

3 Environment

Since its establishment, the ID&E Group has been committed to contributing to the development of a sustainable society by undertaking numerous projects and initiatives aimed at improving and creating a better "natural environment" as well as "social environment."

In alignment with various policies and action guidelines in the environment domain, we will continue to advance sustainability management. Among the wide-ranging environment fields, this report covers the following topics:

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3. Environment

Since its founding, the ID&E Group has aimed to contribute to the development of a sustainable society, engaging in numerous businesses and projects focused on the improvement and creation of both the “natural environment” and the “social environment.” In the new prioritised issues representing our materiality announced in August 2024, we reaffirmed our commitment to environmental action by designating “Cultivating a beautiful and habitable planet” as a key business focus. We will continue to promote sustainability management in the environmental sector in accordance with the “ID&E Holdings Environmental Activity Policy” and the associated action guidelines.

ID&E Holdings Environmental Activity Policy

The ID&E Holdings Group (the ID&E Group) has set an Environmental Activity Policy with the recognition that addressing global environmental issues is a core issue in the sustainability management of the ID&E Group, as we aim to achieve both “contribution to the development of a sustainable society” and “creation of corporate values for the ID&E Group.”

1. ID&E Group’s Basic Stance on Environmental Issues

The ID&E Group will sincerely fulfil its accountability for the Group’s environmental management through compliance with environment-related laws and regulations, reduction of the environmental impact with regard to corporate activities, improvement of the knowledge and awareness of officers and employees needed for environmental consideration, and dialogue and disclosure of information with stakeholders in relation to environmental issues.

Furthermore, we will utilise our experience, technologies, human resources, and networks that over many years have contributed to the development of environment-related social capital around the world to take on the challenge of the development of businesses that are conducive to the realisation of a sustainable global environment even more actively than before with technology as our main pillar.

2. Priority Issues Concerning Environmental Activities

The ID&E Group has positioned the following six themes that are of great concern for society as having a significant impact on the sustainable global environment as environmental issues to be addressed with priority.

- Environmental management
- Climate change/realising a decarbonised society
- Natural environment/biodiversity preservation
- Realisation of a circular society
- Conservation of water resources
- Management of chemical substances

Based on the “ID&E Holdings Environmental Activity Policy,” we have formulated the following action guidelines for prioritizing environmental issues.

- Action Guidelines for Environmental Management
- Action Guidelines for Climate Change/ Realising a Decarbonised Society
- Action Guidelines for the Conservation of the Natural Environment and Biodiversity
- Action Guidelines for Realising a Circular Society
- Action Guidelines for the Conservation of Water Resources
- Action Guidelines for Chemical Substance Management

3.1 Environmental Management

Approach/Policy

For the ID&E Group, which upholds the management philosophy of "Act with integrity and contribute to society through technology and engineering" "Environmental Management" is, along with "Quality Management," a core issue that supports ID&E's sustainability management. Our Group aims to balance environmental conservation and footprint reduction with the provision of high-quality services, and we strive to achieve sustainable and effective "Environmental Management" in accordance with the "Action Guidelines for Environmental Management."

ID&E Holdings Action Guidelines for Environmental Management

The ID&E Holdings Group (the ID&E Group), taking into account the Group's Environmental Activity Policy, has set its Environmental Management Action Guidelines as a common guideline for the environmental activities of the ID&E Group from the point of view of sustainability management.

1. Foundational Recognition

With the awareness that we are a group acting globally, we strive to develop and provide technological services and products that are in harmony with society and nature, and contribute to the conservation and betterment of a sustainable global environment while deepening our partnerships with relevant countries, organizations, and the public with an understanding of international norms and the environment regulations of each country.

2. Linkage with Environmental Management Systems

Environmental management systems are a mechanism that has a high affinity with the specific implementation of sustainability management in the environmental field, and therefore, we will build a mutually complementary relationship between sustainability management and environmental management systems and fulfil our accountability in relation to corporate management and environmental conservation efforts.

3. Environmental and Social Considerations

When ID&E Group companies are involved in projects in Japan or overseas, we will proactively propose to our clients and business partners detailed consideration and environmental conservation measures in accordance with the local natural and social environment, and aim to reduce the environmental impact of our projects.

4. Fostering Trusting Relationships with Stakeholders

The ID&E Group will come to a mutual understanding of environmental issues with stakeholders in relation to the Group's environmental activities, disclose policies, action plans, objectives, data, etc., in relation to efforts on these issues, and strive to build relationships of trust with stakeholders.

5. Raising Environmental Awareness

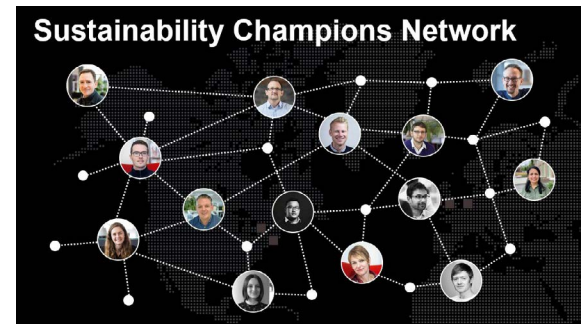
We will provide all officers and employees with opportunities for environmental training to raise their awareness. In addition, we will also proactively conduct environmental management activities in our daily work and daily activities as a global member that is supporting the future of the earth.

6. Comprehensive Approach to Environmental Issues

Recent environmental issues have greatly expanded, such as climate change countermeasures, biodiversity conservation, the formation of a recycling society, and consideration for society and culture, and all of these are both multilayered and intertwined. The ID&E Group understands that each of these environmental issues has a reciprocal impact, and that measures have to be taken to ensure that efforts to resolve each issue have a synergy effect with each other.

Management

Our Group operates a "Quality and Environmental Management System" and many Group companies comply with ISO9001 and/or ISO14001. This is to ensure not only the quality of our business activities but also to actively address environmental considerations. By responding with integrity to the risks and opportunities related to quality and the environment that arise from our business activities, we aim to improve quality, enhance customer satisfaction, and fulfil our social responsibility through environmental awareness. In order to achieve continuous reduction in environmental impact within the "Quality and Environmental Management System," we are raising awareness by linking our business activities with the SDGs and visualising our environmental achievements. BDP has also developed a network of Sustainability Champions that work with project teams to set and monitor project-specific sustainability goals.



3.1 Environmental Management

Activities and Achievements

(1) Raising Environmental Awareness

Various programmes are being implemented within our Group companies to enhance employees' environmental awareness. The most notable examples include:

- ID&E: Environmental education programmes are being implemented for employees within the Group through the ID&E Global Academy. For details, please refer to section 4.2 on Human Capital Management.
- BDP: "Sustainability in Action" is a monthly communication sent to all staff, covering a wide range of sustainability and environmental topics. "BDP Life" is also a quarterly forum where management and employee representatives discuss issues related to the company and how to address them. At regular times throughout the year, environmental issues are presented and discussed.
- Nippon Koei Energy Solutions: The Yokohama Technical Centre conducted a lights-off event within the office floors as part of Earth Day activities on April 22nd.
- NIPPON KOEI LAC. INC. (NKLAC): NKLAC promotes the best practices sharing, which give positive impact toward waste management, energy efficiency and carbon dioxide emission among Group companies and affiliated foothold. Online lecture and online training concerning the quantitation of GHG have also been designed and conducted from its offices in Colombia and Panama.

(2) Comprehensive Initiatives

Complex environmental issues, such as climate change, biodiversity, and waste management, require a holistic

approach rather than discrete responses. Our Group provides various solutions aimed at addressing these interconnected challenges.

Smart Eco Industrial Park 3D Data Platform

At the Long Duc Industrial Park in Vietnam, our Group is advancing the "Smart Eco Industrial Park 3D Data Platform." This initiative involves the integration of solar power generation system, battery storage system,

and an Energy Management System (EMS) into a virtual power plant (VPP), and the construction of a cross-sector data platform. This supports maximisation of renewable energy, improved energy efficiency, productivity enhancement, and reduced environmental impact, aiming to achieve smart industrial park operations.

Overview of the sector-wide data platform



The cross-sector data platform collects and analyses all real-time data within the industrial park using 3D modelling. This enables real-time monitoring and future simulation of the park's operations, supporting decision-making for park management. Our Group is contributing to comprehensive responses to environmental challenges through initiatives such as the Smart Eco Industrial Park at Long Duc. These experiences also support the expansion of the smart city business and provide a new model for sustainable urban development.

3.1 Environmental Management

Hikone Castle Green Slow Mobility Social Experiment

Nippon Koei Urban Space supported the implementation of the "Hikone Castle Green Slow Mobility Social Experiment." The aim of this project is to reduce the entry of private vehicles around Hikone Castle, alleviate congestion, promote environmental preservation in the surrounding area, and boost tourism. Nippon Koei Urban Space has continuously supported the planning, evaluation, and management of this social experiment. In the social experiment involving "Green Slow Mobility," a low-carbon, sustainable, and environmentally-friendly transportation service was trialled, using electric vehicles (EV buses) that travel at speeds under 20 km/h. These initiatives contribute to reducing CO₂ emissions, protecting biodiversity, and revitalising the local economy.

The data obtained through the social experiment will serve as important indicators for future environmental policies and urban planning.

This initiative provides a valuable case study, demonstrating the positive environmental impact that can serve as a reference for other regions.



Bus in trial operation

The Good City

Our Group has launched "The Good City" initiative to realise our mission of "Making the World a Better Place."

Urban areas accommodate 56% of the world's population, generate 85% of its Gross Domestic Product (GDP) but are also responsible for 70% of its CO₂ emissions. Too many cities are congested and polluted, they are car dependent with ineffective public transport, and they fail to provide good housing and quality of life to all their residents.

However, cities also hold the key to solving many of the issues we face. Instead of focusing narrowly on technical aspects like smart cities, our Group takes a holistic, cross-sectoral approach to provide comprehensive solutions that address urban challenges in a one-stop service.

Cities vary hugely in their size, function, culture and geography but they all face the following ten issues even if the solutions may not always be the same. In "Good City," we have defined our views on each of these issues and our ideal vision for them.

Nippon Koei, BDP and other members of ID&E Group have extensive expertise in urban and consulting services and working with cities across the world and independent experts to explore the crucial issues facing cities. As



Issues of cities as defined by "The Good City"

part of "The Good City" initiative, we have also launched "The City Observatory", which focuses on cities around the world and research best practices for creating good cities. The initial programme is working with 10 cities.

