CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

CLIMATE CHANGE

MATERIALITY

Our Policy

In January 2021, we defined our goals for addressing climate change to meet the objectives of the Paris Agreement, establishing a corporate target of net zero emissions by 2050 (Scope 1+2). This will require a reduction in greenhouse gas (GHG) emissions of at least 30% by 2030.

INPEX's disclosures related to climate change are in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Specifically, we have maintained the Board of Directors' oversight role and expanded its involvement in corporate governance. In designing business strategies, we assess our ability to respond to multiple scenarios, including the IEA❶ WEO Sustainable Development Scenario (SDS: scenario consistent with the Paris Agreement goals) as we evaluate our business portfolio. In FY2021, we also started factoring in the Net Zero Emissions by 2050 Scenario (NZE).❷

We conduct an annual assessment and management cycle to assess climate change risks and opportunities and implement measures and work plans developed by that process. Our program to manage GHG emissions involves promoting initiatives to achieve our climate change response goals and to monitor our progress.

❶ International Energy Agency
❷ IEA's Roadmap for the Global Energy Sector to Reach Net Zero by 2050

Message from the Director in Charge of Climate Change Response

Kimihisa Kittaka
Director, Senior Managing Executive Officer in charge of Corporate Strategy & Planning

In February 2022, INPEX announced its Long-term Strategy and Medium-term Business Plan (INPEX VISION @2022). This lays out the path to achieving the target of net zero emissions by 2050 as announced in 2021.

Our basic policy for a net zero carbon society by 2050 is summed up in the statement: "As a pioneer in energy transformation (EX), INPEX will provide a stable supply of diverse and clean energy sources, including oil and natural gas, hydrogen and renewable power." We aim to transform net zero carbon from an ideal to reality by around 2030.

Specifically, we will accelerate expansion of five net zero business areas: (1) hydrogen and ammonia; (2) carbon capture, usage and storage (CCUS); (3) renewable energy; (4) carbon recycling and new businesses; and (5) forest conservation. At the same time, we will maintain a stable supply of oil and natural gas while exerting our utmost efforts to make these products cleaner.

To balance the two social demands of a net zero carbon society and the world's need for energy, we believe it is important to properly assess climate change risks and opportunities and to manage them appropriately.

INPEX VISION @2022 is also reflected in our Corporate Position on Climate Change (published December 2015, the latest revision made in March 2022), available on our website.*

We will continue to accelerate our efforts to achieve our climate change goals.

* Corporate Position on Climate Change and INPEX's Current Initiatives

CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

INPEX Vision @2022
INPEX's Current Initiatives

Climate Change Milestones

2019
- Started economic assessments based on the IEA WEO 2°C scenario
- Conducted trial physical risk assessments of INPEX's main operator sites

2020
- Changed the Climate Change Strategy Working Group to an advisory body for the Sustainability Committee
- Established Guidelines for Assessing and Managing Climate-related Risks and Opportunities
- Received a CDP Climate Change score of A-
- Disclosed GHG emissions based on INPEX equity shares

2021
- Published Business Development Strategy and established climate change goals
- Revised Corporate Position on Climate Change
- Established Guidelines for Transactions and Management of VCUs*1
- Established "Guidelines for Management of Performance against Achieving Climate Change Goals"
- Received a CDP Climate Change score of A-
- Participated in IC-VCM*2 Consultation Group

*1 Verified carbon units
*2 Integrity Council for Voluntary Carbon Markets is a body that sets global benchmarks for the integrity of voluntary carbon credits.

2022
- Announced Long-term Strategy and Medium-term Business Plan (INPEX VISION @2022)
- Revised Corporate Position on Climate Change
- Joined the CCS+ initiative*3

*3 International initiative to develop a methodology for generating carbon credits from CCUS projects

Setting and Achieving Climate Change Goals

INPEX has set three goals to help realize a net zero carbon society in accordance with the objectives of the Paris Agreement.

The first goal is to achieve net zero emissions by 2050 pursuant to the Paris Agreement. The second is to achieve a reduction of at least 30% in net carbon intensity (compared to 2019) by 2030 in the process of fulfilling the first goal. Scope 1+2 emissions, which are emissions from INPEX's business processes, come under these goals. The third goal is to cooperate with all relevant stakeholders across the value chain to reduce the Scope 3 emissions from combustion of the oil and gas we sell. In our 2022-2024 medium-term business plan, we have added the goal to reduce our emission intensity by 10% (4.1kg/boe) over three years in pursuit of our 2030 target.

Specific measures for achieving net zero goals include: (1) promotion of carbon capture utilization and storage (CCUS); (2) bolstering renewable energy initiatives; (3) promotion of CO_2 absorption through forest conservation; (4) maintaining the intensity of methane emissions (methane emissions/natural gas production) at its current low level (about 0.1%); and (5) zero routine flaring. Details of these initiatives are set out in our Long-term Strategy and Medium-term Business Plan (INPEX VISION @2022) and INPEX's Current Initiatives based on the Corporate Position on Climate Change.

Climate Change Goals

INPEX has set its own goals to help achieve a net zero carbon society in accordance with the objectives of the Paris Agreement.

2050
NET ZERO*1
in absolute emissions (Scope 1+2)
*1 On INPEX equity share basis

2030
30% OR MORE*2
reduction in net carbon intensity (Scope 1+2)
*2 In comparison with 2019

Scope3
REDUCTION
work together with all relevant stakeholders to address challenges across the value chain

CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

INPEX Emissions

	CY2019	FY2020	FY2021
Scope1*1 (thousand tons CO_2e)	8,557	7,328	7,302
Scope2*1 (thousand tons CO_2e)	204	148	136
Net carbon intensity*2 (kg CO_2e/boe)	41	35	33
Methane emissions intensity*3 (%)	0.10	0.07	0.04

INPEX'S Net Carbon Intensity

$$\frac{\text{Scope1 + Scope2 – offsets*4}}{\text{Production volume}}$$

Our net carbon intensity in 2021 was 33 kg-CO_2e/boe, a reduction of 20% in comparison with 2019.

