INDORAMA VENTURES

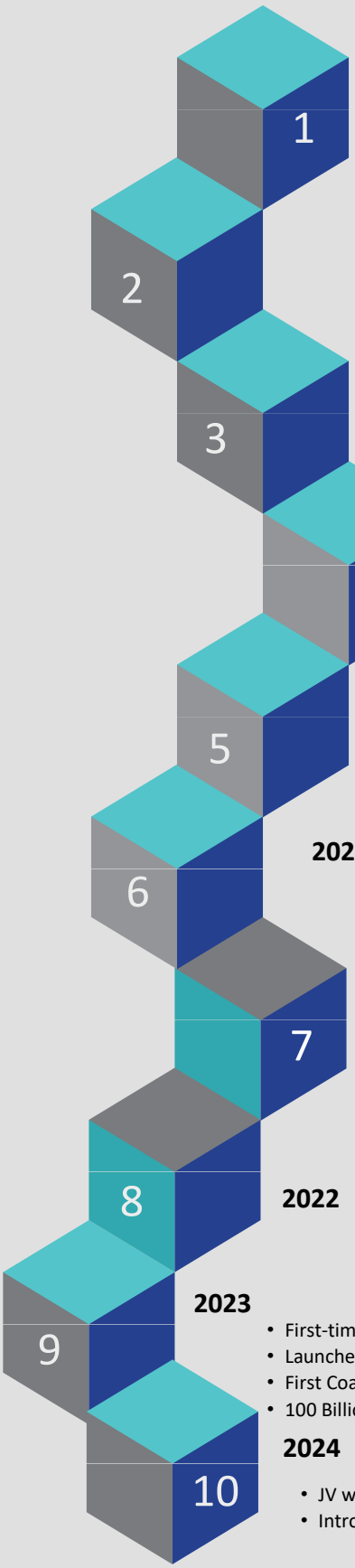
Climate-Related Risk Management Report

Prepared in accordance with the recommendations of the TCFD

June 2024

Indispensable Chemistry

Indorama Ventures Sustainability Milestone



2015

- EcoVadis Assessment
- First CSA Assessment

2016

- Ellen McArthur Global Recycling Commitment
- First-time CDP Climate Change Assessment
- Commenced GHG Scope 1&2 Calculation
- Introduced Corporate Sustainability Targets (1st Gen)

2017

- First-time Site-level Life Cycle Assessment
- Sustainability Data Management System
- Commenced GHG Scope 3 Calculation
- First Sustainable-linked Bond

2018

- Internal Carbon Pricing
- Renewable Energy
- Introduced Sustainable Product Classification

2019

- Circular Economy and Recycling Commitment
- Renewable Energy and Electricity Program
- Hazardous Chemicals/Substances Management Plan
- ESG/Human Rights Protections in the Supply Chain

2020

- GHG Scope 3 Audit
- UN Global Compact (UNGC) “Participant” member
- 1st SDGs Report
- TCFD Supporter - First Chemical Company in Thailand

2021

- Developed Decarbonization Strategies
- First-time ChemScore Ranking (1st Rank)
- Diversity, Equality, and Inclusion
- In-house product-wise LCA calculated
- Introduced Corporate Sustainability Targets (2nd Gen)

2022

- Deja Carbon Neutral PET unveiled
- Indorama Ventures Investment Holding (IVIH) Establishment
- Introduced Circular Feedstock Targets
- First-time CDP Water Assessment

2023

- First-time TNFD Report
- Launched Sustainability Academy
- First Coal Phase-out Project Completed
- 100 Billion Bottles Recycled Achievement

2024

- JV with Carbios Advanced Chemical Recycling
- Introduced Sustainable Supply Chain Program

Sustainability Excellence

MSCI

Achieved an AA rating for the first time in 2024
(improved from A Ratings in 2023)

Member of
Dow Jones Sustainability Indices
Powered by the S&P Global CSA

Listed in **DJSI World and Emerging Markets for the 5th and 7th** consecutive year respectively in the Chemicals sector Indorama Ventures was **ranked in the 92nd percentile**

Achieved 99th percentile among basic chemical companies assessed

FTSE4Good

#1 constituent in the FTSE4Good Index Series (ESG score 4.5 out of 5)

SUSTAINALYTICS

Achieved an **ESG rating in the 12th percentile** in the Chemical Industry Sector (lower percentile indicates better performance)
among 563 companies

CDP
DISCLOSURE INSIGHT ACTION

Achieved a B rating in the CDP's Climate Change

chemsec
CHEMSCORE

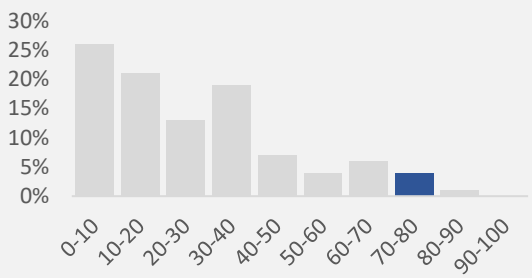
Achieved a B-ranking, Rank = 2 in the 2023 ChemScore assessment, among 50 global chemical companies

SET AA
ESG Ratings 2023

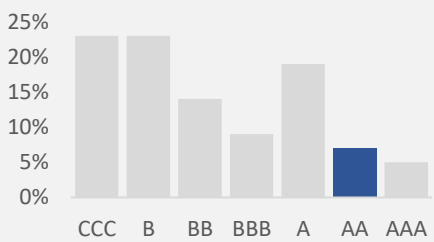
Achieved a total score of 80 with an AA grade, surpassing the "Industrials" group's average score of 67 for companies with a market cap beyond THB 100B