3.1 Environmental Management

■ Details of the “10 issues” for cities as defined by “The Good City”

Issues of cities	Our views	Five ‘Good City’ Solutions	
1. Bringing people together	The primary function of cities is to bring people together. In a world of social media and online meetings, face-to-face contact still matters.	<ul style="list-style-type: none"> • Understanding urbanism • Walkable neighbourhoods • Encouraging a mix of uses 	<ul style="list-style-type: none"> • Welcoming public realm • Sustainable density
2. Getting around	The Good City needs to move people around efficiently. A city is too big for all of this to be done via walking and cycling, the Good City needs efficient public transport and a plan for cars.	<ul style="list-style-type: none"> • Future urban mobility • Development around transit stops • Multi-modal transfer 	<ul style="list-style-type: none"> • Minimising car use • Street for everyone
3. Well designed	Every aspect of the Good City is designed; from its strategic and neighbourhood plans, to its buildings, transport systems, infrastructure, public realm, lighting, street furniture and interiors.	<ul style="list-style-type: none"> • Well planned • Quality master plans • Beautiful buildings 	<ul style="list-style-type: none"> • Respect for heritage • Welcoming and safe public realm
4. Clean and non-polluting	The scale and intensity of cities puts strain on natural systems as well as impacting on public health. The Good City should have clean air and rivers and be efficient at disposing its waste.	<ul style="list-style-type: none"> • Waste to energy • Clean air strategies • Recycling systems 	<ul style="list-style-type: none"> • Water supply systems • Sanitation systems
5. Zero carbon	Cities accommodate 56% of the world’s population but are responsible for 70% of its CO2 emissions. The Good City must therefore be zero carbon ready.	<ul style="list-style-type: none"> • Decarbonisation of power generation • Smart energy networks 	<ul style="list-style-type: none"> • Energy efficiency buildings • Energy storage • City digital twins
6. Quality of life	The primary role of the Good City is to provide its people with a good place to live in communities that are diverse and supportive, healthy and safe.	<ul style="list-style-type: none"> • Quality Housing • Better healthcare and education • Inclusive design 	<ul style="list-style-type: none"> • Empowering communities • Play and recreation
7. Nature based solutions	The Good City is a green city providing healthier, more biodiverse, climate resilient, equitable places to live and work that contribute to a sustainable city.	<ul style="list-style-type: none"> • Biodiversity net gain • Cooling effects • Flood alleviation 	<ul style="list-style-type: none"> • River regeneration • Planning, policy and design guides
8. Resilient	In a changing world the Good City must be resilient, able to cope with both gradual change and extreme events caused by climate change or other natural or human-made disasters.	<ul style="list-style-type: none"> • Disaster prevention • Flood risk assessment • Resilient buildings 	<ul style="list-style-type: none"> • Resilient structures • Smart city systems
9. Flexible and responsive	The Good city is not sufficient enough by just being optimal to deal with current situation and so, it must be able to flex and evolve to deal with whatever tomorrow brings.	<ul style="list-style-type: none"> • Loose fit urbanism • Mix use quarters • Flexible spaces 	<ul style="list-style-type: none"> • Adaptive re-use • Big data
10. Prosperous + successful	The Good City is a prosperous city that provides a living to its citizens and contributes to the success of the national economy.	<ul style="list-style-type: none"> • City renaissance • Urban regeneration • Retail mixed use 	<ul style="list-style-type: none"> • Workplace • Science and technology



The launch was presented to customers during a private showcase hosted by ID&E in Kuala Lumpur, Malaysia.



Launch events for The Good City were held for internal staff at BDP's London studio

3.2 Climate Change / Realisation of a Decarbonised Society

Approach/Policy

Addressing climate change and realising a decarbonised society are among the most significant challenges that ID&E Group can contribute to through its business activities, leveraging the technologies it has cultivated since its foundation. With this recognition, we have established the "Action Guidelines for Climate Change/ Realising a Decarbonised Society". In line with international initiatives, we will ensure appropriate accountability and collaborate with various stakeholders to comprehensively and proactively drive efforts towards the realisation of a decarbonised society.

ID&E Holdings

Action Guidelines for Climate Change/Realising a Decarbonised Society

Based on the Group's Environmental Activity Policy, the ID&E Holding Group (ID&E Group) will address the following listed matters.

1. Responding to the Recommendations of the TCFD (Task Force on Climate-Related Financial Disclosures)

As a corporate group involved in the provision of technological services and business operations connected to climate change / realising a decarbonised society, the ID&E Group supports the TCFD Recommendations. This is an international framework that was established for the purpose of accelerating action against climate change through corporate disclosure of information on climate change. We will continue to appropriately disclose information based on the four items of governance, strategy, risk management, and metrics and

targets. Based on our experience in disclosing information based on the TCFD Recommendations, we will steadily prepare for dealing with new international frameworks and initiatives, such as the disclosure standards of the International Sustainability Standards Board (ISSB).

2. Comprehensive Efforts for Climate Change/Realising a Decarbonised Society

(1)Efforts of the ID&E Group towards decarbonisation
The ID&E Group will sincerely fulfil its accountability in regards to climate change measures in order to achieve the goals of the Paris Agreement adopted at the 21st Conference of Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC). Specifically, we aim to reduce Scope 1 and 2 greenhouse gas-equivalent emissions from our consolidated subsidiaries, which exceed more than 70% of the ID&E Group's sales, to net zero by 2030. This will be achieved through measures such as CO₂ absorption and fixation, emission reduction, etc., including purchase of credits.

(2)Contributions of the ID&E Group toward realising a decarbonised society
We will accelerate mitigation measures to absorb and fix greenhouse gas emissions and reduce the volume of emissions, and furthermore proactively work on adaptation measures to prepare for the impact of climate change. In fields such as urban development, transportation, forest conservation, renewable energy, and disaster reduction/prevention, we will bring together the ID&E Group's technologies that have been accumulated over many years with innovative technologies to provide solutions from both perspectives of mitigation and adaptation. We will also contribute to accelerating the transition to a decarbonised society through the effective operation of the carbon pricing mechanisms.

3. Comprehensive Efforts for Biodiversity, Water Resource Conservation and Resource Recycling

Taking into consideration that appropriate responses to climate change will lead to solutions for various environmental issues such as biodiversity, the conservation of water resources, resource circularity,

etc., we will comprehensively make efforts on all of these issues with climate change measures set at the core.

4. Climate Change Measures that Take into Account the Entire Supply Chain

Considering the importance of reducing greenhouse gas emissions throughout the entire supply chain, we will deepen dialogue with relevant stakeholders and strive against climate change by sharing our goals.

Efforts Towards TCFD Recommendations

For globally expanding Group, addressing climate change is both a risk and an opportunity. Based on the TCFD (Task Force on Climate-related Financial Disclosures) recommendations, we will continue to make efforts to clearly communicate to all stakeholders the impacts that climate change has on our Group's business activities.

Governance

As described in section "2.2 Structure", we are promoting sustainability initiatives related to climate change. However, given that the Sustainability Promotion Council addresses a wide range of topics, it has been challenging to focus solely on discussions regarding climate change. Going forward, we will establish a specialised committee dedicated to climate change, which will work on detailed discussions and the implementation of climate change-related practices.

3.2 Climate Change / Realisation of a Decarbonised Society

Strategy

● Definition of Scenarios

Our Group has selected the "SSP1-1.9 (below 1.5° C scenario)" and "SSP5-8.5 (4° C scenario)" from the "Intergovernmental Panel on Climate Change" (IPCC) as the baseline scenarios for scenario analysis.

The below 1.5° C scenario assumes that decarbonisation will be maximally promoted under sustainable development, with strengthened environmental policies and regulations aimed at achieving carbon neutrality by 2050. This scenario envisages the introduction of carbon taxes and the mainstreaming of renewable energy as the primary energy source.

On the other hand, the 4° C scenario assumes development based on dependence on fossil fuels, without the introduction of mitigation measures such as reductions in greenhouse gas emissions. Compared to the below 1.5° C scenario, this scenario envisages a significant increase in the scale and frequency of natural disasters.

Based on these scenarios, our Group has analysed medium- and long-term risks and opportunities related to climate change factors that affect our business. We have consolidated and disclosed the risks and opportunities that are of the highest priority for our Group.

● Scenario Analysis

The scenario analysis conducted for FY2024/06 focused on our company and five main Group companies: Nippon Koei, Nippon Koei Urban Space, BDP, Nippon Koei Energy Solutions,

and Nippon Koei Business Partners. These five main Group companies represent approximately 71% of our Group's total revenue (as of FY2023/06).

In the scenario analysis process, we successfully identified common risks and opportunities across all five companies. However, while company-specific risks and opportunities with significant impact were present, the extraction, analysis, and evaluation of these risks and opportunities were not fully considered. Moving forward, we will review the methods for identifying, analysing, and evaluating risks and opportunities for each company, and will enhance the scope of our disclosures. Additionally, we will work towards expanding the

range of companies covered by this analysis.

Furthermore, we have conducted a financial impact assessment on quantifiable risks and opportunities (Table 3). This assessment was carried out in consultation with stakeholders from each segment. However, due to the ongoing development of common definitions related to climate change related costs and revenue across the Group, slight discrepancies arose between the companies and segments in terms of the definitions and aggregation methods related to climate change responses. We will improve the clarification of climate change-related costs and revenue by establishing and implementing common definitions within the Group.

■ Table 1: Climate-Related Risks, and Countermeasures

Risk Types		Risk Details	Timeframes	Impact on Business and Finance		Countermeasures
				1.5°C	4°C	
Transition Risks	Policy and Legal	• Increased energy procurement costs, such as fuel costs, due to carbon pricing.	Long-term	Low	–	<ul style="list-style-type: none"> • Transition to and insourcing of renewable energy (ID&E RE100) • Comprehensive promotion of energy-saving measures • Carbon footprint-conscious design and construction management • Promotion of research and development for environmental impact reduction
		• Higher costs for acquiring carbon credits.	Long-term	Low	–	
		• Increased utility and vehicle costs due to the introduction of carbon pricing	Long-term	Low	–	
		• Increased operational costs from the implementation of carbon pricing	Long-term	Low	–	
Physical Risks	Chronic	• Indirect operational cost increases due to the introduction of policies and regulations.	Long-term	Low	–	<ul style="list-style-type: none"> • Mitigate vehicle expenses through the introduction of fuel saving EVs • Streamlining operations through AI adoption
		• Increased electricity and water consumption due to rising temperatures.	Ultra-long-term	Low	Low	
Physical Risks	Chronic	• Disruptions to employee access to offices and project sites caused by extreme weather events.	Ultra-long-term	Medium	Medium	<ul style="list-style-type: none"> • Ensuring continued work through the use of satellite offices and remote work • Improvement of BCP (Business Continuity Planning) • Reducing risks of inaccessibility to project sites by incorporating potential delays from extreme weather into pre-project planning

* Timeframe: Short-term (2024), Medium-term (~2027), Long-term (2030), Ultra-long-term (2030~)

* Impact on Business and Finance: Low (JPY10m), Medium (JPY10m to JPY100m), High (JPY100m or more)

* For transition risks, the company examines items impacted by policies and market changes implemented by governments to limit global warming to below 1.5° C (transition risks under the 4° C scenario are not considered).