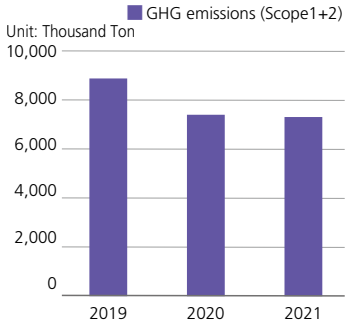
*1 INPEX's equity share emissions
*2 Net carbon intensity including offsets
*3 Methane emissions intensity: calculated as methane emissions/natural gas production (%), the formula used by the Oil and Gas Climate Initiative
*4 The offsets include reduction contributions from renewable energy as well as CO_2 absorption through forest conservation. Contributions from renewable energy are calculated based on Guidelines for Measurement, Reporting and Verification of GHG Emission Reductions in JBIC's GREEN (the "J-MRV Guidelines")

Making Our Operations Cleaner

Efforts to Reduce Greenhouse Gas Emissions

In FY2021, GHG emissions within our operational control❸ amounted to 6.70 million tons-CO_2e, a decrease of 0.97 million tons-CO_2e on FY2020 levels. The main reason for the decrease was a reduction at Ichthys LNG of the low-pressure gas flaring❹ that occurs during the gas treatment process. The reduction was achieved due to stable year-round operations.

Annual GHG Emissions within INPEX's Operational Control (Scope1+2)



The aggregation, analysis and reporting of GHG emissions from each operational site is carried out regularly following the Corporate Standard for HSE Performance Data. To ensure the reliability of our reporting, we obtained third-party assurance for the environmental data for our domestic operations, and for the GHG emissions both in Japan and overseas.

Each of our domestic and overseas operator projects strive to reduce its GHG emissions through energy conservation activities tailored to its own situation. Eech also endeavors to avoid continuous flaring and venting during normal operations, and reduce methane leaks.

In FY2020, as part of our efforts to reduce routine flaring during normal operations (zero routine flaring), we assessed the current situation of applicable routine flaring at each of our operating sites. In FY2021, our HSE Unit, Technical Division and operational sites jointly studied flare reduction measures.

At our US tight oil project, the addition of equipment to improve gas quality has enabled the sale of previously unsalable volumes of gas that were routinely flared. The facility was able to achieve zero routine flaring in October 2021.

Other measures being taken to reduce flaring include: the reduction of compressor downtime (a factor contributing to the need for flaring); and installing vapor recovery units at new production sites. Going forward, we will continue exploring and implementing diverse measures to completely eliminate routine flaring at other sites as well.

In FY2018, we started to aggregate data and report statistics on fugitive methane emissions, in accordance with international methods. In FY2019, we conducted methane leak inspections at the applicable points of equipment and facilities at our operator projects in Japan. We also established a system for data collection and reporting. In FY2020, we conducted leak inspections at most applicable points using a laser methane detector, and took immediate measures where leaks were detected. With regard to our overseas projects, methane leak inspections were routinely performed at the US tight oil project in FY2021 using an infrared camera system. We are considering implementing similar inspections at other overseas projects, and will continue taking further action to reduce fugitive methane emissions.

In our domestic exploration and development operations, we participate in the Japan Business Federation's (Nippon Keidanren) voluntary Carbon Neutrality Action Plan through our membership in the Japan Petroleum Development Association (JPDA). In FY2021, we reexamined our plan for reduction of emissions toward 2030.

❸ Operational control: This scope includes our Headquarters and Technical Research Center (both in Tokyo), overseas offices, and operational organizations in Japan and overseas
❹ Flaring: The act of incinerating and detoxifying excess hydrocarbon gas produced by crude oil drilling facilities and gas processing facilities, instead of releasing it to the atmosphere

CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

CO_2 Absorption through Forest Conservation

Forest Conservation: One of Our Five Net zero Businesses

In our Long-term Strategy and Medium-term Business Plan (INPEX VISION @2022) published in February 2022, we identified forest conservation as one of the five net zero businesses we plan to promote in pursuit of a net zero carbon society in 2050.

Importance of Forest Conservation and Afforestation in Tackling Climate Change

There is now growing interest in nature-based solutions as a way to tackle climate change, and as a responsible company with worldwide operations, INPEX is also eager to boost its involvement in this area.

Forest conservation and afforestation projects not only reduce CO_2 emissions resulting from deforestation and forest degradation while increasing CO_2 absorption, they offer co-benefits by safeguarding critical biodiversity and water resources, reducing soil erosion, and raising the living standards of local communities, thereby contributing towards the realization of the United Nations' Sustainable Development Goals (SDGs).

INPEX's Forest Conservation and Afforestation Initiatives

Within a hierarchical approach to achieving net zero goals, we see CO_2 absorption through forest conservation and afforestation as complementing such efforts as the production of cleaner oil and natural gas, the transition to natural gas, CCUS, and adoption of renewable energy.