Sustainability Disclosure Award 2023
for the fifth consecutive year

DJSI Industry score distribution



MSCI ESG Rating Distribution



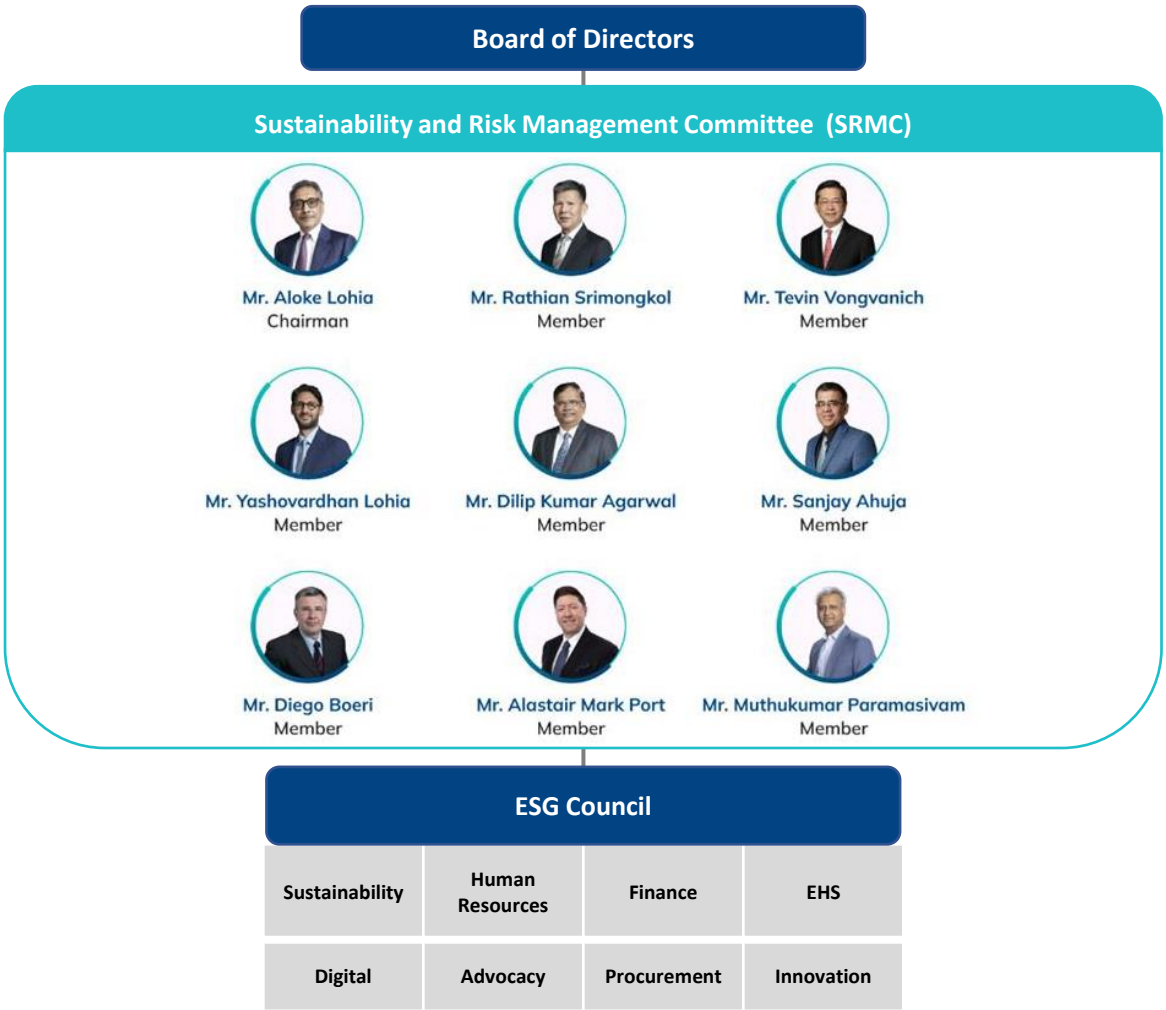
Indorama Ventures is dedicated to sustainability, consistently recognized by third-party assessors for our efforts. Our sustainability tagline, "Possible through Action," reflects our commitment to our ambition, which is shared across all functions of our business. Climate change is a key focus of our sustainability journey and has shaped our strategy to align with challenges and opportunities from changing global trend. Transparent and accurate reporting of our decarbonization initiatives is crucial for communicating our progress to stakeholders. Indorama Ventures has supported the TCFD recommendations and has incorporated them into reports since 2019 by reporting on the following four key pillars.

Governance *Page 3-4*	Strategy *Page 5-12*	Risk Management *Page 13-15*	Metrics & Targets *Page 16-18*
Disclose the organization's governance around climate-related risks and opportunities	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	Disclose how the organization identifies, assesses, and manages climate-related risks	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material

1. GOVERNANCE

Organizational Sustainability and Risk Management Structure

Figure 1: Climate-related risk integrated into the existing sustainability and risk management structure



Board oversight of climate-related risk and opportunity

The board of directors plays a crucial role in climate governance by ensuring that the decarbonization strategies of the company is integrated and aligned with the overall business strategy. The board meets on a quarterly basis where climate-related issue are discussed.

Three sub-committees are appointed by the board: Sustainability and Risk Management Committee (SRMC), Nomination, Compensation, and Corporate Governance Committee (NCCG), and the Audit Committee. The SRMC approves and reviews the implementation of sustainability strategies, monitors physical and transitional risks, and reviews risk mitigation plans and scenario analyses.

Meeting quarterly, the SRMC is chaired by the Group CEO and includes the Deputy Group CEO and Chief Financial Officer, Chief Strategy and Transformation Officer, Chairman of the ESG Council, two independent directors, executive president of three business segments (CPET, Fibers, and Indovinya).

The nine members of the SRMC work with all key functions of the organization including Advocacy, Risk Management, Strategy, Environment, Health & Safety (EHS), and Sustainability, reflecting the broad and multidisciplinary nature of sustainability. More information on the SRMC is available here.

Management oversight of climate-related risk and opportunity

The management works closely with the SRMC to ensure that climate-related risk and opportunity that are highlighted are managed effectively. Management level governance of climate related topics are addressed by three bodies; the Indorama Management Council (IMC), Manufacturing Excellence Council (MEC) and the ESG council.

1. GOVERNANCE

Oversight & decision-making

The IMC is the apex executive committee within Indorama Ventures, comprising the Group CEO, Deputy Group CEOs (including the CFO), Executive Presidents (representing Business Segments), Chief Human Resource Officer, and Chief Strategy and Transformation Officer as well next generation of Lohia Family (representing Sustainability, Investor Relations and Business Development).

It serves as a strategic platform for high-level decision-making and policy formulation. The council's scope encompasses:

1. Strategic Engagement: Engaging on a wide array of subjects pertinent to the organization, ensuring comprehensive coverage of strategic matters.

