

Responding to Environmental Risks and Opportunities

Hitachi's Approach

From abnormal weather conditions around the world associated with global warming to resource depletion and loss of biodiversity, environmental risks that could seriously affect the future of humanity and our planet are on the rise. International calls are being made for measures to mitigate these risks, as exemplified by the Paris Agreement adopted in 2015 at the 21st Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change and the Sustainable Development Goals (SDGs)—the centerpiece of the 2030 Agenda for Sustainable Development, adopted by the United Nations. Businesses, too, must accurately ascertain the risks they face and the opportunities that arise for the utilization of management resources.

Hitachi focuses on two particular environmental risks and opportunities—climate change and water resources—and promotes initiatives to address them in a steadfast manner. Indeed, among the top five global risks in terms of impact cited by the World Economic Forum in its *Global Risks Report 2017* are “water crises,” “extreme weather events,” and the “failure of climate-change mitigation and adaption.” Hitachi will strengthen its response from a global perspective to risks that threaten both corporate finances and society as a whole, such as the growing seriousness of abnormal weather, changing rainfall patterns, and the impact of droughts and floods on economic activity.

Climate Change: Risks and Opportunities

Engaging with the Risks and Opportunities of Climate Change

Hitachi sees climate change risks and opportunities as important management issues. We are therefore setting long-term environmental targets through 2050 and clearly outlining our policy of contributing to the achievement of a low-carbon society. In addition, given the global regulatory and policy trends in climate change, we will launch business strategies to minimize risks and maximize opportunities. To that end, the Executive Sustainability Committee was created in 2017, with the Hitachi president serving as chairman and members including other top executives. Group-wide measures on climate change are advanced by establishing KPIs in our Environmental Action Plan.

► Regulatory Risks and Opportunities

Carbon taxes, energy consumption taxes, and emissions trading systems may be newly introduced or further strengthened, representing risks impacting directly on management costs on top of those incurred in complying with the environmental regulations and policies of countries and regions around the world. To mitigate such risks, we have been reducing or minimizing cost burdens by enhancing production efficiency and introducing energy-saving measures. Our energy-saving investments in fiscal 2016 totaled approximately 9.1 billion yen.

We also regard the energy-efficiency standards and regulations for products as opportunities for business expansion. If our products did not meet such standards, we would risk

losing sales opportunities, but Hitachi not only clears the required norms, we also develop energy-saving products and services that go beyond the prescribed standards. We can thus increase the likelihood of our energy-saving products and services being selected by our customers and gaining fuller market penetration, thereby expanding our business.

► Risks and Opportunities Presented by Physical Factors

Hitachi has a worldwide business presence and believes that disasters due to the impact of global warming—like powerful typhoons and heavy rainfall—represent serious business continuity risks. In choosing sites for new plants, for example, we take potential flood damage into consideration, and we have established the *Hitachi Group Guidelines for Developing Business Continuity Plans* that outline measures to be taken in times of disaster.

At the same time, we perceive the increase in demand for natural-disaster countermeasures in various countries and regions as business opportunities for our disaster-prevention solutions. Hitachi uses the latest IT tools to analyze and evaluate data pertaining to people's daily lives, meteorological and other natural trends, and the operation of social infrastructure, providing solutions that lead to a proper climate change response and creating new business opportunities.

► Other Risks and Opportunities

A company's approach to climate change issues influences stakeholders' evaluations and affects customers' choice of products and services. It can become either a risk to business

continuity or an opportunity for sales expansion. Hitachi upholds long-term environmental targets of reducing the CO₂ emissions throughout our value chain by 50% in fiscal 2030 and 80% in fiscal 2050. Toward this goal, in fiscal 2016, we achieved 35% reductions in CO₂ emissions from the use of products and services through the promotion of environmentally conscious design during the development stage, as well as through the increased sales of products and services with high energy-saving performance. Furthermore, we have improved energy use per unit by 12% through energy-saving investments in high-efficiency facilities and equipment and by moving forward in production efficiency by utilizing IoT. In the future, we will switch to a low-carbon business structure; develop innovative devices and materials that contribute to the reduction of the environmental burden; develop and popularize ultra-efficient products and low-carbon energy; and offer energy-conserving social system solutions through the wide-ranging and integrated harmonization of disparate systems.

Water-Related Risks and Opportunities

Activities for Water-Related Risks and Opportunities

Hitachi is responding to both water-related risks and opportunities with our customers and society through our business operations by establishing a long-term environmental target of building a water- and resource-efficient society by 2050.

► Regulatory Risks and Opportunities

We are subject to regulations stipulated by different countries and regions concerning water use, such as a tightening of quality standards for both water supply and drainage and a jump in prices. These regulations pose a risk for our business

activities, but they can also be an opportunity for our water-related business.

Hitachi places the water-related business as a core undertaking, having established the Water Business Unit to provide machinery, electrical facilities, and services for water infrastructure. To date, we have installed approximately 700 water purification plants and 900 sewage treatment plants in Japan, as well as over 200 plants in some 40 countries and regions around the world. By providing a range of water-treatment technologies, from water generation to sewage, we seek to realize efficient water circulation for our customers and to lessen the impact of water-related regulations.

At approximately 200 Hitachi business sites around the world, we are promoting appropriate water usage for each locale by investigating and analyzing water risks and usage status to be prepared for any regulatory risks that may arise in the future.

► Risks and Opportunities Presented by Physical Factors

Just as there are countries and regions around the world that are endowed with rich water resources, there are also many places where people do not have enough water for their everyday lives and for agriculture. For Hitachi, such shortages represent both a risk and an opportunity.

For example, we provide the long-distance water pumps at the core of water distribution facilities in large-scale projects to provide water to areas with a shortage. In Egypt, we built pumping facilities to send water from the Nile River to desert areas for the country's greening project, and in China we are drawing water from the Yangtze River to the Yellow River, which suffers from a serious water shortage. Meanwhile, our desalination system provides water for Male, the capital of the

Maldives—an island country without rivers that depends on rain or groundwater for its drinking water. Through our participation in these large-scale, global projects, we will continue to help find solutions for water-related problems around the world.

We are also focusing on physical water risks at our own plants. A water shortage is usually regarded as the main physical risk for ordinary plants. However, since Hitachi's business sites are concentrated in areas near rivers or with a rich source of underground water, we consider this physical risk to be minimal. Even so, we have taken appropriate and necessary measures to secure dedicated waterways in case there are water-access concerns. We also deem flood damage as a physical risk. At times of new plant constructions, therefore, we keep the potential damage in mind when choosing sites. When we judge countermeasures to be required, we install bulkhead partitions or place essential amenities on the second floor—including at existing plants. We check upstream water levels every month and set up flood task forces when levels reach a dangerous level, sharing such information with our suppliers. We also diversify risks by procuring components from multiple suppliers.

We will continue to promote necessary measures to minimize water-related physical risks.