As the operator of Ichthys LNG, INPEX has built experience in forestry projects to absorb CO_2 through its involvement in the planting and management of eucalyptus trees and in savannah fire management programs. In FY2021, we began supporting the Rimba Raya Biodiversity Reserve REDD+ project in Indonesia, through which INPEX will acquire five million tons worth of carbon credits over five years while backing the construction of orangutan conservation facilities. In March 2022, we entered a memorandum of understanding with ANZ and Qantas to progress the evaluation of a project that brings together carbon farming and renewable biofuels in the Wheatbelt region of Western Australia. The carbon farming in this project provides an opportunity to support carbon capture from the atmosphere through reforestation and improving of soil, thus reducing GHG emmisions.

Going forward, we plan to step up our involvement in projects supporting efforts to absorb CO_2 through forest conservation.

Forest in Rimba Raya Biodiversity Reserve

INPEX's Forest Conservation Initiatives at International Conference Organized by Sabah Forestry Department in Malaysia

At the 11th International Conference on Heart of Borneo (HoB), held online in November 2021, we presented our strategy for achieving a net zero carbon society by 2050 and also discussed our support for the Rimba Raya Biodiversity Reserve REDD+ project and the outlook for participation in further forest conservation-related businesses.

HoB is an initiative spearheaded in 2007 by the governments of Indonesia, Malaysia and Brunei Darussalam to promote conservation of the tropical forest in the heart of Borneo.

CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

INPEX's Approach to Procuring and Utilizing Carbon Credits

For INPEX's carbon offsets on GHG emissions, we use carbon credits certified under highly trusted national and international schemes, which we receive in return for support and participation in forest conservation projects. Through our participation in various local and overseas initiatives[5], we track the latest developments in the carbon credit market. We also conduct internal project assessments including their medium- and long-term performance. Through these efforts, we work to ensure that we procure high-quality credits.

[5] IC-VCM (Integrity Council for the Voluntary Carbon Market), VCMI (Voluntary Carbon Markets Integrity Initiative) and others

Credits Verified under Highly Trusted National and International Schemes

INPEX selects and utilizes carbon credits verified under the following schemes:

- VCS (Verified Carbon Standard): Verification standard established by Verra, an international body for setting carbon offset standards
- JCM (Joint Crediting Mechanism): Japanese Government-led bilateral credit program for reduction and removal of GHG emissions in cooperation with developing countries, with both sides sharing the benefits of reduction and removal
- J-Credit: Scheme designed to certify the amount of GHG emissions reduced and removed in Japan, with credits certified by the Japanese Government

Procurement of High-quality Credits

(1) Internal project assessment

To ensure acquisition of high-quality carbon credits from top-grade projects, INPEX first assesses projects before making a final selection and purchase. These assessments are designed to identify any permanence[6] concerns or potential issues with local communities and other stakeholders, and also to verify that land ownership and usage rights are unambiguous and guaranteed to extend beyond the life of the crediting period.

(2) Priority on projects with co-benefits

In addition to reduction of CO_2 emissions and removal of CO_2, we give preference to projects that deliver co-benefits by contributing to the United Nations' SDGs.

[6] Permanence: Refers to the need to ensure that CO_2 reductions and removal are non-reversible, with no risk of release into the atmosphere

- SD Vista: Sustainable Development Verified Impact Standard: This is a framework for certifying a project's contribution to the SDGs. The Rimba Raya Biodiversity Reserve REDD+ project received certification for all 17 SDGs.
- CCB (Climate, Community and Biodiversity Standards): This framework certifies projects that simultaneously address climate change, support communities and conserve biodiversity. The Rimba Raya Biodiversity Reserve REDD+ project was awarded Gold Level (projects providing exceptional benefits) on all three criteria.

Participation in Discussion on Co-benefits during Class in Columbia University's Sustainability Management Masters Program

In December 2021, representatives of INPEX and InfiniteEARTH, the organization managing the Rimba Raya Biodiversity Reserve REDD+ project, jointly addressed students undertaking the Finance and Sustainable Development course at Columbia University.

The course looks at the role of finance in the drive to fight climate change, with a focus on sustainable development in industrializing nations. A major theme of the class was co-benefits.

The presentation prompted many questions and a lively discussion.

Professor Satyajit Bose, Columbia University, School of Professional Studies

Todd Lemons, CEO InfiniteEARTH

CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction

Promoting Sale of Carbon-neutral Products

INPEX promotes the sale of carbon-neutral products to its customers. Carbon-neutral products are LNG, natural gas and LPG products sold by INPEX for which the GHG emissions produced during all processes from extraction through transportation and combustion are offset by CO_2 credits (carbon credits), resulting in net zero GHG emissions across the life cycle. By supplying these carbon-neutral products, we contribute to our customers' efforts to reduce their carbon footprints.

Reducing Contractors' and Suppliers' Emissions

We encourage our contractors and material suppliers to reduce their GHG emissions. Our HSE Policy states that we will "pursue every effort to reduce Greenhouse Gas (GHG) emissions and adhere to our GHG emissions management process." In line with our efforts to reduce emissions across the supply chain, our contractor and supplier agreements include a clause requiring compliance with our HSE Policy.