2. Cross-Functional Brainstorming: Serving as a collective forum where key functions converge to brainstorm on organizational-level issues, fostering a collaborative approach to problem-solving.

3. Policy Shaping: Defining and shaping organizational policies through deliberations, aligning business operations and functions with overarching goals.

4. Diverse Perspectives: Encouraging diverse and independent viewpoints, acting as a sounding board to refine ideas and strategies.

5. Organizational Harmony: Creating harmony in the organization's thought process and operations, ensuring a unified direction and approach across various function through new challenges in the business environment.

ESG council is a governing body which sets and advocates high level policy and strategy on ESG matters for Indorama Ventures. It consists of 15 senior leaders across different functions to discuss the implementation of key ESG programs. Environmental and climate issues are discussed quarterly to determine the appropriate solutions to navigate

The MEC has the responsibility to execute and roll out sustainability initiatives in Indorama Ventures' operating sites. The council consists of 7 senior executives from different departments to steer concerted efforts towards more climate sustainable manufacturing. In addition, the MEC also appoints the Decarbonization Committee, which is tasked to identify available technological opportunities, assess financial investment costs for transition, and implement Green Projects to lower Indorama Ventures climate footprint. In 2021, the Decarbonization Committee published a "decarb" playbook, which is a document that details the key technological options for Indorama Ventures sites to reduce greenhouse gas emissions and optimize energy consumption.

Table 1: Key Sub-committee structure and their roles and responsibilities

	Governing Structure	Roles and Responsibility	Meeting Frequency
Board level	Board of Directors	• Oversight of climate-related risk and opportunities • Ensure decarbonization strategies is in-line with the company's business strategy	Yearly
	Sustainability and Risk Management Committee	• Oversight and review decarbonization activities and performance • Monitors key business risks	Quarterly
Management level	IMC	• Ensure that the decarbonization initiatives are implemented as planned	Quarterly
	Manufacturing Excellence Council	• Provide environmental stewardship including water management • Establish standard operating procedure to maximize asset operating efficiency	Quarterly
	ESG Council	• Advocates and push policies and initiatives to ensure sustainability progress	Quarterly
Operational level	Decarbonization Committee	• Monitors emerging technologies required to decarbonize operations of the companies • Evaluate financial feasibilities of sustainability initiative to be approved by the management	Monthly
	Sustainability Department	• Relay climate-related data, and monitor sustainability progress • Assisting SRMC in decarbonization performance monitoring	Monthly

2. STRATEGY

Climate-related risk management framework

Climate-Related Risks

Transition Risk

Technology

Medium-term (5-10 years)

- Uncertainty of new technologies
- Cost to transition to lower emissions technology

Market

Short - Medium-term (0-10 years)

- Changes in customer/consumer preferences from high carbon intensive to low carbon products
- Increased demand of renewable raw material
- Access to financing and insurance increasingly affected by climate and environmental risks

Policy and Legal

Medium and Long-term (10-30 years)

- Implementation of cap-and-trade or carbon tax in jurisdictions where the company operates
- Exposure to litigation
- Enhanced emissions reporting obligations

Reputation

All time frames

- Plastics Pollution
- Movements on fossil fuel avoidance
- Increased stakeholder concerns

Physical Risk

Acute

Medium and Long-term (5-30 years)

- Incidents with large-scale environmental damage
- Natural resource crisis
- Natural disaster and extreme weather events

Chronic

Medium and Long-term (5-30 years)

- Risk of sea level rise and riverine flooding at sites located in high-risk areas, rising mean temperatures
- Changes in precipitation patterns and extreme weather variability leading to production disruptions
- Failure to mitigate and adapt to climate change

Climate-Related Opportunities

Resource Efficiency

- Use of recycling to increase circularity in operations
- Use of more efficient modes of transportation
- Use of more efficient production and distribution processes
- Building efficiency improvements
- Reduced water usage and consumption
- New technologies to reduce resource intensity in production

Energy Sources

- Use of energy sources with lower emissions (renewable energy, fuel transition)
- Use of supportive policy incentives
- Use of new technologies
- Participation in carbon markets
- Innovative power purchase contract structures

Products

- Development and expansion of low emission goods and services
- Development of climate adaptation and risk solutions
- Development of low-carbon products through R&D and innovation
- Diversification of business activities
- Shift in consumer and customer preferences

Markets

- Access to new markets
- Use of financial incentives and subsidies
- Access to new innovative financing mechanisms

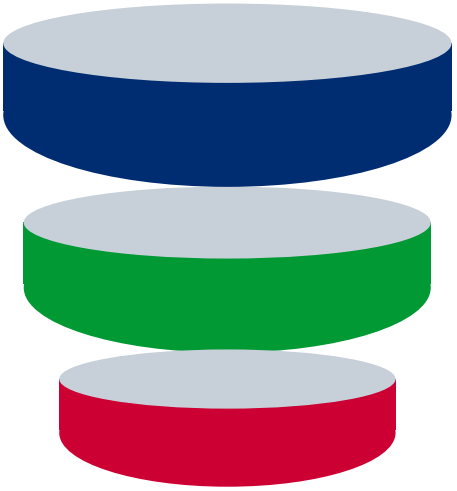
Resiliency

- Participation in renewable energy programs and adoption of energy efficiency measures
- Resource substitution, innovation, and diversification
- Development and deployment of recycling technologies
- Meeting and getting ahead of emissions and single-use plastics regulation

2. STRATEGY

Climate-related risk management framework

Figure 2: Process for identifying material risk items



01

Climate Risk Inputs

Climate risks are gathered from each risk champion within the organization through desk review, engaging with external experts, and reviewing existing risks.

02

Preliminary Assessment

A quick qualitative assessment of the initial risk list is performed through a brainstorming workshop to identify material risks for prioritization.

03

Material Risk Items

A final list of material risk items to be monitored is to be compiled together with an appropriate risk mitigation strategy. Risk materiality undergoes an annual review.

Process for selection of material climate-related risk and opportunity

Due to the complexity of climate-related risks, a process is put in place to selectively prioritize risks and opportunity items that have potential material financial impact. Figure 2 depicts the process that is currently used which includes both internal and external inputs. Internally, relevant personnel in the organization are responsible for identifying emerging climate risks based on constant monitoring of climate trends. In addition, external consultants and experts provide additional input to verify the final selection of risks and confirm that no items are overlooked.