* For physical risks, the company evaluates items impacted by temperature increases under the 1.5° C and 4° C scenarios. Qualitative assessments of business impacts for 2030 and 2050 are conducted, with significant differences observed by 2100.

3.2 Climate Change / Realisation of a Decarbonised Society

■ Table 2: Climate-Related Opportunities and Countermeasures

Opportunity Types	Opportunity Details	Timeframe	Impact on Business and Finance		Countermeasures
			1.5°C	4°C	
Resource Efficiency	• Reduction in energy-related costs through the introduction of subsidy programmes.	Medium-term	Low	—	• Reduction of costs for renewable energy and energy-efficient facilities through subsidies under GX promotion. • Enhanced information disclosure to meet disclosure requirements for subsidy utilisation.
Products and Services	• Expansion of investment opportunities in renewable energy.	Medium-term	High	—	• Promotion and development of hydropower projects (small-scale hydropower and pumped hydro storage). • Business development leveraging battery-related technologies (e.g. development and operation of demand-supply management systems).
Physical Opportunities	• Supporting the development of regional circular and ecological spheres by leveraging local characteristics.	Medium-term	High	—	• Further promotion of decarbonisation support in urban development. • Application of the company's know-how and technologies to support "Regional Circular and Ecological Spheres" in urban development. • Expansion of smart city-related services.
	• Increased orders for renewable energy-related projects.	Medium-term	High	—	• Identifying demand for renewable energy facilities. • Strengthening sales structures to capture demand in response to the growing need for renewable energy facilities. • Promotion of technological development for renewable energy.
	• Rising demand for infrastructure construction, maintenance, and repair for disaster prevention, mitigation, recovery, and reconstruction due to natural disasters and rising sea levels.	Long-term	High	High	• Active support for infrastructure development needs related to disaster prevention, mitigation, recovery, and reconstruction overseas. • Rapid response to demand changes driven by national resilience policies.
	• Increased order opportunities associated with enhancements to power generation and transmission infrastructure.	Long-term	High	High	• Strengthening sales structures to capture demand in response to increasing equipment needs. • Promoting renewable energy introduction in Japan through the acquisition of cutting-edge international information and technologies.
Market	• Rising needs for the development of new products or services driven by research, development, and innovation.	Long-term	High	High	• Manufacturing and developing decarbonisation products and services by utilising new technologies. • Reducing manufacturing costs through the use of new technologies.
	• Improved profitability due to diversified consumer behaviour and increased awareness of environmental issues, leading to increased demand for new environment-related services.	Long-term	High	High	• Understanding environmental demand. • Expansion of existing GX and sustainability-related businesses. • Promotion and development of green infrastructure and renewable energy projects in line with demand. • Transparent communication the company's initiatives and track record. • Monitoring trends through participation in the GX League.
	• Expansion of customer preference by contributing to GHG emissions reduction for clients through decarbonisation-related services.	Long-term	High	High	• Investment in and development of low-carbon technologies for green infrastructure and policy support. • Strengthening proposal capabilities to client companies and local governments that are actively addressing climate change.

* Timeframe: Short-term (2024), Medium-term (~2027), Long-term (2030), Ultra-long-term (2030-)

* Impact on Business and Finance: Judged on the same scale as risks.

* Opportunities are evaluated for items impacted by policies and market changes by governments aiming to limit global warming to below 1.5° C (transition risks and opportunities under the 4° C scenario are not considered).

* Opportunities are also evaluated for items impacted by temperature increases and their implications for the company.

3.2 Climate Change / Realisation of a Decarbonised Society

■ Table 3: Financial Impacts of Climate-Related Quantifiable Risks and Opportunities

Risk Types		Risk Details	Method for Calculating Financial Impact	Financial Impact	
				1.5°C	4°C
Transition Risks	Policies and Regulations	Increase in fuel and energy procurement costs due to the incorporation of carbon pricing	Scope 1 emissions (energy sources) for FY2023 × growth rate × carbon price	0.5 million yen/year ~ 4.3 million yen/year	—
		Increase in utility and vehicle costs due to the introduction of carbon pricing	Utility costs (electricity) for FY2023 × growth rate × rate of change in electricity prices	9.7 million yen/year	—
Physical Risks	Chronic	Disruption of employee access to offices and project sites due to extreme weather events	Total maximum historical damage costs × growth rate × occurrence probability	3.5 million yen/year ~ 15 million yen/year	7 million yen/year ~ 30 million yen/year

Opportunity Types	Opportunity Details	Method for Calculating Financial Impact	Financial Impact	
			1.5°C	4°C
Products and Services	Expansion of Orders for Renewable Energy-related Projects	Revenue from renewable energy-related projects in FY2023 × (parameter for 2030 - growth rate)	1,500 million yen/year ~ 2,200 million yen/year	—
	Increased Demand for Infrastructure Construction, Maintenance, and Repair for Disaster Prevention, Mitigation, Recovery, and Reconstruction Due to Natural Disasters and Rising Sea Levels	Revenue from infrastructure-related projects in FY2023 × (parameter for 2030 - growth rate)	8,700 million yen/year	—
	Increased Order Opportunities Due to Enhancements in Power Generation and Transmission Facilities	Revenue from power generation and transmission-related projects in FY2023 × (parameter for 2030 - growth rate)	2,100 million yen/year ~ 5,500 million yen/year	—

* Financial Impact Amounts represent estimated figures for FY2030 (risks as costs, opportunities as revenue).

* Target Organisations: Main Group companies that conducted scenario analysis

* Key Parameters Used: Our Group's long-term management strategy (growth rates), IEA Net Zero Emissions by 2050 Scenario, IPCC RCP2.6 Scenario, IPCC RCP8.5 Scenario.

● Measures to Address Risks

In anticipation of potential future risks, such as the rise in carbon pricing, our Group launched a demonstration project, "NKRE100", in July 2023. This project supplies 100% renewable energy to three locations, including our Group headquarters, using electricity from our self-operated hydropower plants. This initiative marks the start of expanding NKRE100 into ID&E RE100 to locations in Japan within our Group, as well as expanding services such as procurement of electricity derived from renewable energy suited to regional characteristics and the introduction of renewable energy generation facilities. In the future, we plan to offer services including the aggregation of other companies' renewable energy sources, local production and consumption of renewable energy, energy demand-supply management, and electricity trading.

Risk Management

Our Group recognises the risks (including opportunities) arising from climate change as a critical management issue. Matters related to climate change, natural capital, and biodiversity are incorporated alongside financial risks and other areas, with the Sustainability Promotion Council at the core, to gather and analyse information and develop our Group's policies and action plans.

► For details on the risk management process, please refer to 5.3 Risk Management

3.2 Climate Change / Realisation of a Decarbonised Society

Metrics and Targets

Our Group monitors greenhouse gas emissions resulting from business activities and evaluates the impact on management. In line with the scenario analysis, we have calculated the CO₂ emissions for Scope 1, Scope 2, and Scope 3 for FY2023/06, covering the Main Group Company. As this was the first year of calculation, many items had to be estimated using financial data to derive greenhouse gas emissions from monetary values. We are now working on reviewing the data collection

and calculation methods to better understand the precise greenhouse gas emissions. Moving forward, we will gradually expand the calculation scope and, through the regular quantification of greenhouse gases using the quantitative platform introduced in July 2024, work towards reducing emissions.

● Transition Plan

The Main Group Company have set their reduction targets for Scope 1 and Scope 2 emissions at the same level as Science-

Based Targets (SBT) by FY2030. The reduction target for Scope 3 is currently under development. Moving forward, we will proceed with SBT certification and commitment to reduction targets while expanding the sites where renewable energy is introduced to further reduce Scope 2 emissions. Additionally, we will work to enhance disclosures in line with the four key information disclosure elements required by the TCFD recommendations.

■ GHG Emissions of Main Group Company of ID&E Holdings

Category	FY2023 Emissions (t-CO ₂)	FY2024 Emissions (t-CO ₂)
Scope1	1,038	997
Scope2	4,460	2,425
Scope1, 2	5,498	3,422
Scope3	68,275	102,897

* The emission figures for both fiscal years are under review, and adjustments are expected.

* For Scope 1 emissions, only confirmed values from mobile emission sources are included, and increases are expected as additional data is accounted for.

* For Scope 1 emissions in FY2024, the mobile emission source data for Nippon Koei is based on FY2023 figures.

* For Scope 3 emissions under Category 5 (waste-related emissions), data from Nippon Koei's sites has not been fully incorporated.

■ 2030 Reduction Targets Based on the Transition Plan

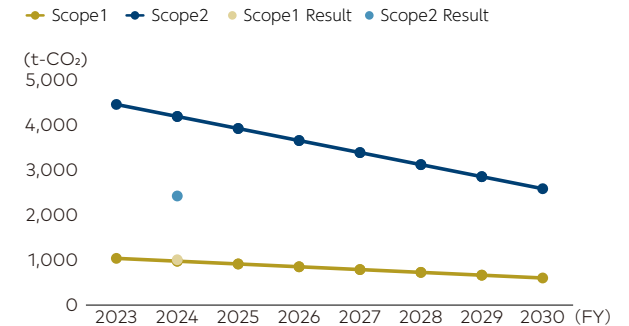
Category	Baseline Year (FY2023) Emissions (t-CO ₂)	FY2030 Emissions (t-CO ₂)	Reduction Rate (Average Annual Reduction Rate)
Scope1	1,038	602	42%(6%)
Scope2	4,460	2,587	42%(6%)
Scope1, 2	5,498	3,189	42%(6%)

* The total values for Scope 2 and Scope 1, 2 are market-based emissions figures

* The lines indicate permissible emission levels if reductions are made in alignment with SBT standards.