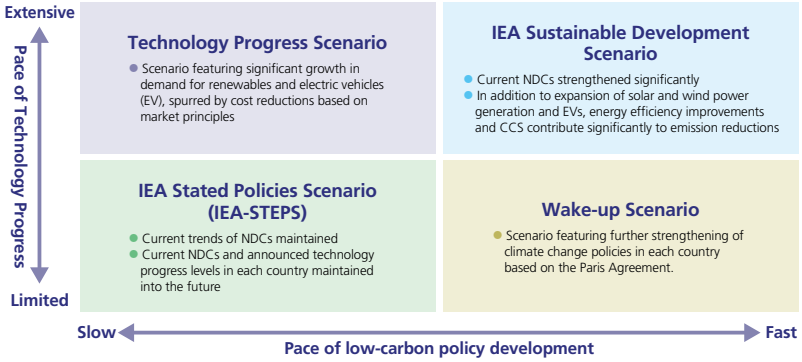
The INPEX Low-Carbon Society Scenarios

Regarding the outlook for the business environment, including energy demand and supply toward a low-carbon society by 2050[7], INPEX refers primarily to the Stated Policies Scenario (IEA-STEPS) and the Sustainable Development Scenario (IEA-SDS) of the International Energy Agency (IEA)'s World Energy Outlook (WEO). We also refer to the Technology Progress Scenario (a scenario envisioning significant growth in demand for renewables and electric vehicles spurred by cost reductions based on market principles) and the Wake-up Scenario (a scenario envisioning further strengthening of climate change policies in each country based on the Paris Agreement). We apply these four scenarios when examining our business strategies over the period of transition to a low-carbon society. Once a year, we review the scenarios in light of the IEA's WEO updates and reexamine the direction of our strategies. In FY2021, we also started referencing the Net Zero Emissions by 2050 Scenario (IEA-NZE), announced with the IEA's WEO.

In February 2022, we formulated our Long-term Strategy and Medium-term Business Plan (INPEX VISION@2022) utilizing these scenarios. Moving forward, we will continue to use scenario reviews to quickly grasp changes in the business environment and review management strategies and plans in line with social trends.

[7] IEA WEO sets out a panoramic view of the international energy scene through 2050.
IEA WEO 2021

The INPEX Low-Carbon Society Scenarios



CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

Ongoing Initiatives to Address TCFD Recommendations

Governance System for Climate Change Response

INPEX's Board of Directors maintains its oversight role and has expanded its involvement in our climate change response. Specifically, matters relating to the company's position on climate change require a resolution of the Board of Directors. In January 2021, we announced our goals for tackling climate change based around our corporate target of net zero emissions by 2050 (Scope 1+2). In February 2022, we released our Long-term Strategy and Medium-term Business Plan (INPEX VISION @2022), which envisions accelerated expansion of our five net zero businesses as we head towards net zero in 2050. Accordingly, we revised and disclosed our Corporate Position on Climate Change[8] in March 2022. We also update and disclose, in principle once a year, INPEX's Current Initiatives[8], a document that details progress in implementing climate change measures based on the Corporate Position on Climate Change.

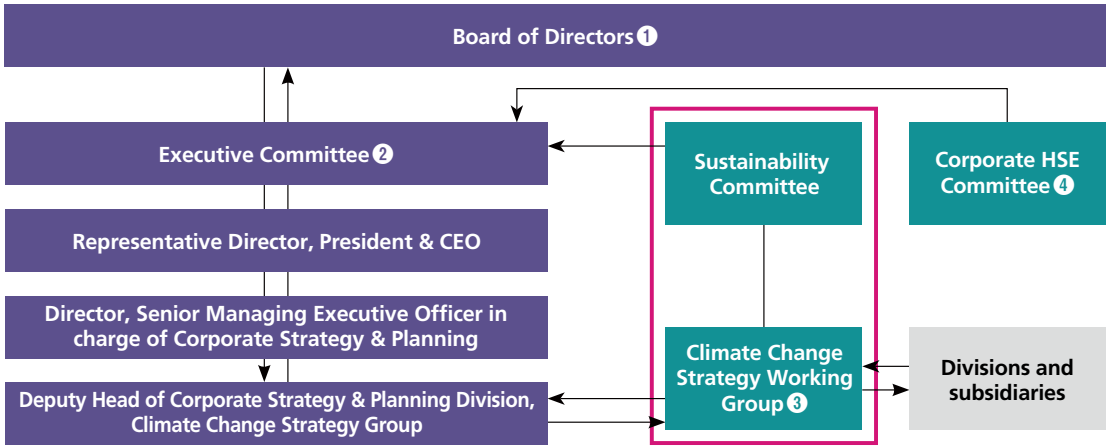
[8] "Corporate Position on Climate Change" and "INPEX's Current Initiatives"

Climate Change Response and Directors' Compensation

In February 2022, we revised our compensation system in relation to bonuses for all of the company's representative directors and other internal directors. We adopted GHG emissions intensity, the indicator used in our Long-term Strategy and Medium-term Business Plan (INPEX VISION @2022), as a key performance indicator for stock-based compensation, which serves as a medium- to long-term form of incentive.

Further to this, for the directors in charge, qualitative targets are set each year to promote climate change response, risk management and information disclosure. The degree to which these targets have been achieved is evaluated and reflected in the director's remuneration.

Governance Framework for Climate Change Response



Roles

1. Supervision of Corporate Position on Climate Change, and monitoring of climate change responses
2. Decisions on assessments of climate-related risks and opportunities, and decisions on important goals relating to climate change
3. An advisory body to the Sustainability Promotion Committee, comprising about 30 cross-organizational members and responsible for assessing climate-related risks and opportunities.
4. Collection, analysis, and reporting of GHG emissions according to the Health, Safety and Environmental (HSE) Policy

CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

Assessing and Managing Climate-related Risks and Opportunities

As a general rule, INPEX assesses and manages climate-related risks and opportunities in an annual cycle. Our overall response to climate change is handled by the Climate Change Strategy Group within Corporate Strategy & Planning Unit, Corporate Strategy & Planning Division.

For climate-related risks, the Climate Change Strategy Working Group (WG), composed of some 30 members representing each of the divisions, conducts assessments and devises preventive and mitigation measures. These measures are discussed in Sustainability Committee meetings and reflected in annual plans.