These risks are identified in terms of short-term (0-5 years), medium-term (5-10 years), and long-term (10-30 years) timeframes, in line with our financial and business strategic planning. Climate-related risk management is analyzed through the perspective of (1) Physical risk and (2) Transition risk and their respective subcategories:

Transition Risk
Short – Medium term

Carbon Regulations

As a global chemical company, we are faced with risks in carbon pricing mechanisms that will be introduced, or increased costs.

Physical Risk
Medium – Long term

Water Stress

Water is an essential resource used in our manufacturing process. Water stress exacerbated by climate change could potentially disrupt our operations and create conflicts with stakeholders.

Opportunity
Short – Medium term

Recycling/ Renewable feedstock

As the largest recycler of PET, we have the strong advantage of having proprietary knowledge on mechanical recycling. Global demand is expected to increase, and Indorama Ventures would be well positioned to be a key player in this growing market.

2. STRATEGY

Climate-related opportunities for Indorama Ventures

Investing in low-carbon product development for business resiliency

Indorama Ventures strategically prioritizes the development and implementation of the core foundations of our sustainable business, aligned with our Vision 2030, to significantly invest in recycling technologies and biomass feedstock. We are increasing our use of biomass feedstock, with a commitment to achieving a cumulative investment of $4.7 billion by 2030. This will be realized by elevating our recycled feedstock to 23% (against Indorama Ventures' PET feedstock) and bio-based feedstock to 16% (against Indorama Ventures external feedstock).

Acting as a sustainable business incubator across:

In 2022, Indorama Ventures Investments & Holding (IVIH) established a mandate to achieve our Vision 2030 ambitions on advanced recycling and renewable feedstock, and to achieve decarbonization and a circular economy.

- Advanced recycling
- Bio-based chemicals/ polymers
- Renewable feedstock
- Biodegradable polymer

Circular feedstock projects

Poly materia™ Biodegradable hygiene products

With 30 additional projects identified and being evaluated.

Circular Feedstock

Target

Bio-based feedstock:
16% against Indorama Ventures external feedstock by 2030

Performance

In 2023, Indorama Ventures recorded **1.32%** against Indorama Ventures external feedstock.

Product highlights

ALKEST LV 1400 is a readily-biodegradable solvent derived from 100% natural raw materials. Its lipophilic properties enable improved interaction with oily soil, resulting in exceptional performance in cleaning and degreasing, particularly for I&I and household hard cleaning applications.

In addition to its non-flammable profile, ALKEST LV 1400 can be classified as a VOC exempt solvent according to the California Air Resources Board (CARB) and the United States Environmental Protection Agency (EPA) Safer Choice program.

France-based Texinov has embraced sustainability on many fronts, exemplified by its creation of insect-proof and compostable nets for agricultural use. The finely knitted net, known as FILBIO®, not only protects crops without using pesticides - which may be harmful to both humanity and the environment - it also protects against hail, wind, and climate-induced stress. Made with Indorama Ventures bio-based PLA, it is re-usable for up to three growing seasons.

At our German sites in Bobingen and Guben, Indorama Ventures produces PLA staple fibers and filaments, which are made from 100% renewable materials. PLA significantly reduces CO_2 emissions and utilizes much lower energy consumption during raw material production .

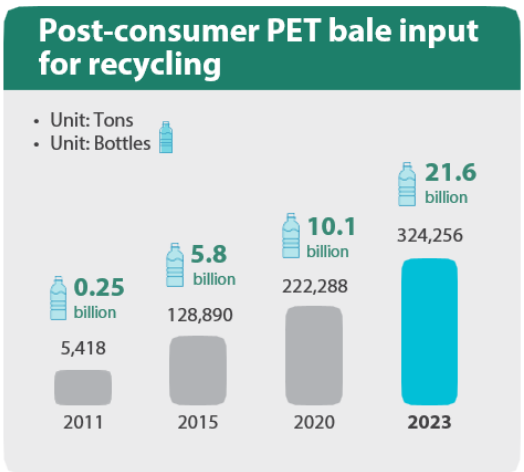
Recycling Capacity Expansion

We are increasing our investments in recycling plants, having committed $1.5 billion to build the necessary global recycling infrastructure to achieve a closed loop system, which can further encourage the end-use of recycled PET and deliver a circular economy for beverage packaging. We have made a further commitment to increase our annual bale input to 750,000 tons by 2025 and 1.5 million tons by 2030 and are working with multiple industry partners to achieve a circular economy for sustainable plastics.

We have acquired proprietary insights into mechanical recycling and formed partnerships with innovative entities to develop and test next-generation chemical recycling technologies.

- Acquisition of the Czech Republic-based PET plastic recycler, UCY Polymer.
- Co-investment in the bio-recycled PET manufacturing plant, Carbios.
- Successfully commissioned our first bottle-to-bottle recycling facility in the Philippines, "PETValue," with Coca-Cola.

Figure 3: 2023 progress towards meeting post-consumer bale input target



The PET bottles figure uses an average weight and an overall height of on-the-go PET water and soda bottles, equivalent to the volume recycled at Indorama Ventures recycling sites between February 2011-December 2023. Weighting shall be referenced to The International Bottled Water Association.

2. STRATEGY

Water risk analysis

We manage our water responsibly, including water withdrawal and discharge, and continuously seek improvements in water management through the 3Rs. Conscious of water risk, Indorama Ventures is demonstrating responsibility through our efficient water management stewardship. We focus on local water risk assessments and through follow-up, have put in place an effective risk management system, and regularly assess our exposure to water-related risks. We conducted a water sensitivity analysis using the AQUEDUCT Water Risk tool developed by WRI to identify water stress locations in 2023.

This tool facilitated the assessment of changes in water demand, water supply, stakeholder risk, and regulations based on current and future conditions. It also enabled us to foresee changes in water risk forecasting in 2030, and 2040. These results were analyzed and discussed during risk assessment committee meetings, which take place annually, to identify the necessary mitigation measures and any meaningful initiatives for plants located in areas facing extreme water stress or significant risks to water usage.