* By FY2030, a 42.0% reduction in Scope 1 + 2 emissions compared to the baseline year FY2023 is required, corresponding to an average annual reduction rate of 6.0%. SBT requires linear reductions; therefore, our transition plan also assumes linear reductions.

* For Scope 2 emissions, expansion of the ID&E RE100 initiative is expected to enable achievement of the targets.



3.2 Climate Change / Realisation of a Decarbonised Society

Initiatives and Achievements

In addition to "mitigation" measures aimed at absorbing, sequestering, and reducing greenhouse gas emissions, our Group is also actively engaging in "adaptation" measures to prepare for the impacts of climate change. By integrating long-standing technologies with innovative solutions in areas such as urban development, transport, forest conservation, renewable energy, and disaster prevention and mitigation, we provide comprehensive solutions that address both "mitigation" and "adaptation."

(1) Mitigation

Belgium Large-Scale Battery Storage Project and Akita Prefecture Energy Supply Base Project
NIPPON KOEI ENERGY EUROPE B.V. (NKEE) is constructing and operating a large-scale grid battery storage system in Ruien, Belgium, with an output of 25 MW and a capacity of 100 MWh. This project is aimed at ensuring stable grid operation in response to the growing integration of renewable energy. NKEE oversees the project from planning to operation.

Additionally, in collaboration with the Belgian aggregator YUSO, NKEE provides aggregation services that enable electricity trading in the market.

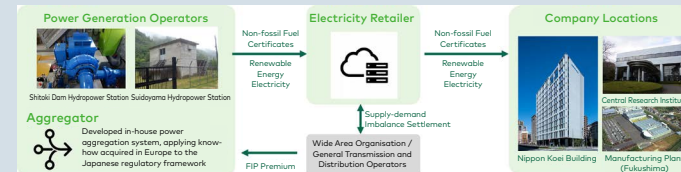
Building on the NKEE's expertise in "renewable energy + battery storage + energy management systems (EMS)" developed in Europe, Nippon Koei Energy Solutions is expanding its business in Japan as well. Nippon Koei Energy Solutions, as the representative company of a consortium, has been awarded the "Akita Coastal Treatment Centre Energy Supply Base Project" by Akita Prefecture. This project adopts the DBO (Design, Build, Operate) method, aiming to establish energy self-sufficiency in the region by utilising diverse renewable energy sources, including biogas power generation, wind power, and solar power. Through collaboration with local companies, the project is advancing through a joint venture (JV) and special purpose company (SPC), contributing to regional decarbonisation. It is planned to operate the facility for 20 years from 2027 to 2047.



Ruien Power Plant

Launch of 'NKRE100' pilot project for 100% Renewable Energy Use in Nippon Koei Buildings
In July 2023, the ID&E Group launched the "NKRE100" pilot project to achieve 100% renewable energy use at three sites in Japan: the Nippon Koei Building, the Central Research Institute, and the Fukushima office (Now NKRE100 is expanded as ID&E RE100 at ID&E Sustainability Management Framework). Under this initiative, approximately 5,000 MWh of electricity is supplied annually from the Shitoki Dam Hydropower Station and Suidoyama Hydropower Station in Fukushima Prefecture, with an estimated annual reduction of around 2,300 t- CO₂ of greenhouse gas emissions. We have also introduced an electricity pricing structure that is linked to the power market, aiming for stable energy supply. Furthermore, Nippon Koei Energy Solutions has implemented a "Virtual PPA" (Power Purchase Agreement), separating the environmental value from renewable energy power, and collaborates with the Group's retail electricity providers to procure power. This initiative aims to efficiently utilise renewable

energy, reduce CO₂ emissions, and achieve both stable energy supply and cost reduction.

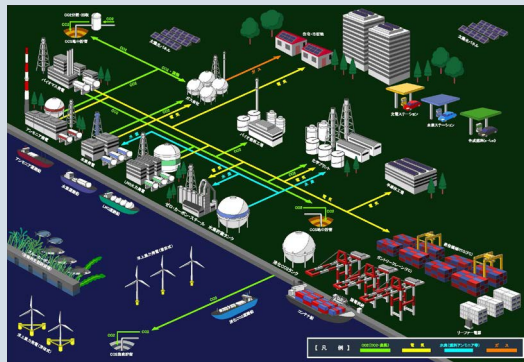


3.2 Climate Change / Realisation of a Decarbonised Society

Providing technology for the planning and design to achieve decarbonisation and carbon-neutral ports

Ports serve as the key hubs for international supply chains, with over 99% of export and import cargo passing through them, while also hosting industries such as power generation, steel and chemical industries that consume large amounts of energy. Given this, coastal regions and ports are seen as areas with significant potential for CO₂ reductions. The "Carbon Neutral Port (CNP)" initiative aims to achieve decarbonisation and carbon neutrality in these regions. As this initiative progresses, it contributes to reducing CO₂ emissions across the entire supply chain and to the construction of sustainable industries. Niigata Port has published a Port Decarbonisation Promotion Plan towards the formation of a CNP, and Nippon Koei and Nippon Koei Energy Solutions have developed emissions estimates, reduction targets and plans, and hydrogen and ammonia supply plans. Through dialogue with various stakeholders, including the national government, local municipalities, port authorities, shipping companies, warehousing companies, and energy-related businesses, the project has moved forward. The need for advanced expertise spanning multiple fields such as port civil engineering, decarbonisation, and energy generation highlights ID&E Group's comprehensive capabilities.

Carbon Neutral Port schematic diagram



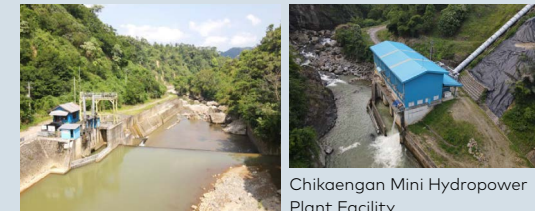
Future Land Use Concept for Hydrogen and Ammonia Supply Facility Development at Niigata Port

(Excerpt from the Niigata Port Decarbonisation Promotion Plan, published March 2024)



Renewable Energy Certificates for Power Sales in Indonesia

Nippon Koei is engaged in a small-scale hydropower project in Garut Regency, West Java, Indonesia, overseeing all aspects from planning, feasibility studies, design, investment, financing, construction management, to operation and maintenance. Beginning in 2009 with surveys and preliminary studies on the Cikaengan River, PT CIKAENGAN TIRTA ENERGI (CHIKAENGAN) was established in 2010, and in 2013, Nippon Koei acquired 90% of the company's shares, with commercial operations starting on 24th December, 2021. Despite damage caused by landslides due to heavy rainfall in 2020, the facility was promptly restored and is now operating normally. The Cikaengan Mini Hydropower Plant has a capacity of 7.2 MWh. The generated power is supplied to the local community through the grid. Furthermore, CHIKAENGAN acquired renewable energy certificates (I-REC) equivalent to the power it sold. By providing these certificates to companies operating in Indonesia, the ID&E Group contributes to reducing environmental impact.



Chikaengan Mini Hydropower Plant Facility

3.2 Climate Change / Realisation of a Decarbonised Society

Support for the Decarbonisation Plan of the Galapagos Islands

Nippon Koei, in collaboration with Chubu Electric Power and Seed Okinawa Co., Ltd., has been contracted by the Japan International Cooperation Agency (JICA) for the "Road Map for Zero Fossil Fuel in Galapagos Islands Project " in Ecuador. This project, running from February 2024 to February 2027, aims to introduce renewable energy and achieve energy efficiency on the Galapagos Islands.

Currently, diesel power generation is the primary source of electricity on the islands, with power demand expected to rise alongside the growth of tourism. The Ecuadorian government is accelerating efforts to limit the use of fossil fuels to achieve sustainable development. This project includes investigating the potential for geothermal energy, as well as optimising the integration of renewable energy and battery storage with the existing diesel power generation system, aiming for decarbonisation and sustainable energy supply for the Galapagos Islands.

Overseas Group Company Initiatives in Latin America

In the municipality of Maracanaú, located in the state of Ceará, Brazil recognised for its strong industrial and logistical location, NIPPON KOEI LAC. INC. (NKLAC), through its Urban Transport and Logistics Programme (TRANSLOG), drew up the Decarbonisation and Climate Change Adaptation Plan (PDAMC), with funds from the Inter-American Development Bank (IDB). In order to achieve the proposed objectives, the Municipal Climate Change Adaptation and Mitigation Policy was drawn up and a Greenhouse Gas (GHG) Emissions Inventory was developed, using the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) method and covering Scope 1. This inventory made it possible to identify the municipality's climate threats and vulnerabilities. In addition, targets were set for reducing GHG emissions, organizing these guidelines into an Adaptation and Mitigation Action Plan, formally agreed with the local community.



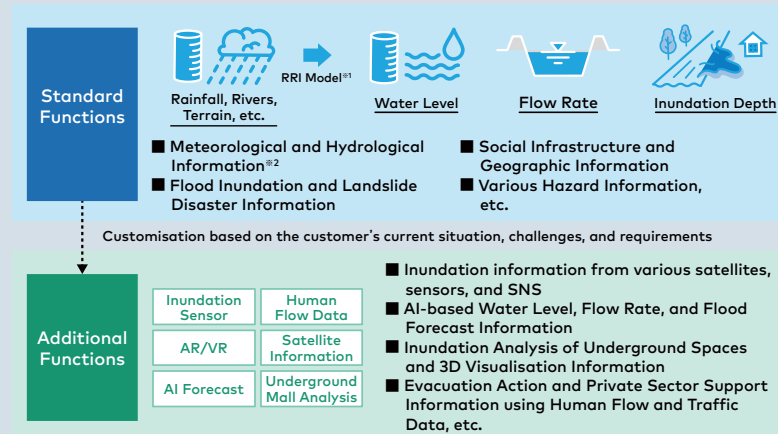
3.2 Climate Change / Realisation of a Decarbonised Society

(2) Adaptation

Bosuke®- An Innovative Disaster Prevention Platform to Address Natural Disasters

Nippon Koei's proprietary disaster prevention platform, "Bosuke®," is a cloud-based service designed to visualise the information necessary for disaster response and evacuation actions, contributing to more efficient disaster operations and the goal of zero delays in evacuation. Customisable features include real-time flood analysis, AI-based water level forecasting, rainfall prediction, information sharing systems, flood sensors, satellite data, and 3D models. It is an effective tool for responding to the increasing frequency and severity of natural disasters caused by climate change. Demonstration experiments of "Bosuke®" have been conducted in Iwaki City (Fukushima Prefecture), Shizuoka City (Shizuoka Prefecture), and Fujimino City (Saitama Prefecture) to enhance regional disaster prevention functions. During Typhoon No.13 in September 2023, "Bosuke®" was successfully utilised, demonstrating the importance of centralised disaster information and the effectiveness of flood-related information.