The process of risk assessment follows the procedure outlined in ISO31000 (2009) (Figure A), an international risk management standard. We update external and internal factors and share information regarding the company's status among WG members. We then identify risks and analyze their causes, preventive measures, mitigation measures, and residual risks (Figure B). The residual risks are assessed using the Risk Assessment Matrix Based on TCFD Recommendations (Figure C), created by INPEX.

Figure A. ISO31000 Process

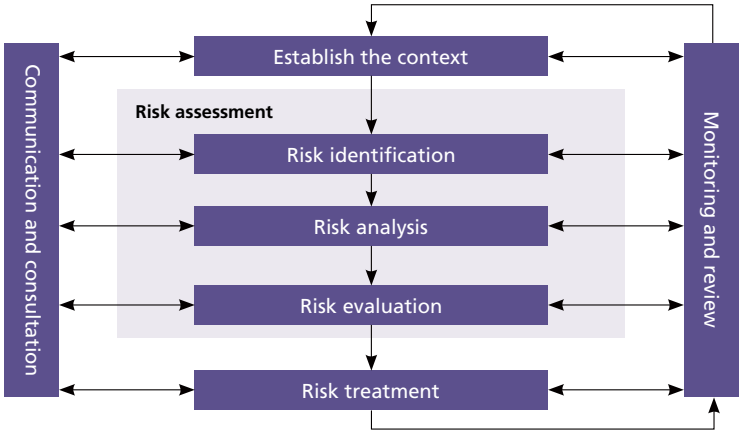


Figure B. Risk Analysis Process

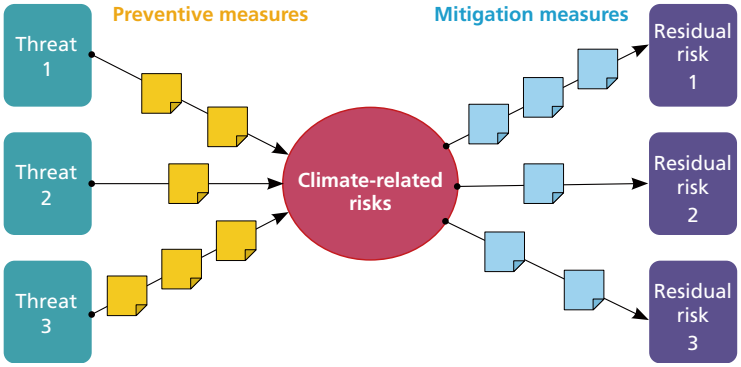


Figure C. Risk Assessment Matrix based on TCFD Recommendations

Severity of consequences		Likelihood: 5 Highly unlikely	4 Unlikely	3 About as likelyas not	2 Likely	1 Highly likely
	A Significant	A5 Medium-Low	A4 Medium-High	A3 Medium-High	A2 High	A1 High
	B Major	B5 Medium-Low	B4 Medium-Low	B3 Medium-High	B2 Medium-High	B1 High
	C Moderate	C5 Low	C4 Medium-Low	C3 Medium-Low	C2 Medium-High	C1 Medium-High
	D Minor	D5 Low	D4 Low	D3 Medium-Low	D2 Medium-Low	D1 Medium-High
	E Insignificant	E5 Low	E4 Low	E3 Low	E2 Medium-Low	E1 Medium-Low

FY2021 Workshop for Assessing Climate-related Risks and Opportunities

WG members from each division met in an online conference to assess climate-related risks and opportunities based on INPEX's low-carbon society scenarios.

CLIMATE CHANGE

Our Policy 49

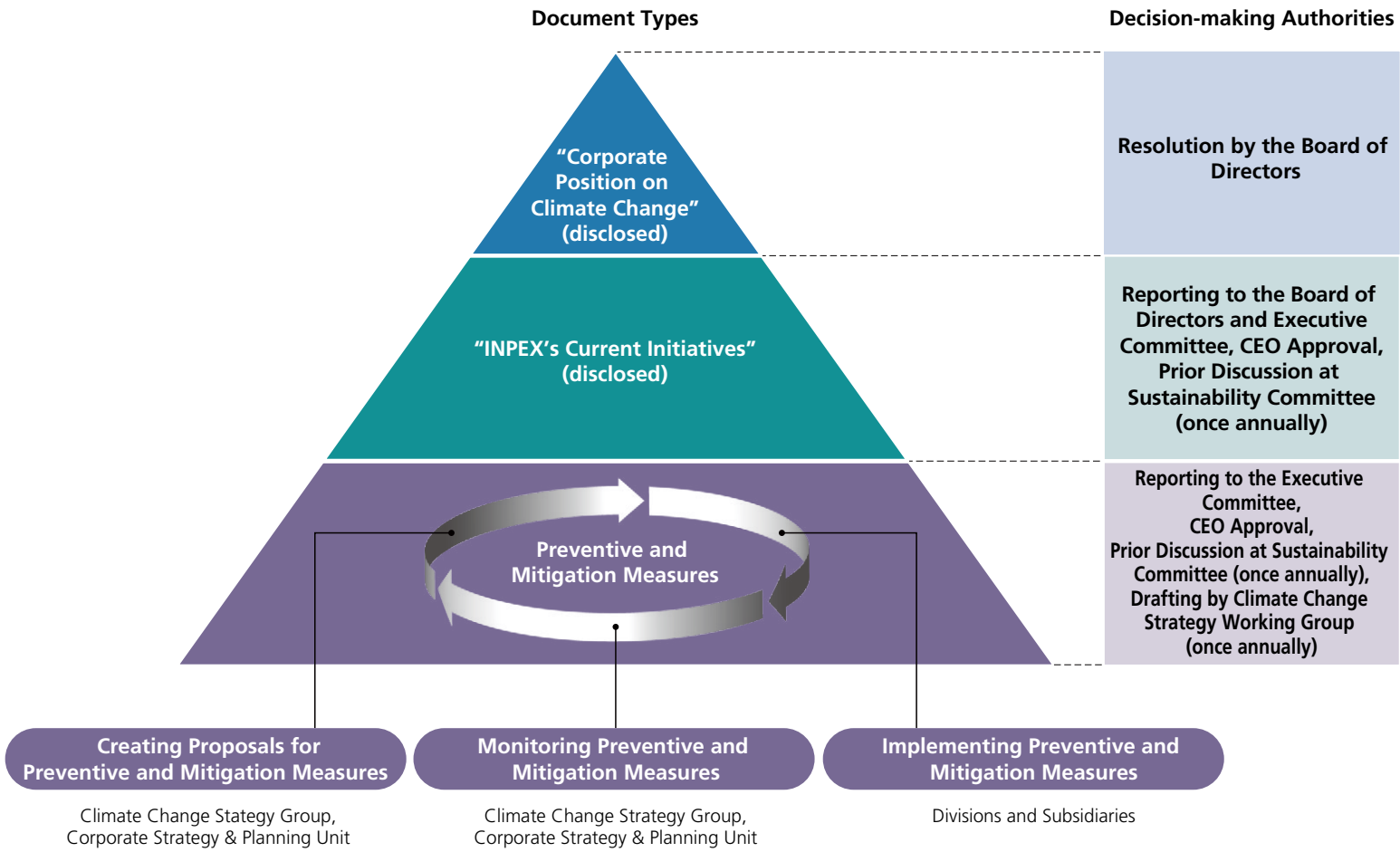
Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