Figure 4: 2023 Water Stress Assessment

(% of Indorama Ventures' operations identified in water stress areas using the AQUEDUCT Water Risk Tool)

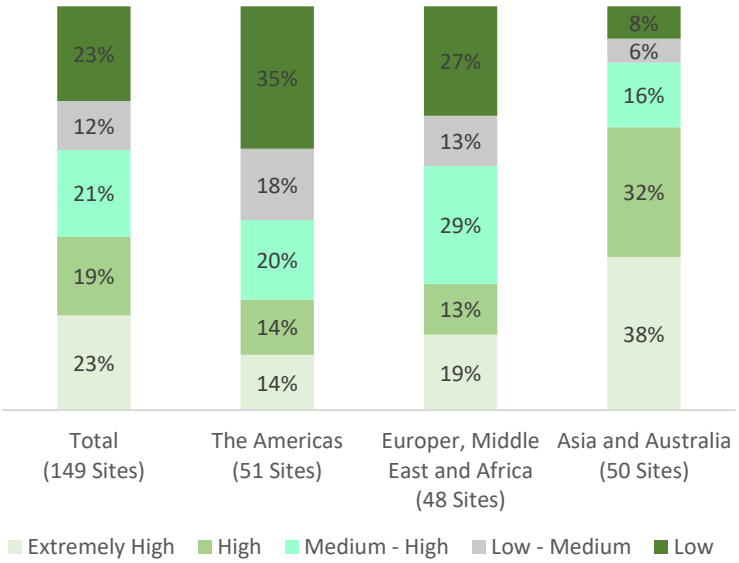


Table 2: Financial Impact estimation of plant shutdown from water stress

Stress Level	No. of sites	30-day shutdown cost	60-day shutdown cost	90-day shutdown cost
Extremely High	**35**	**15.87**	**31.74**	**47.61**
High	**29**	**10.36**	**20.72**	**26.23**
Sub-total (million $)		**26.23**	**52.46**	**78.69**

Note: The financial impact is estimated via the loss of EBITDA from plant shutdowns due to water shortage. Please refer to Indorama Ventures' 2023 water stress assessment report for more details.

Mitigation Action Plan for Water Stress

- The risk management committees of plants and business segments regularly monitor potential regulatory changes and evaluate water risks and opportunities by conducting scenario analyses with those changes.
- We undertake natural disaster risk assessment of our plants and sites to determine the risk level and risk mitigations and intervention required, by developing risk assessment standards in collaboration with Environmental, Health & Safety, and Group Insurance.
- We establish ''minimum expectations'' on assessment , preparedness, and response planning including emergency procedure for natural disasters such as hurricanes, winter freeze, and flooding
- We conduct a water sensitivity analysis using the AQUEDUCT Water Risk tool developed by the World Resources Institute to identify water stress locations. This tool helps us evaluate changes in water demand, water supply, risks from stakeholders and changes in regulations based on current and future conditions. We assessed our water risk for 2023 with forecasts for 2030. These results are analyzed and discussed during meetings held by the SRMC to identify necessary mitigation measures or initiatives on a quarterly basis, with a focus on plants in areas facing high risks of water stress or locations with significant risks to water usage.
- We evaluate options and the potential to reduce water consumption, increase the recycling and reuse of wastewater, and collecting rainwater to achieve our goal of zero effluent discharge at as many sites as possible, and establish targets at the entity and group level.
- We are committed to sustainable water management (including water withdrawal and discharge) by complying with all applicable environmental laws, international standards, and regulations in the countries where we have operations, and will be proactive in demonstrating our leadership and responsibility in line with our values.

2. STRATEGY

Scenario analysis

Carbon pricing is an essential financial mechanism for transitioning towards a low-carbon economy. As many countries are developing carbon pricing mechanisms to control national emissions in line with their nationally determined contributions (NDCs), we have revised our calculation methodology to increase the scope of coverage to include emerging schemes as well as those not currently in place.

Emissions forecasts were projected based on our business plans, which already account for production growth until 2030. The costs associated with our emissions in 2030 were referenced from the IEA World Energy Model 2023, which specifies costs for different regions. We expect that most of the carbon regulations affecting our operations will be based on an emission trading scheme, where we will be allocated a certain number of allowances. Therefore, the impact on our emissions is modeled to affect only half of our total emissions.

As carbon pricing is a material risk for Indorama Ventures and other petrochemical companies, risk reduction is captured within our sustainability target of reducing our GHG Intensity (Scope 1&2) by 30% by 2030. Supporting measures to achieve this target are outlined on the next page.

Figure 5: Scenario references [1]

Scenario	Scenario Description	2030 Impact
IEA Stated Policies Scenario (STEPS)	Business-as-usual without new climate policies. The Stated Policies Scenario reflects the impact of existing policy frameworks and today's announced policy intentions. The aim is to hold a mirror to the plans of today's policymakers and illustrate their consequences for energy use, emissions, and energy security.	$21.5M - $43.0M
IEA Announced Pledge Scenario (APS)	Scenarios representing that governments meet all climate-related commitments in their entirety and on schedule. This encompasses nationally determined contributions (NDCs), long-term net-zero pledges, and other energy-related targets. It is assumed that there will be cost reductions in low-carbon technologies to make targets feasible. The associated temperature rise of this scenario 1.7°C.	$320M - $640M
IEA Net Zero Emissions by 2050 (NZE)	Narrow but achievable pathway for the global energy sector to achieve net zero CO_2 emissions by 2050, with advanced economies reaching net zero emissions in advance of others. This scenario also meets key energy-related SDGs, particularly by achieving universal energy access by 2030 and through major improvements in air quality. This is consistent with limiting the global temperature rise to 1.5°C without exceeding this threshold.	$395M - $790M

Note: Indorama Ventures made Carbon pricing (Carbon Tax + ETS) payments of approximately $5.62M in 2023

[1] World Energy Model, IEA (2023).

2. STRATEGY

Decarbonization pathways

Conventional Pathways

Efficiency and Optimization

The proposed projects that seek to address resource intensity are classified as green projects. Sites regularly propose green projects, with new projects to be approved by head office. Indorama Ventures maintains a pipeline of green projects classified as approved, promising, and aspirational scenarios according to their payback period and cost efficiency.