Disaster Prevention Platform "Bosuke®" functional diagram



^{#1}Rainfall-Runoff-Inundation Model developed by the Public Works Research Institute
^{#2}Meteorological Agency and Ministry of Land, Infrastructure, Transport and Tourism Data Feed

"Bosuke®" Integrated Information Function (Dashboard Image)

The dashboard provides a consolidated view of information for disaster response and evacuation actions. Key features include:

- Weather Information:** Real-time weather data for the current location (e.g., Iwaki City).
- Map:** A geographical map showing inundation areas and alert zones.
- Real-time Display of On-site Footage:** Live video feeds from various locations.
- Display of Water Level and Rainfall Forecast Data:** A line and bar chart showing water levels and rainfall forecasts over time.
- Function for Identifying Locations Exceeding Water Level and Rainfall Thresholds:** A table showing current and forecasted water levels and rainfall for various locations, with color-coded indicators for thresholds.
- Report Output Function:** A feature to generate reports from the data.
- Function for Tracking Evacuation Order Issuance:** A table showing evacuation order status based on water level, rainfall, and maximum inundation depth forecasts.

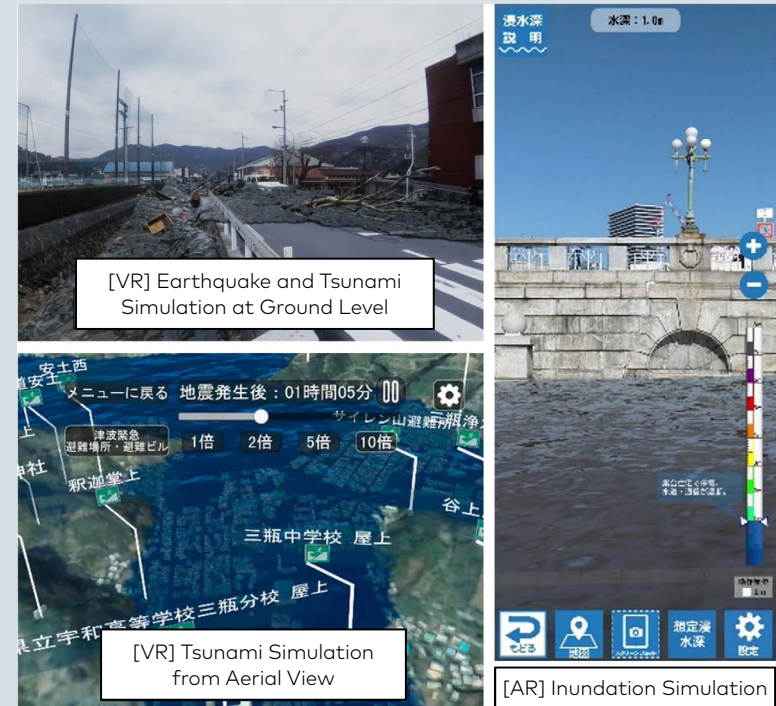
3.2 Climate Change / Realisation of a Decarbonised Society

Development of Disaster Awareness Content Using VR and AR

In addition to physical infrastructure development, Nippon Koei is also involved in the creation of disaster prevention tools and educational content. One notable initiative is the development of disaster awareness content using Virtual Reality (VR) and Augmented Reality (AR). With the increasing severity of natural disasters caused by climate change, it is crucial to enhance disaster preparedness through lessons from past experiences and disaster education. In Seiyō City, Ehime Prefecture, efforts have been made to ensure the lessons from the July 2018 heavy rains are not forgotten, by promoting further disaster prevention and mitigation education. As part of this effort, a "Disaster Memorial Exhibition Room" was established in Nomura Town, a severely affected area, and a package learning project titled "Learning from Disasters" was implemented.

Nippon Koei was commissioned by Seiyō City to develop AR and VR content as disaster experience facilities within the "Disaster Memorial Exhibition Room". The content allows users to experience and learn about the July 2018 heavy rains through VR. Later, additional VR content was created to simulate tsunami scenarios based on the 2013 tsunami risk assessment for Ehime Prefecture, using real-world imagery to depict possible flood scenarios

within the city. These tools have been used as educational materials in annual disaster prevention lessons held each July and have also contributed to disaster education in local elementary schools. Furthermore, the Japan Government's Cabinet Office and the Ministry of Land, Infrastructure, Transport and Tourism have established a system to recognise facilities that convey the experiences of local disasters and activities that preserve the lessons learned, known as the "NIPPON Disaster Heritage". On 5th September, the first 22 cases were announced, and Seiyō City's "Disaster Memorial Exhibition Room" was recognised as one of the "NIPPON Disaster Heritage" sites.



Disaster awareness content screen

3.3 Biodiversity Conservation and Natural Capital

Approach/Policy

The ID&E Group has carried out various projects and services, both in Japan and internationally, that contribute to the conservation and management of natural capital, including environmental protection, forest conservation, ecosystem preservation, and environmental assessments. Through our hydropower operations and survey/ design projects, we engage in business activities that directly or indirectly depend on or impact the natural environment. With the materiality of "Realising a Livable Global Environment," ID&E has established the "Action Guidelines for the Conservation of Natural Environments and Biodiversity," which outlines the company's commitment in these areas. Based on these guidelines, the ID&E Group aims to further enhance its internal responses as well as the related services it provides.

ID&E Holdings

Action Guidelines for the Conservation of the Natural Environment and Biodiversity

Based on the Group's Environmental Activity Policy, the ID&E Holding Group (ID&E Group) will address the following listed matters. As a first step, we aim to contribute to the realisation of a "nature- positive" society, while keeping in mind the Kunming-Montreal Global Biodiversity Framework 2030 Mission, which is a global goal to be achieved by 2030.

1. Response to the Recommendations of the TNFD (Task Force on Nature-Related Financial Disclosures)

As a corporate group that has provided technical services related to the

natural environment and biodiversity both in Japan and internationally, the ID&E Group supports the TNFD recommendations. This is an international framework for promoting the achievement of a "nature- positive" society through the corporate disclosure of information concerning the natural environment and biodiversity. We will identify areas that can be easily impacted by the corporate activities of the ID&E Group, and after clarifying their reliance on nature, impacts, and priority areas, we will conduct risk and opportunity assessments, and appropriately disclose information.

2. Promoting the Conservation, Regeneration and Restoration of the Natural Environment/Biodiversity

In the businesses in which the ID&E Group is involved in Japan and overseas, we will strive to minimise the negative impact of our business activities on the natural environment and biodiversity to enable the diverse blessings of nature to be left to future generations and to be enjoyed in perpetuity. In addition, we will contribute to the conservation of the natural environment and biodiversity through proactive involvement in businesses and research that directly contribute to the conservation of species diversity.

3. Promoting the Regeneration and Restoration of the Natural Environment/Biodiversity

In addition to the conservation activities set forth in the preceding paragraph, the ID&E Group will actively engage in activities to restore a healthy natural environment and ecosystems, while utilizing the technologies it has cultivated over many years. We will propose the provision of social infrastructure in harmony with nature so that the diverse functions that nature is endowed with, including "self-sustaining recovery capabilities," can be fully utilised. We will contribute to the creation of a sustainable and resilient environment and society while pursuing synergies between the restoration of the natural environment and biodiversity and the well-being of society as a whole.

4. Comprehensive Efforts Toward Climate Change, Water Resource Conservation and Resource Circularity

With the recognition that the conservation and restoration of the natural environment as a whole will have a reciprocal impact on issues

related to climate change, water resource conservation, and resource circularity, the Group will engage with these issues holistically.

5. Understanding and Addressing Dependence and Impact on Biodiversity with Consideration for the Entire Supply Chain

With the recognition that biodiversity issues are issues that affect the entire supply chain, we will understand their dependence and impact on biodiversity, and make efforts together with stakeholders on biodiversity preservation and restoration.

Response to the TNFD (Taskforce on Nature-related Financial Disclosures) Recommendations

Following the release of the final report on the TNFD recommendations in September 2023, the ID&E Group has been preparing to align its disclosures with these guidelines. In FY2024/06, the ID&E joined the TNFD Forum and conducted scoping for five Main Group companies within the Group. For FY2025/06, the Group plans to expand the extent of the scoping and aims to conduct analysis, evaluation, and disclosure for priority companies and businesses in line with the TNFD recommendations and register as a TNFD Adopter. Moving forward, the Group will implement the necessary measures, considering the potential future obligations of disclosing nature-related financial information under international accounting standards.

3.3 Biodiversity Conservation and Natural Capital

Initiatives and Achievements

(1) Contributions to Biodiversity Conservation and Natural Capital

Utilising "Environmental DNA Technology"

Our Group actively employs Environmental DNA (eDNA) technology, which analyses the genetic information of organisms found in the environment.

eDNA technology contributes to biodiversity conservation and natural capital management in the following ways:

- It swiftly assesses the health of ecosystems in lakes, rivers, and forests, supporting environmental assessments, impact evaluations, and conservation measures.
- It tracks the presence of endangered and rare species, aiding in their conservation and protection efforts.
- It serves as an information tool for predicting and preventing infectious disease outbreaks, such as COVID-19.
- It helps estimate the flow of river water and groundwater using DNA as a marker.



Standard River Sampler Made with Sponge

eDNA technology is particularly suited for detecting a wide range of species from minute DNA samples found in the environment. Since it does not require the capture or observation of organisms, it is a low-impact and environmentally friendly method.

■ On-site Installation of Marine Sponges-based Environmental DNA Survey



Responding to Biodiversity Net Gain

(BNG: Biodiversity net gain) policy mandate in UK
UK's Environment Act 2021 requires most development projects to increase biodiversity by +10% compared to pre-development levels. The mandatory requirement came into effect in February 2024, requiring the quantification and assessment of biodiversity. UK-based BDP employs in-house ecologists to assess biodiversity and support its operations to minimise losses and ensure net gains wherever possible, in line with mandatory BNG requirements. Experiences through this initiative will be beneficial not only for the UK, but also for our Group, which provides services in other countries and regions.