As outlined in our Long-term Strategy and Medium-term Business Plan (INPEX Vision @2022), we take a company-wide approach to climate-related opportunities, with our Hydrogen & CCUS Development and Renewable Energy and New Business divisions at the core.

In addition, INPEX's Current Initiatives based on the Corporate Position on Climate Change includes initiatives related to the five net zero businesses, the transition to natural gas, and making upstream operations cleaner. These initiatives are considered by the Sustainability Committee, approved by the CEO, and then reported to the Executive Committee and the Board of Directors.

Figure D: Process of Assessing and Managing Climate-related Risks



CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

FY2022 Status of Climate-related Risks: Assessment Coverage, Expected Timing and Action Plans

Risk category		Risk description	Expected risk timing	Action plan
Transition risks	**Policies and regulations** (Scope 1 emissions)	Risk of increased costs due to the introduction and strengthening of a carbon price system	Short-term ~ Medium-term	● Monitor carbon pricing policy trends ● Increase internal carbon price from US$40/t$CO_2$-e to US$65/tCO_2-e and establish this as a base case to assess the economic impact
	Technologies and markets (Reduced demand and lower prices for oil and gas)	Risk of reduced demand and lower prices for oil and gas due to a decline in the cost of renewable energy, electric vehicles and/or storage batteries, or market preference for low-carbon energy	Medium-term ~ Long-term	● Scenario-based monitoring of market and technology trends ● Financial assessment of portfolio based on oil and carbon prices used in the IEA WEO Sustainable Development Scenario (SDS)
	Reputation (Scope 1 emissions)	Stakeholder concerns about Scope 1 emissions	Short-term	● Net zero by 2050, and at least 30% reduction in net carbon intensity by 2030 ● Promote technological development and commercialization with the goal of achieving an annual CO_2 injection amount of 2.5 million tons or more around 2030. ● Maintain methane emissions intensity (methane emissions/natural gas production) at its current low level (about 0.1%) ● Zero routine flaring by 2030
	Reputation (Scope 3 emissions)	Risk that attention attracted by Scope 3 emissions will cause the image of oil and gas companies to deteriorate	Short-term ~ Medium-term	● Engage with stakeholders to reduce Scope 3 emissions ● Promote development and greater use of natural gas ● Sell carbon-neutral LNG
	Financing	Potential adverse impact on financing activities if investors and financial institutions regard disclosure as inadequate	Short-term ~ Medium-term	● Disclose information in line with TCFD Recommendations
Physical risks	**Acute risks**	Risk of impairment to operating facilities from extreme weather events	Short-term ~ Medium-term	● Regular assessment of physical risks
	Chronic risks	Risk of impairment to operating facilities from long-term increase in average temperatures, changing precipitation patterns, and rising sea levels	Medium-term ~ Long-term	

Short-term up to one years　Medium-term one to five years　Long-term longer than five years

CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

Climate Change Opportunities to Be Assessed in FY2022, Proposed Timing and Progress Status