Natural Capital Solutions

Natural capital solutions work to counterbalance every ton of GHG emitted by ensuring a corresponding reduction of one tone in the atmosphere. This can be achieved by funding additional renewable energy projects, forestry initiatives, wetland restoration, or carbon capture and storage. Indorama Ventures is exploring the potential of issuing plastic/carbon credits within recycling facilities in addition to ownership structures to facilitate carbon offset projects, addressing any residual emissions.

Energy Transition

Indorama Ventures has implemented solar rooftops and is exploring transitioning from coal to low carbon-intensive energy sources. Additionally, the company is exploring renewable energy purchases through Virtual Power Purchase Agreements (VPPA) which are expected to make up the bulk of its renewable energy procurement.

Recycling

Recycling addresses both emissions reduction and plastic pollution. Recycled PET (rPET) has significant environmental advantages over virgin PET, both in terms of lower lifecycle carbon emissions and addressing plastic pollution.

Supporting Activities

Supplier Engagement

Indorama Ventures' Sustainable Supply Chain program was launched in 2021. Ongoing supplier engagement aims to manage ESG risks and share product carbon footprint information, enabling the estimation of Scope 3 emissions while facilitating Scope 3 target-setting.

Internal Carbon Pricing

Internal carbon pricing (ICP) is used to project finance assessments at certain sites.

New Technologies

Carbon Capture, Utilization, and Storage (CCUS)

Carbon capture, utilization, and storage (CCUS) encompass technologies that directly remove carbon dioxide from the air, particularly from high-intensity sources such as coal or gas power stations. Indorama Ventures is closely monitoring the development of CCUS technology and its potential applicability to the company's various sites.

Renewable Natural Gas (RNG)

RNG is methane gas, chemically identical to fossil fuel natural gas but sourced from decaying feedstocks. Nearly all available RNG is derived from landfills, sewage treatment plants, or livestock manure ponds on large industrial farms. It offers significantly lower emissions than conventional natural gas.

Bio/Renewable Feedstock – Vision 2030
Decarbonizing our products through biomass

Indorama Ventures committed to investing $4.7 billion in investments to increase biomass feedstocks to 2.4 million tons, which includes the investment in a natural alcohol plant as part of the Oxiteno acquisition.

Green Hydrogen

Green hydrogen is produced by splitting water molecules into hydrogen and oxygen via electrolysis, using a process powered by renewable electricity. Green hydrogen could play a significant role in decarbonizing sectors resistant to electrification.

2. STRATEGY

Decarbonization case studies

Generating Solar Energy at our Sites

Thailand

The new solar farm at the AsiaPet site in Lopburi boasts a generation capacity of 5.6 MW, leading to an approximate annual reduction of 3,940 tCO_2e in GHG emission. The total solar capacity at the Lopburi site will reach 12 MW, making it the largest among all Indorama Ventures' sites.

Thailand

In partnership with Glow, Indorama Petrochem Limited (PTA) completed the installation of ground-mounted and rooftop solar panels at the site in 2022, with a total capacity of 2.96 MWp. The solar panels are expected to generate 4,500 MWh/year, contributing to an annual reduction of 1,800 tCO_2e in GHG emissions.

Thailand

In 2022, Petform (Thailand) Limited in Nakhon Ratchasima installed a new solar plant with a capacity of 586 kWp, contributing to an annual reduction of 351 tCO_2e in GHG emissions.

China

Performance Fibers Kaiping (PFK), one of Indorama Ventures' facilities in Guangdong, commissioned solar panels with a capacity of about 1 MWp in August 2022. An additional 4 MWp was completed in January 2023, leading to approximate electricity generation of 5 million MWh/year and an annual reduction of 3,500 tCO_2e in GHG emissions.

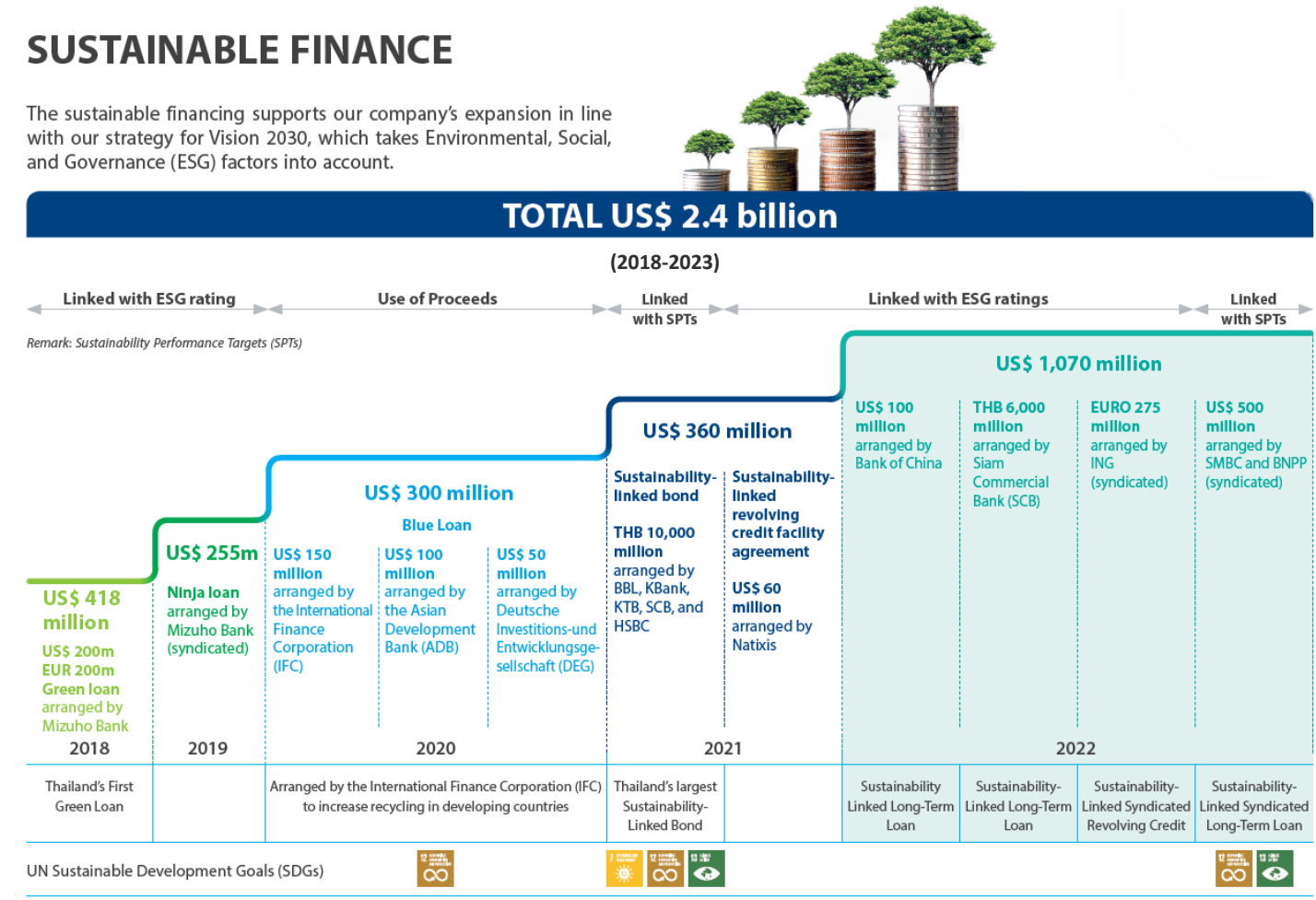
Liquefied Natural Gas-Based Heating System (Thailand)