3.3 Biodiversity Conservation and Natural Capital

(2)Restoration and Regeneration of the Natural Environment and Biodiversity

Consultancy for Identifying the Restoration Area Based on Ecosystem Services

The World Wide Fund for Nature (WWF) is working to convert existing rubber plantations to sustainable rubber production forests and ecosystem conservation in Myanmar, Thailand and Laos. WWF commissioned MYNMAR KOEI INTERNATIONAL LTD (MKI) to conduct a study to identify reforestation sites in Myanmar's rubber plantation dominated areas.

To identify key sites for forest restoration, MKI utilised satellite imagery to analyse the correlation between forest cover (the percentage or extent of land covered by forests) and the locations of former rubber plantations. This analysis helped pinpoint potential reforestation sites. Building on the experience from this project, MKI aims to apply these insights to various environmentally conscious offset activities in the future.



Pictures of rubber plantation landscapes.



Foreign Minister's Commendation

Employees of Nippon Koei's Coastal and Port Department were involved in the planning and design of coastal protection measures for the Bali Coast Conservation Project in Indonesia, focusing on landscape and environmental considerations. In 1999, the Department utilised this experience to publish papers on specific approaches to technical challenges and solutions for beach restoration. Subsequent papers published annually received high acclaim from the Japan Society of Civil Engineers and the Asian Civil Engineering Coordinating Council, earning commendations from both organisations. These papers, grounded in advanced technical expertise and practical experience, were deemed beneficial for facilitating smooth and effective technology transfer



Nusa Dua Beach (Indonesia)

and contributed significantly to the effective promotion of Japan's economic cooperation, earning the Foreign Minister's Commendation.

3.3 Biodiversity Conservation and Natural Capital

Contributing to Urban Biodiversity Conservation and Sustainable Society through the Utilisation of the Park-PFI System

Our Group, led by Nippon Koei Urban Space, is actively utilising the "Park-PFI" (Public Offering for Installation and Management) system. This system allows private enterprises to manage and operate facilities that enhance the convenience of park users. The revenues generated from these facilities are then used to improve park management and maintenance.

From the perspective of biodiversity conservation, the "Park-PFI" system offers the following benefits:

- **Ecosystem Conservation and Restoration:** It promotes the development and maintenance of parks and green spaces, contributing to the preservation and enhancement of biodiversity.
- **Green Network Construction:** It facilitates the creation of green corridors that support the movement of species and the securing of habitats within urban areas.

Below are some of the key projects our Group has undertaken in relation to the "Park-PFI" system.

- **Urban Park Park-PFI Project: "Meiji Park" (Tokyo)**

This project represents the first case in Tokyo where the "Park-PFI" system, based on the Urban Parks Act, has been utilised for the installation and management of a metropolitan park. Nippon Koei Urban Space is working towards sustainable park management, including utilizing data from smart poles (AI cameras, AI beacons) and conducting vegetation surveys.

- **The Nakaze Campsite, managed by Hirado City in Nagasaki Prefecture, is a camping site developed using the Park-PFI system. It has been in operation since 2019 and marked the first use of this system for park development in Nagasaki Prefecture. Additionally, this was the first case nationwide where the overall management and operation of the entire park were undertaken through this system.**



Meiji Park (Tokyo)

3.4 Resource Circulation

Approach/Policy

In relation to the establishment of a circular society, the ID&E Group has provided various technologies and services, with a focus on waste management. Contributing to the creation of a circular society requires not only efforts made through our business activities but also the fulfilment of our responsibility to explain how we are addressing this issue internally. With this in mind, the Group has formulated the "Action Guidelines for Realising a Circular Society." Based on these guidelines, the Group will work to further develop and deepen our approach to the circular economy.

ID&E Holdings Action Guidelines for Realising a Circular Society

Based on the Group's Environmental Activity Policy, the ID&E Holding Group (ID&E Group) will address the following listed matters.

1. Promotion of the Circular Economy

As a corporate group that has provided technical services related to waste management both in Japan and internationally, the ID&E Group will strive to reduce waste generated from its own corporate activities, promote maximum reuse and recycling of limited resources, and faithfully fulfil its accountability. In addition, the ID&E Group will aim to reduce the amount of final disposal (zero emissions) by not producing waste and pursuing more efficient use of resources and energy with less environmental footprint.

2. Contributing to Proper Management of Waste and Reducing the Amount of Waste to be Disposed

In addition to providing technical services related to waste management, the ID&E Group will also make every possible effort to reduce waste generated from businesses in which it is involved across the world, thereby contributing to the formation of a sustainable, circular society in Japan and abroad. Our efforts will not just be in regard to recycling waste but will also be on reducing the volume of waste through energy recovery.

3. Comprehensive Efforts for Climate Change, Biodiversity and Water Resource Conservation

We believe that working toward sustainable resource use and shifting to a circular economy will lead to resolve various issues including climate change, biodiversity, and water resources, and we will comprehensively address all of these issues.

4. Cooperation and Collaboration with External Stakeholders

Through the ID&E Group's overall business activities, first, we will strive to understand the flow of waste disposal in the entire supply chain, and will work together with each stakeholder based on an understanding of their role in waste management.

5. Raising the Awareness of Each Officer and Employee

We will promote not only reducing waste, reuse, and recycling, but also take a proactive stance on avoiding waste generation, and encourage all executives and employees to think and act independently toward the realisation of a circular society.

Initiatives and Achievements

Our Group is actively promoting a circular economy around the world.

(1) Promotion of Circular Economy Initiatives

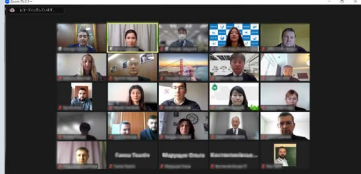
Efforts to Reduce Waste and Convert Energy

BDP has set a target to reduce non-electrical waste by 20% based on the 2022-23 baseline, with recycling initiatives being implemented across all offices (all studios). At the Sheffield studio, non-recyclable waste is utilised in the local heating system, and in London, waste is converted into energy to supply electricity to households.

3.4 Resource Circulation

Support for Ukraine's Reconstruction and Rubble Recycling Efforts

Nippon Koei is engaged in a reconstruction project to recycle rubble in Ukraine, where handling the debris from destroyed buildings has become a major challenge following Russia's invasion. Four months after the invasion, in June 2022, Nippon Koei employee participated as an expert in an online seminar hosted by the Japan International Cooperation Agency (JICA). While most rubble in Ukraine is landfilled, to share knowledge and experience related to disaster waste management in Japan, Nippon Koei initiated a project in October 2023 to support the establishment of temporary storage sites for rubble recycling. Beyond this effort, our Group is also working across multiple sectors-including energy and resources, transport, urban and regional development, water and sewage systems, and ICT- leveraging our comprehensive strengths to cater to specific local needs.



(2) Contribution to Proper Waste Management and Reduction in Disposal Volumes

The Fukushima office of Nippon Koei Energy Solutions, formulated "Controlled Industrial Waste and Stable Industrial Waste*" reduction plan. The Fukushima office site has seen an increasing trend in waste production, with concerns that landfill capacity may be exhausted within ten years. Through the introduction of new technologies and raising employee awareness, The Fukushima office is striving to achieve sustainable waste management and reduced disposal volumes. For example, wood materials within controlled industrial

waste are being separated into wood chips and bolts/nuts, while large pieces of wood longer than 2 meters are being cut to facilitate their recycling as wood chips. The Fukushima office is also promoting waste reduction by separating recyclable items from non-recyclable ones.

* Controlled industrial waste refers to waste like wood chips that can rot or emit toxic gases when exposed to rainwater. Stable industrial waste refers to waste that does not change state when exposed to rain and can be landfilled in a stable landfill site. At the Fukushima office, concrete debris, rubber waste, and glass waste are the primary types of waste produced.



3.4 Resource Circulation

(3) Raising Employee Awareness of Circular Economy Practices Initiatives at Overseas Group Companies

NIPPON KOEI LAC. INC. (NKLAC) in Panama organised and held a workshop to promote recycling in the office, event which was attended approximately 25 participants. The workshop will be available to employees in all countries and regions during the last quarter of 2024.



Scene from a Recycling Workshop

BDP: All building users are encouraged to take responsibility for contributing to environmental performance and to make efforts to minimise environmental impact. The sustainability team, which manages and monitors the environmental performance of each office (studio), leads these efforts.

Our environment at **BDP.**

BDP has an in-house sustainability team whose role is not only to assist in the environmental design of buildings, but also to manage and monitor operational performance of our studios.

We have made commitments, backed by our Executive Board, to measure and minimise the impact of our day-to-day operations. This is communicated through our Environmental Management System (EMS), which is independently audited and formally certified to ISO 14001.

All building users have a responsibility to contribute to the environmental performance of the studios.

All queries regarding the operation of the building should be directed to one of the sustainability team or the facilities manager.

This flyer outlines the office-specific facilities and management policies that building users must be aware of whilst working in the London studio.



3.5 Water Resource Conservation / Pollution Prevention

Approach/Policy

For the ID&E Group, which has been engaged in water resource development around the world since its founding, the conservation and efficient use of water resources is a top priority sustainability issue. Additionally, as a Group that includes manufacturing divisions, we bear responsibility for preventing pollution, including the management of chemical substances. In light of this, we formulated the "Action Guidelines for the Conservation of Water Resources" and "Action Guidelines for Chemical Substance Management" "Guided by these principles, we will work earnestly towards conserving water resources and preventing pollution, thereby contributing to our materiality goal of "Creating a Livable Global Environment."

ID&E Holdings Action Guidelines for the Conservation of Water Resources

Based on the Group's Environmental Activity Policy, the ID&E Holding Group (ID&E Group) will address the following listed matters.

1. Efforts to Conserve Water Resources and Reduce Water Use

As a corporate group that has been engaged in businesses related to water resources in Japan and abroad for many years, the ID&E Group will earnestly strive in activities to ensure sustainable water supplies for future generations and faithfully fulfil its accountability. In addition to our Group's business locations, such as ID&E Group' offices and research facilities, we will promote the reduction of water consumption in the businesses we are involved in both in Japan and overseas. In addition to fostering water conservation awareness in each and every employee,

we will also work on efficient use of water by utilizing the ID&E Group's technologies and R&D results.

2. Sustainable Use of Water Resources

When implementing Japan-based and overseas businesses related to the use of water resources and other businesses that require consideration for water resources, the Group will protect the water environment and strive toward the sustainable use of water resources by investigating, identifying and assessing regions and locations with high water stress.