TCFD	Opportunities to be assessed	Timing	Long-term strategy and progress status
Opportunities related to resource efficiency	**Energy efficiency improvements in production processes**	Short-term	● Design facilities with high energy efficiency and follow through with a rigorous maintenance plan and routine maintenance activities
Opportunities related to energy sources	**Utilization of renewable energy sources in production processes**	Short-term ~ Medium-term	● Deepen knowledge of clean energy technology by supplying clean power to offshore production facilities by floating offshore wind power generation at INPEX's newly acquired Norwegian project
Opportunities related to products and services	**Promotion of CCUS business**	Medium-term	● Aim to inject at least 2.5 million tons of CO_2 annually in around 2030 ● Verify CO_2-EOR* viability in Minamiaga, Abu Dhabi and elsewhere ● Study possibility of employing CCS at Ichthys LNG
	Development of hydrogen business	Medium-term ~ Long-term	● Aim to produce and supply at least 100,000 tons of hydrogen and ammonia annually by 2030 ● Build blue hydrogen/ammonia pilot plant in Kashiwazaki, Niigata, targeting start-up in 2024 ● Conduct joint research on clean ammonia business in Abu Dhabi
	Expansion of renewable energy businesses	Short-term ~ Medium-term	● Aim for installed capacity of 1-2 GW primarily in offshore wind and geothermal generation businesses ● Participate in offshore wind-power projects in the Netherlands and Nagasaki ● Participate in Muara Laboh geothermal-power project in Indonesia
	Promotion of carbon recycling	Medium-term ~ Long-term	● Build a 400 Nm^3/h methanation facility in Nagaoka with verification tests scheduled to start in 2025 ● Install artificial photosynthesis panels in Darwin, Australia, with a view to developing practical applications
	Cultivating new business opportunities	Medium-term ~ Long-term	● Evaluate possibilities for drone utilization, methane pyrolysis, direct air capture (DAC), and blue carbon
	Promoting sale of carbon-neutral products	Short-term	● Further expand sales of carbon-neutral products and broaden carbon credit portfolio
	Promotion of forest conservation	Medium-term	● Aim for steady acquisition of 2 million tons worth of carbon credits annually from Rimba Raya Biodiversity Reserve REDD+ and other high-quality forest conservation projects
Market opportunities	**Diversification of energy supplies**	Medium-term	● Establishment of Asian gas value chain through investment in LNG bunkering, receiving terminals, small-lot distribution and midstream/downstream businesses such as power generation
	Development of cleaner natural gas	Medium-term ~ Long-term	● Increase production capacity at Ichthys LNG. Pursue business opportunities in Southeast Asia. Promote projects, including introduction of CCS, at the Abadi LNG Project in Indonesia

Short-term up to one years　Medium-term one to five years　Long-term longer than five years

* Enhanced oil recovery, including enhanced gas recovery

CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

Development of Physical Risk Assessment Process

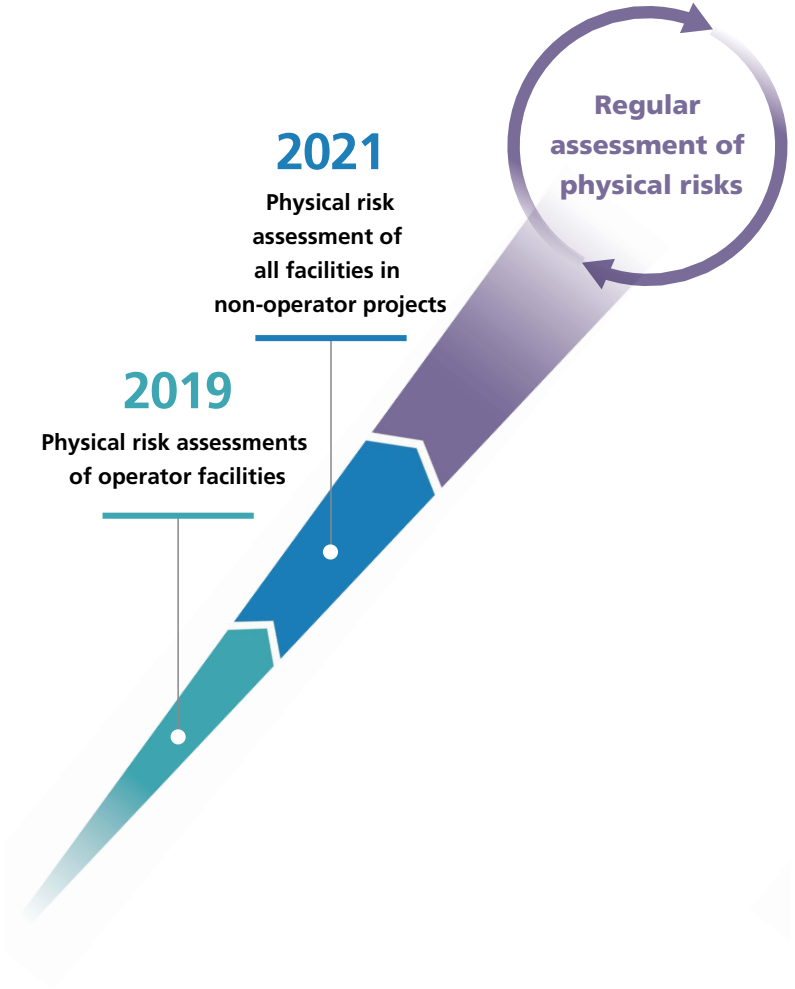
In 2018, we reviewed the process of assessing physical risks and drew up a roadmap covering the facilities at both operator and non-operator projects. In 2019, we conducted a trial physical risk assessment for our major operator facilities. To determine climate variables, including the increase in average temperature and sea-level rises in the mid-21st century, we started with external data from the RCP8.5 (Representative Concentration Pathways 8.5) scenario outlined in the IPCC Fifth Assessment Report (AR5), which assumes the highest level of global warming. Using the data, we identified the risks for our major facilities in Niigata Prefecture, Japan and in Darwin, Australia. In 2021, we completed trial assessments for almost all facilities in the eleven major projects with which INPEX is involved as a non-operator after confirming the status of physical risk assessments. We will also analyze gaps between the IPCC Fifth Assessment Report and the subsequently published Sixth Assessment Report (Working Group I).

For chronic risks, the assessments indicate a low risk from floods at Ichthys LNG and other major facilities located on the seaboard because they have been designed to withstand rising sea levels. Temperature increases could conceivably impair operating efficiency, but because we conduct ongoing improvements to the facilities as required, we have concluded that no major damage is likely to occur through 2030.