Indorama Polyester Industries in Nakhon Pathom, Thailand achieved a significant milestone in their sustainability journey by commissioning a liquefied natural gas (LNG)-based thermic fluid heating system to replace the original coal-fired system. This marks their first step towards phasing out coal at their site, resulting in an annual reduction of 5,212 tCO_2e in GHG emissions and an expected overall 6% carbon savings this year.

2. STRATEGY

Sustainable finance

Sustainable finance is an integral part of Indorama Ventures' financial planning, driven largely by climate considerations. To mitigate climate-related risks and seize climate-related opportunities, we utilize sustainability-linked finance to support the investments necessary to meet our sustainability targets. This includes mitigating transition risks, such as carbon pricing, through investments that support the decarbonization pathways outlined in our climate strategy. Since 2018, we have raised a total of US$2.4 billion to lower our environmental footprint, promote a circular economy, and support SDG goals.



Indorama Ventures' leadership in sustainable finance

Indorama Ventures is a global leader in ESG integration and has secured roughly US$2.4 billion in sustainable financing as of December 2024. Our highlights include:

1. A term loan facility for US$100 million arranged by the Bank of China, linked to Indorama Ventures' ESG rating.
2. A sustainability-linked long-term loan facility for THB 6 billion arranged by Siam Commercial Bank, linked to Indorama Ventures' ESG rating.
3. A sustainability-linked long-term loan facility for US$500 million arranged by Sumitomo Mitsui Banking Corporation, BNP Paribas, and five other banks, linked to our GHG intensity reduction and post-consumer PET bale input.
4. A sustainability revolving facility for EUR 275 million arranged by Bangkok Bank, ING, Luminor, HSBC, ABN, and SCB, linked to our ESG rating.

3. RISK MANAGEMENT

Indorama Ventures climate governance ensure effective identification and management of climate risks

Principle 1 – Climate accountability on boards

Our Board is ultimately accountable for the long-term strategy and resilience with respect to potential evolvement in the business landscape pertaining from climate change. However, the Board monitors and ensures the compliance pertaining to climate change through its subcommittee, Sustainability and Risk Management Committee, consisting of executive and non-executive directors.

Principle 2 – Command of the (climate) subject

Our board members with relevant work experience. Its composition is sufficiently diverse in knowledge, skills, experience and background to effectively consideration and take decisions informed by an awareness and understanding of climate-related opportunities and threats.

Principle 3 – Board structure

We have most efficient board comprising of independent directors, non-executives directors and executive directors with vast experience in industry in which we are operating, global warming, climate change, and its impacts. Climate Change is one of the potential risk for the Company. The Board through its subcommittee regularly monitor the status, threats and opportunities that could impact our operations. The Sustainability and Risk Management the effective approach to integrate climate concerns into its organizations operations globally.

Principle 4 –Material risk and opportunity assessment

To evaluate and advise the Board on significant risks and uncertainties that could impact sustainable profitable growth. The board further ensures that the organization's actions and responses to climate are proportionate to mitigate the negative impacts of climate changes to the company.

Principle 5 – Strategic and organizational integration

Climate Change issues are regularly and systemically considered for strategic investment planning and decision-making processes and assist management in embedding a prudent "risk culture" throughout the organization. We monitor and evaluate financial and non-financial impacts as well as potential business risks of a regulated price on carbon and are taking further steps to study and implement a policy to embed the internal cost of carbon in our operations including in M&A decisions.

Principle 6 - Incentivization

The board ensures that management incentives are aligned to promote the long-term growth of the company. Incentivization scheme (monetary, nonmonetary and recognitions) is designed for our management to promote and reward sustainable value creation which relates to environmental performance including decarbonization targets and/or sustainability goals.

Principle 7- Reporting and disclosure

We report climate-related issues to the Board and the Sustainability Risk Management Committee on material climate-related risks, opportunities and strategic decisions as well as performance as a result of our initiatives. We also consistently and transparently disclosed to all stakeholders in our Sustainability Report, Annual Report and Corporate Website. We received an award from Transparency International where it ranked Indorama Ventures among emerging markets multinationals and as one of the top companies in the world in the report. Our score is the highest in Thailand. Transparency International is a global movement initially based in Berlin, Germany, and studies transparency in over 100 countries. The vision of this nongovernmental organization is to create a world free of corruption.

Principle 8 – Exchange

Our directors and management keep abreast of all developments and updates on Climate Change. They educate themselves and also through attending high profile conferences such as World Economic Forum, conferences, seminars. Further, the Sustainability Department, Decarbonization Committee, Business Heads, internal subject matter experts keep updating the management on industry trends, emerging risks, new regulations and various other issues that could impact the business operations in long term and short term. They also regularly approve, supervise the conduct of the company's engagement in industry and public policy making, maintain its awareness about good climate-governance practices and encourage climate dialogue and methodology sharing among industry peers, investors, regulators and other stakeholders.

