li> <li>Reduction in CO<sub>2</sub> emissions through the provision of sustainable packaging suitable for reduce/reuse/recycle initiatives</li> <li>Reduction in CO<sub>2</sub> emissions through the provision of eco-friendly materials and schemes that make a strong contribution to reducing greenhouse gas emissions and the provision of solutions for energy saving and energy creation</li> </ul>
		<ul style="list-style-type: none"> <li>Promotion of climate change initiatives and related information disclosure</li> </ul>	Medium to large	<ul style="list-style-type: none"> <li>Recognition as a "Digital &amp; Sustainable Transformation" company</li> <li>Increase in corporate value due to ESG recognition</li> </ul>
		<ul style="list-style-type: none"> <li>Increased profit through the creation of environmental process innovation technologies for printing processes</li> </ul>	Small to medium	<ul style="list-style-type: none"> <li>Cost reductions and granting of licenses due to VOC technology development in the printing business</li> </ul>

\*1 Financial impact based on assumption of carbon price of 10,500 yen/t

4°C scenario World in which the effect of regulation is small, and there is a possibility of rising risk of natural disasters				
	Expected situation	Item	Impact	Countermeasures
Physical risks	Increasing frequency and intensity of wind and flood damage due to rising atmospheric temperature	Halt in production at plants due to water and flood damage, etc.	Large	Reduce the risk of a halt in production by formulating a business continuity plan that addresses flooding, diversifying the supply chain, installing facilities to minimize damage, implementing advance measures for facilities, and using alternatives for chemical substances that have the potential to cause pollution
		Chemical substance discharge pollution due to torrential rain, floods, etc.	Medium	Consider the possibility of leakage of chemical substances, formulate and implement countermeasures Utilize casualty insurance for the purpose of dealing with damage Monitor anticipated risks
	Expected situation	Item	Impact	Securing opportunities
Physical opportunities	Need for BCP due to increased frequency and intensity of wind and flood damage	BCP support business utilizing ICT	Medium	Supporting operational DX initiatives that address BCP by combining digital technologies with advanced operational know-how

■ Metrics and Targets

Companywide Materiality (Environmentally Friendly & Sustainable Production)

Toppan has formulated the Toppan Group Environmental Vision 2050, which sets out the policy for long-term initiatives to address climate change and other global environmental issues. Based on backcasting from the vision for 2050, Toppan

has also set the Toppan Group Medium-and-Long-Term Environmental Targets for Fiscal 2030, which focus on the target year for achievement of the SDGs.

**Toppan Group Environmental Vision 2050**

As a member of international society, the Toppan Group aims to enable “fulfilling, sustainable living” by contributing to decarbonization, resource circulation, and the optimal use of water through forward-looking activities with consideration for preservation of the global environment.

- ① **Contributing to Decarbonization**  
Aiming for virtually zero Scope 1 and 2 greenhouse gas emissions.
- ② **Contributing to Resource Circulation**  
Aiming for zero waste emissions.
- ③ **Optimal Water Use**  
Reducing water consumption and contributing to improved water quality by preventing pollution.

**Toppan Group Medium-and-Long-Term Environmental Targets for Fiscal 2030**

- ① **Contributing to Decarbonization**  
Reduce Scope 1 and 2 greenhouse gas emissions by 32.5% (446 kt-CO<sub>2</sub>e) compared to the fiscal 2017 level (1,373 kt-CO<sub>2</sub>e).  
(Renewable energy ratio of 6.5%)  
Reduce Scope 3 greenhouse gas emissions by 20% (1,224 kt-CO<sub>2</sub>e) compared to the fiscal 2017 level (6,122 kt-CO<sub>2</sub>e).
- ② **Contributing to Resource Circulation**  
Reduce final landfill waste disposal by 60% (4,444 t) compared to the fiscal 2017 level (7,407 t).  
Increase waste plastic material recycling rate by 12 percentage points (to 65%) compared to the fiscal 2017 level (53%).
- ③ **Optimal Water Use**  
Reduce water consumption, improve water efficiency, and avoid water pollution risks.  
(Quantitative targets will be set going forward.)

Business Materiality (Sustainable Global Environment)

Based on TOPPAN Business Action for SDGs, a blueprint announced in 2020, Toppan has specified three areas of focus—creating a circular economy, decarbonizing, and expanding

eco-friendly products and solutions—and is taking on the challenge of addressing climate change-related issues through its business.