For acute risks, we endeavor to ensure that our major operator projects are adequately prepared for typhoons, cyclones and other natural disasters through planning, operational measures, training and use of external information. Insuring our property against natural disaster is another way we strive to reduce financial losses associated with acute risks. With respect to natural disasters in Japan, as the national government upgrades infrastructure, INPEX has also conducted pipeline risk assessments and studied countermeasures against natural disasters. Based on these reviews, we have carried out replacement work on portions of the pipeline deemed to have a high natural disaster risk.

Going forward, cross-organizational teams will conduct periodic physical risk assessments and make appropriate disclosures regarding physical risks.

Physical Risk Assessment Roadmap



CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

Assessment of Financial Impact of Climate-related Risks

INPEX uses two methods to assess the potential financial impact of climate-related risks. The first method is an economic assessment of each of our projects using internal carbon pricing. This assessment forms our base case. The reason we use this is because more than 130 countries have already declared net zero targets by 2050, and we expect a growing number of countries to introduce carbon pricing as they bolster efforts to tackle climate change. INPEX's internal carbon price is reviewed each year with reference to the carbon prices in the IEA WEO Stated Policies Scenario (STEPS). In FY2022, we adjusted our internal carbon price from US$40/t$CO_2$-e to US$65/tCO_2-e to reflect the IEA WEO carbon price forecast.

The second method is to assess the financial impact on our business portfolio. This is a financial assessment of the market risks to our portfolio resulting from the oil and carbon prices in the IEA WEO Sustainable Development Scenario (SDS: scenario consistent with the Paris Agreement's goals). By applying oil and carbon prices shown in the IEA WEO SDS to the net present value (NPV) calculation for projects, we calculate the extent of change against a base-case NPV as the impact on our portfolio. Despite difficulties in formulating assumptions, we adopt this as one of the methods to assess the financial impact on our portfolio. We will continue to refine the implementation standards for this method and to improve the competitiveness of our portfolio as we factor in changes in the business environment.

Two Approaches to Financial Assessment

	Assessment using internal carbon pricing	Assessment using SDS scenario
Financial assessment method	Financial impact of carbon pricing policies on projects	Assessment of financial impact on portfolio resulting from application of oil prices and carbon prices according to the IEA WEO Sustainable Development Scenario (SDS)
Metrics	IRR based on internal carbon price (base-case)	Extent of change in NPV using IEA WEO SDS reference prices (sensitivity analysis)
Status	Adopted as base case since FY2021	Implemented since FY2018

CLIMATE CHANGE

Our Policy 49

Setting and Achieving Climate Change Goals 50
Making Our Operations Cleaner
CO_2 Absorption through Forest Conservation
INPEX's Approach to Procuring and Utilizing Carbon Credits
Supply Chain Emission Reduction Initiatives – Towards Scope3 Reduction
The INPEX Low-Carbon Society Scenarios

Ongoing Initiatives to Address TCFD Recommendations 55
Governance System for Climate Change Response
Assessing and Managing Climate-related Risks and Opportunities
Development of Physical Risk Assessment Process
Assessment of Financial Impact of Climate-related Risks

Disclosures in Line with TCFD Recommendations

	Overview of TCFD Recommendations	INPEX's disclosures	Pages
Governance	**Disclose the organization's governance in relation to climate-related risks and opportunities**		
1	Describe the board's oversight of climate-related risks and opportunities	● Governance System for Climate Change Response	P55
2	Describe management's role in assessing and managing climate-related risks and opportunities	● Message from Director in Charge of Climate Change Response ● Governance Framework for Climate Change Response	P49,55
Strategy	**Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material**		
1	Describe the short-, medium- and long-term climate-related risks and opportunities the organization has identified	● Climate-related Risks and Opportunities	P58-59
2	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning	● Long-term Strategy and Medium-term Business Plan (INPEX Vision @2022)	P4-8
3	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	● INPEX Low-Carbon Society Scenarios ● Assessment of Financial Impacts of Climate-related Risks ● Application of Internal Carbon Price	P54,61
Risk Management	**Disclose how the organization identifies, assesses and manages climate-related risks**		
1	Describe the organization's processes for identifying and assessing climate-related risks	● Assessing and Managing Climate-related Risks and Opportunities	P56-57
2	Describe the organization's processes for managing climate-related risks	● Assessing and Managing Climate-related Risks and Opportunities	P56-57
3	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	● Risk Management System	P35
Metrics and targets	**Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material**		
1	Disclose the metrics used by the organization to assess climate change-related risks and opportunities in line with its strategy and risk management process	● Managing GHG Emissions ● Climate Change Response and Directors' Compensation	P51,55
2	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions, and the related risks	● ESG Performance Data: Climate Change <Target Management>	P106
3	Describe the targets used by the organization to manage climate change-related risks and opportunities and performance against targets	● Efforts in Setting and Achieving Climate Change Goals	P50-51

7 metrics of disclosure in line with TCFD Guidance of Metrics, Targets, and Transition Plans

	Overview of metrics	INPEX's disclosure	Pages
1	Capital Deployment	● Investment from 2022 to 2030	P5
2	Climate-Related Opportunities (Five net zero businesses)	● Operating cash flow around 2030	P6
3	Remuneration	● Climate Change Response and Directors' Compensation	P55
4	Physical Risks	● Assessment process for physical risks	P60
5	Transition Risks (Assessment of Financial Impact)	● Assessment method with IEA SDS scenario	P61
6	Internal Carbon Prices	● US$65/$tCO_2$-e	P61
7	GHG emissions	● Scope1, 2, 3 (ESG Performance Data)	P106-107