3. Initiatives for Wastewater Management and Water Pollution Prevention

The ID&E Group will comply with all laws and regulations governing wastewater management and water pollution in its business activities, and will take appropriate measures to treat wastewater and take precautions against leakage to prevent contamination of local water bodies and groundwater.

4. Dialogue and Collaboration with Stakeholders

We will deepen dialogue and collaboration with stakeholders across the entire supply chain and contribute to water resource conservation activities in order to build a robust water and material cycle system.

ID&E Holdings Action Guidelines for Chemical Substance Management

Based on the Group's Environmental Activity Policy, the ID&E Holding Group (ID&E Group) will address the following matters.

1. Thorough Implementation of Proper Management of Chemical Substances

The ID&E Group will ensure that its places of business, factories, and research facilities that handle chemical substances strictly comply with

relevant laws and regulations on occupational health and safety and other relevant laws and regulations governing the handling of chemical substances, while thoroughly managing each stage of handling as described in (1) to (4) below, and fulfilling accountability in good faith. If an ISO14001 certification for environmental management system has been awarded, we will appropriately manage chemical substances by screening chemical substance risks while confirming the impact on the environment.

(1)Research, Study and Development

In regard to chemical substances used in chemical analysis, etc., we will work to reduce their use and emission, while employing new technologies that comply with the requirements of official methods in our analysis methods.

(2)Procurement

When procuring raw materials and parts that contain chemical substances that must be controlled under laws and regulations, we will obtain safety information on such chemical substances from suppliers and carry out appropriate verification. In addition, we will proactively collaborate on the safety of persons involved in chemical substances when they are being procured and to prevent adverse effects on local environments and communities during procurement.

(3)Manufacturing and Use

We will carry out occupational health and safety risk assessments and environmental assessments for raw materials that contain chemical substances that must be controlled under laws and regulations, and work to maintain a safe and secure working environment for employees. In addition, facilities that handle chemical substances containing toxic substances, will comply with structural standards based on laws and regulations related to occupational health and safety and water pollution, carry out regular inspections, preemptively prevent fires, explosions, and leaks, etc., caused by chemical substances from facilities, and strive to ensure the safety of the global environment and local communities.

3.5 Water Resource Conservation / Pollution Prevention

(4) Disposal

We will fulfil our responsibilities as a manufacturer and user of chemical substances by working to recycle waste containing chemical substances at each business location and by sharing necessary information on the nature and condition of the waste with our industrial waste contractors.

2. Consideration for the Natural Environment and Human Health

With regard to chemical substances that are of concern for their highly hazardous effects on ecosystems and human health, we will communicate necessary information for fulfilling our responsibilities as a member of the value chain, and give all due consideration to minimise adverse effects on the environment and the health of all stakeholders.

Initiatives and Achievements

Our Group is actively employing various technologies not only at our own sites but also in infrastructure development to conserve water resources, reduce water usage, promote sustainable use of water resources, and offer solutions for wastewater management and pollution prevention.

(1) Efforts to Conserve Water Resources and Reduce Usage

Rainwater Infiltration Facilities to Ensure Water Circulation

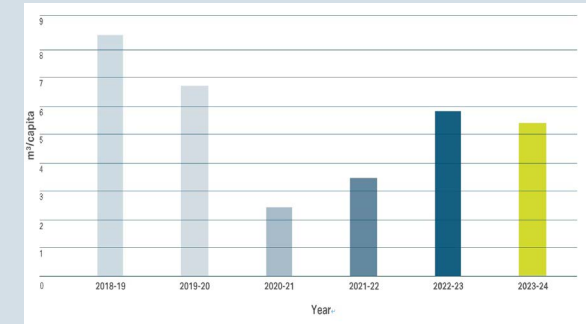
Nippon Koei Urban Space: At Nagoya Head Office building (a company-owned building), Nippon Koei Urban Space has installed permeable paving (outdoor parking areas), rainwater inlets, and permeable gutters to promote water circulation.



Rainwater Inlet Installed at the Nagoya Head Office Building Parking Lot

Installation of Flow Restrictors at BDP Offices (Studios)

In order to control the use of water resources within studios, BDP installed flow restrictors at potential locations to control the flow of fluids (liquids and gases) and prevent excessive flow.

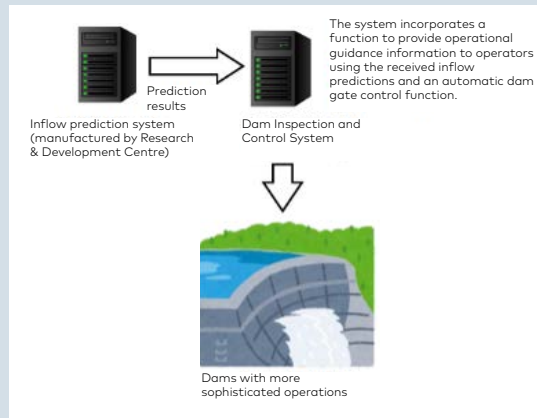


Trends in Water Consumption at BDP

3.5 Water Resource Conservation / Pollution Prevention

Research and Development of Advanced Dam Functions Balancing Flood Control and Water Utilisation

Nippon Koei Energy Solutions: In response to the increasing demand for advanced dam operations that integrate improved inflow predictions, Nippon Koei Energy Solutions is conducting research and development to balance flood control (disaster prevention) with increased hydropower generation (water utilisation). This enables more precise management of dam discharges, reducing unnecessary discharges and increasing hydropower generation.

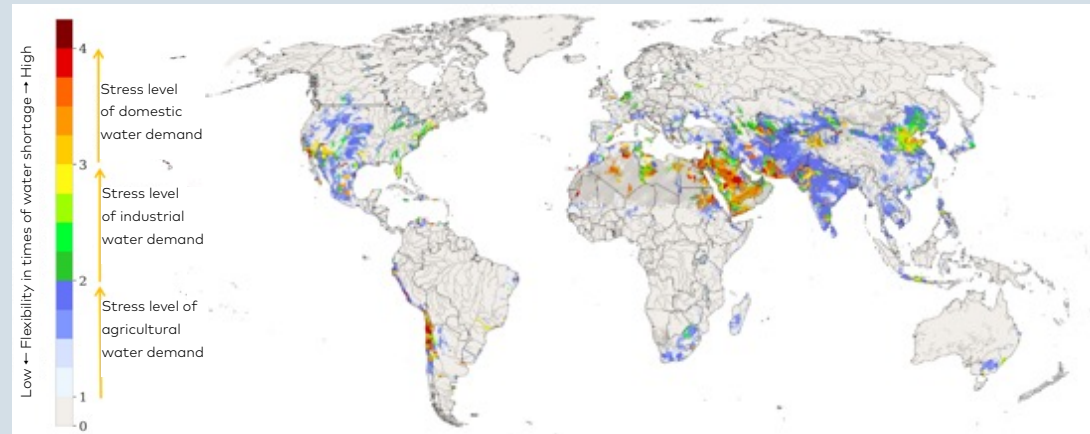


(2) Sustainable Use of Water Resources

Development of the SS-DTA Water Resource Risk Assessment Indicator

Nippon Koei, in collaboration with governmental bodies, universities, and companies, has developed a new water resource risk assessment indicator, SS-DTA. The indicator compares the availability of water resources in drought years with the shape of usual local water demand, including the impact of water infrastructure. This new risk assessment tool visualises regional water risks, aiding in corporate water resource risk management and allowing governments to prioritise water resource measures and evaluate regions facing challenges. As a result, sustainable living in local communities can be maintained.

■ Global Water Resource Risk Distribution Map Evaluated by "SS-DTA"



///: Arid regions with very limited water resources (<0.5m³/sec). The small denominator makes results highly sensitive to minor errors, requiring careful interpretation of evaluation outcomes.

Estimates based on calculation results from the H08 model at a spatial resolution of 5° × 5° (approximately 9 km at the equator).

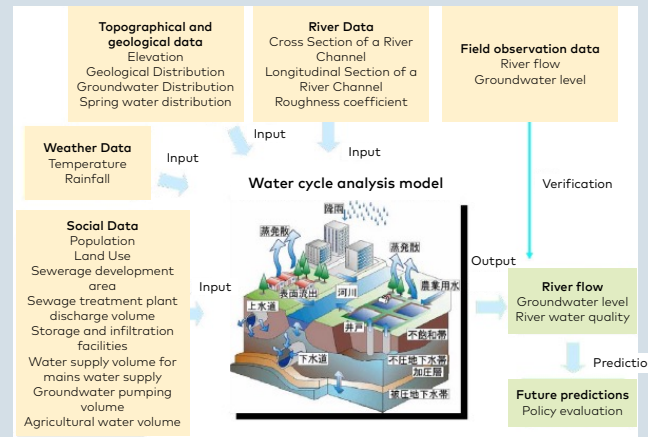
3.5 Water Resource Conservation / Pollution Prevention

Recreation of the Water Cycle Process through the Development of a Distributed Physical Water Cycle Model

Urbanisation has led to increased runoff and reduced groundwater recharge due to impermeable surfaces like asphalt and concrete. Nippon Koei has developed a "Distributed Physical Water Cycle Model" that

simulates and evaluates water and material cycles in watersheds. This model can physically reproduce various water cycle processes, including rainfall, snowmelt, evapotranspiration, and groundwater flow, supporting the development of plans aimed at establishing healthy water cycles.

■ Conceptual Diagram of the Distributed Physical Water Cycle Model



(3) Wastewater Management and Pollution Prevention Initiatives

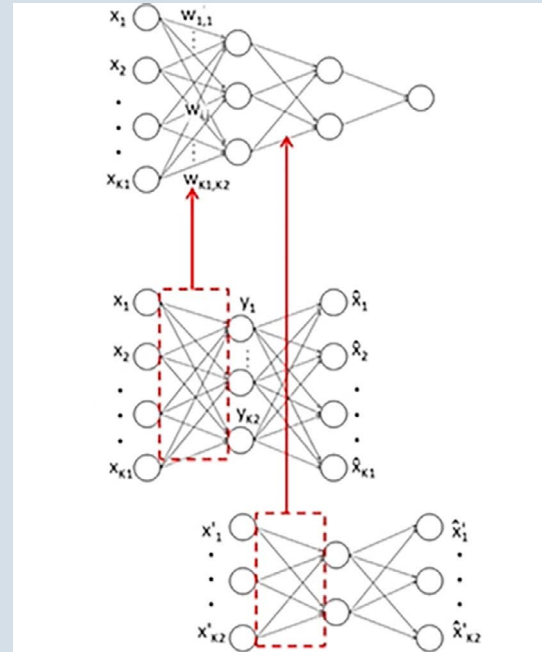
Drainage Pipe Improvement Project at the Matasniyo River, Panama City
NIPPON KOEI LAC. INC. (NKLAC) is providing project management, technical assistance and supervision for the final design and implementation of the Matasniyo River's main water collection pipeline, to divert wastewater from the river to the Juan Diaz water treatment plant in Panama. The Matasniyo River is regarded as one of the seriously polluted rivers in Panama and the project is expected to contribute to river's water quality improvement.

3.5 Water Resource Conservation / Pollution Prevention

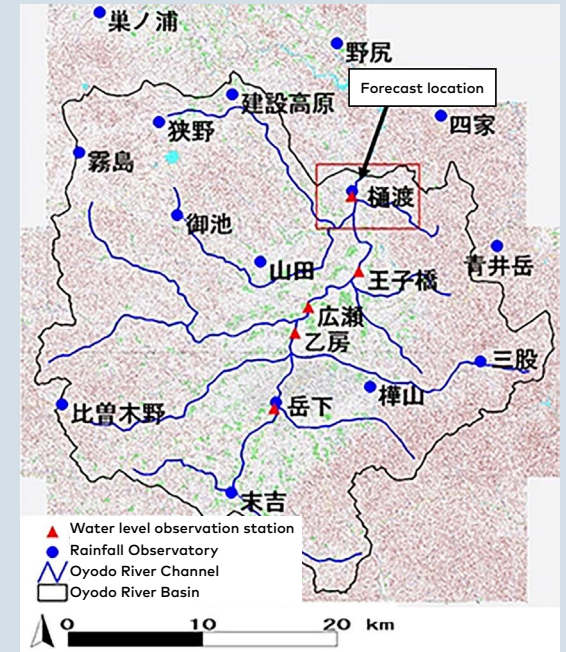
(4) Other Initiatives

Development of a River Water Level Prediction System

Nippon Koei has developed a system using artificial intelligence (AI) to accurately predict rising river water levels during unprecedented floods. By training the AI with historical rainfall records and river level data, it can predict, up to six hours in advance, whether flooding will occur during extreme rainfall, helping local governments and utilities guide evacuation efforts.



Conceptual Diagram of Pre-training Using an Autoencoder



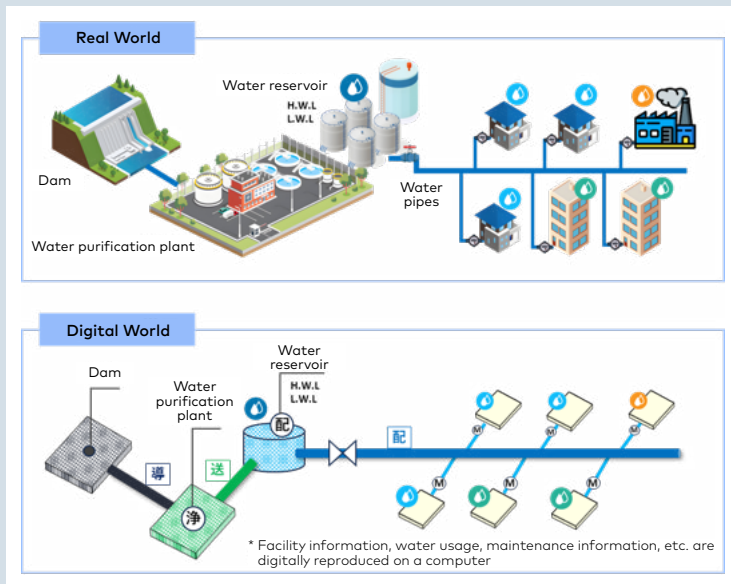
Map of the Oyodo River Basin, Hinotachi Observation Point, and Observation Stations

3.5 Water Resource Conservation / Pollution Prevention

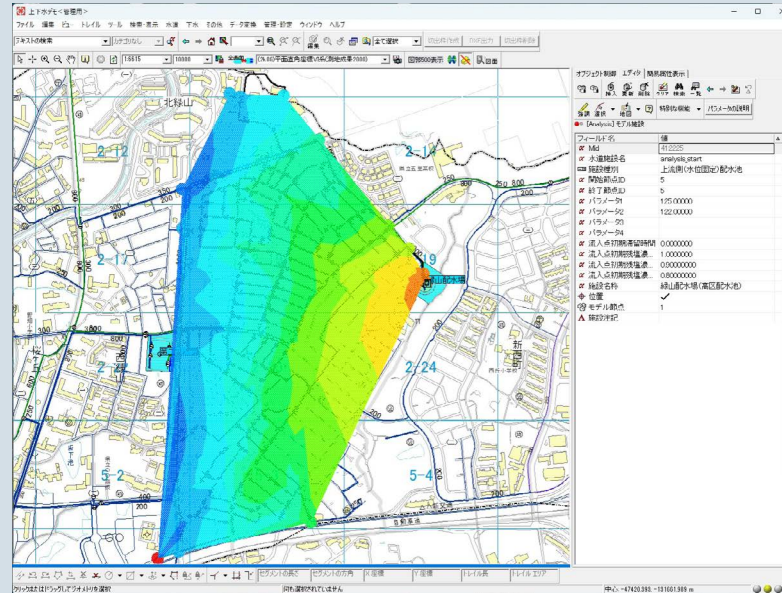
Supporting Water Utility Operations with a Network Asset Management System

Geoplan Namtech Inc. has implemented a network asset management system for around 40 water utilities, managing both water purification (production) and distribution (transport). By recreating the flow of water from purification plants to household taps through a water pipeline network, the system enables simulations for daily water management, disaster response, and long-term business planning. Additionally, consulting services based on maintenance data contribute to energy-saving measures and extending asset lifespans.

■ Reproducing a real water pipe network in the digital world



■ Simulation example from a pipe network model (water pressure distribution)



3.6 Consideration for the Environment in Services and Products

Policy/Approach

The ID&E Group aims to reduce environmental impact through environmentally conscious services and products, striving to create a sustainable and prosperous society. The projects in which our Group is involved are of high public interest, and the impact of providing services and products is wide-reaching. Keeping this in mind, we incorporate environmental considerations into our quality management processes when providing services and products, while proactively proposing measures to reduce environmental impact through technological innovation.

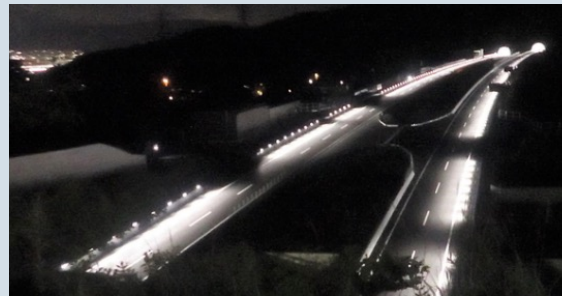
Initiatives and Achievements

Environmentally Conscious Infrastructure Development - Initiatives in the New Tomei Expressway Project

Infrastructure development, while contributing to the resolution of social issues, also has the potential to adversely affect the environment. To reconcile between development and the environment, our Group carries out environmental assessments, including surveys, predictions, evaluations and the design of plans for environmental conservation and establishment. In the case of the New Tomei Expressway (Hadano to

Yamakita section), which opened in 2022, Nippon Koei conducted a series of environmental assessment tasks related to the project. This included pre-construction environmental surveys, proposing conservation measures for important species (such as transplants, relocations, and lighting adjustments), and monitoring during and after construction. These activities were reported to an expert environmental review committee to ensure the project progressed with consideration for biodiversity.

Since 2011, Nippon Koei has been involved in a range of environmental surveys and planning tasks, contributing to the promotion of environmentally conscious road development by providing comprehensive support to our client.



Shin-Tomei Expressway

Development of Bay Control Unit (BCU) for Substations

The ID&E Group, led by the control equipment department of Nippon Koei Energy Solutions, has been working on the development of a Bay Control Unit (BCU) for electrical grid substations. This unit complies with the international standard IEC 61850 and is designed to enhance the functionality of monitoring and control systems, improving both operational efficiency and environmental performance in substations. The BCU enables efficient communication between various devices within the substation, allowing real-time data exchange and control, contributing to automation and remote monitoring, thus improving safety and reliability. Additionally, from an energy management perspective, the BCU helps reduce CO₂ emissions from substations and supports the efficient integration of renewable energy, contributing to environmental sustainability. Through this technology, Nippon Koei Energy Solutions aims to contribute to sustainability and environmental issues in the energy sector.

3.6 Consideration for the Environment in Services and Products

Biological Soil Crust (BSC) Method: A Nature-Friendly Erosion Control and Re-vegetation Technology Focusing on Erosion Prevention

The Biological Soil Crust (BSC) Method, co-developed by the ID&E Group and the Public Works Research Institute, is a technology that uses soil algae to form colonies on the soil surface to prevent erosion and promote vegetation recovery. This method contributes to biodiversity conservation and reduces environmental impact in civil engineering projects, both in Japan and abroad. In recognition of its excellence, the BSC method received the Japan's Minister of Defence Award in the 6th Infrastructure Maintenance Award in 2022 and the Minister of the Environment Award in the 51st Environment Awards in 2024, highlighting its technical superiority and environmental superiority.

Other Awards and Patents:

- "Best Presentation" at the Subtropical Greening Case Study Awards Show (Okinawa)
- "Honourable Mention" from the Ministry of the Environment's Natural Environment Symbiosis Technology Research Group
- Patent for Soil Erosion Prevention Method: Patent No. 3718203
- Patent for Natural Invasion Alert Method: Patent No. 6734500



Exhibiting at the 2024 Green Infrastructure Industry Exhibition

The ID&E Group continues to focus on promoting green infrastructure as part of its contribution to a sustainable society and participated in the 2024 Green Infrastructure Industry Exhibition, following its participation in 2023. Green infrastructure initiatives include reducing disaster risks, expanding the use of renewable energy, developing smart cities, and addressing climate change. Through these efforts, we aim to reduce environmental impact and contribute to sustainable consumption and production.

Exhibiting at the Green Infrastructure Industry Exhibition provided a valuable opportunity to promote the Group's green infrastructure initiatives to various companies, organisations, government officials, and students. We plan to continue participating in similar activities in the future.



Group photo of participants