3. RISK MANAGEMENT

Identification and management of climate risk

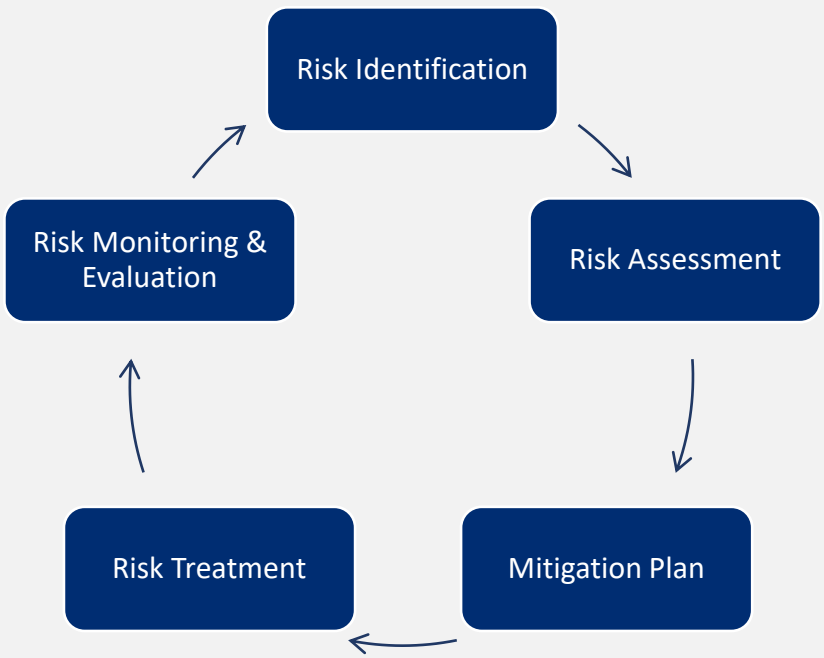
Identification of Climate-related Risk

Following the principle in the WEF climate governance initiative, we set up a process to identify climate-related risks. These are directly covered under Principle 4 and Principle 8, along with other supporting principles on this matter. Inputs for climate-related risks are obtained from the bottom up, in which business functions submit risk items through a risk portal. To increase internal knowledge and awareness of climate-related risks, the Indorama Sustainability Academy was created to provide important information on climate and sustainability concepts. In addition, our members actively join external workshops and events, closely follow industry updates and guidelines, and engage with external experts to produce an exhaustive list of risk items. Internally, the risks are screened to filter the most material risk items.

Management of Climate-related Risk

Climate-related risks that are identified are assessed internally by an assigned risk owner in the Sustainability Team. The risk assessment scores the risk on a severity scale of 1-5, from least to most severe impact. A probability score is also determined, which allows a mapping of risk items. Subject matter experts then evaluate the highly severe and highly probable risks and a risk management strategy is created for the approval of the SRMC. Related programs to the risk management strategy are discussed at appropriate forums.

Figure 6: Climate-related Risk Identification and Management Process



Integration of Climate-related Risk management

The complex nature and scale of climate-related risks require a strong understanding of various knowledge areas to accurately assess their impact on Indorama Ventures. To address this challenge, our climate risk councils and committees have been setup to be cross-functional and each given oversight of strategy, policy and execution. This diversity enables a thorough assessment across business areas, allowing us to identify and escalate risks within specific functions and effectively communicate policies and initiatives across the organization. To bolster climate-related risk response, the new Sustainability Academy serves as a knowledge-sharing and learning platform.

3. RISK MANAGEMENT

The Business Continuity Program

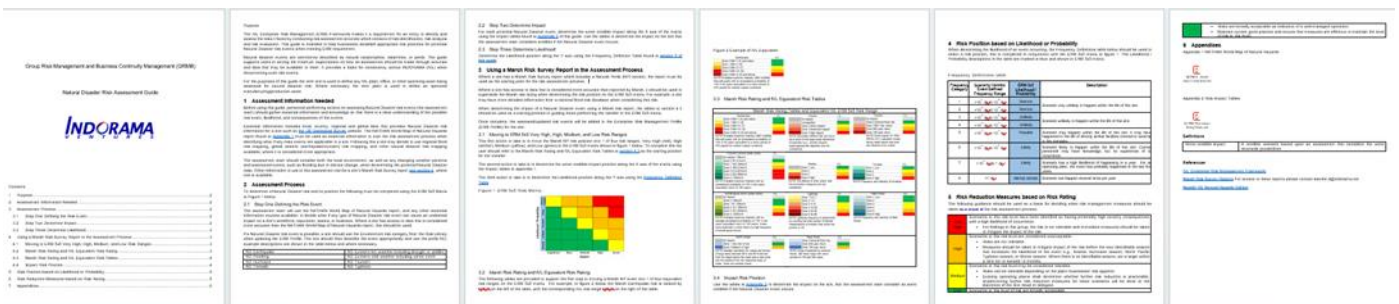
As a leading chemical company with a geographically diverse business presence around the world, Indorama Ventures's climate-related risks are a key focus of our Business Continuity Management Program (BCMP), which is aligned with our ISO 22301:2019 Business continuity management systems. This program includes, but is not limited to, assessing the impacts of extreme weather events on our business, which we recognize as more prevalent due to changes in weather patterns. These events can:

- Have an adverse impact on raw material supply, including increases in raw material costs.
- Have a negative impact on or disruption to critical transportation and infrastructure on which we depend.
- Reduce the output in manufacturing processes and, in extreme cases, cause a shutdown.

Through our Business Continuity Management Program, we deliver continuity strategies to deal with these types of events including drought, extreme weather, flooding, etc. and the disruptions they have on our operations. These efforts include but are not limited to the following:

1	2	3	4	5	6
Product Standardization (name/grade)	Seasonal Stock Buffering	Alternate Suppliers & Flexibility	Diversify Transportation Modes & Expand Warehousing	Production & Sales Transfer	BCP Development & Exercising
Flexibility to source & reduce customer qualification time	Prevent shortages of key raw materials and finished goods during predictable seasonal weather events	Provide alternate sourcing options and flexibility to reroute materials during disruption	Enhance logistics availability & capacity during disruption	Inter & intra-regional transfer strategies capitalizing on the global IVL network	Availability of, & familiarity with BCPs guiding responses to disruptions & continuous improvement

To support businesses engaged in the Business Continuity Management Program, Indorama Ventures has developed a dedicated Risk Assessment Guide that specifically focuses on extreme weather events to ensure our assessment outcomes are aligned with key partners globally.

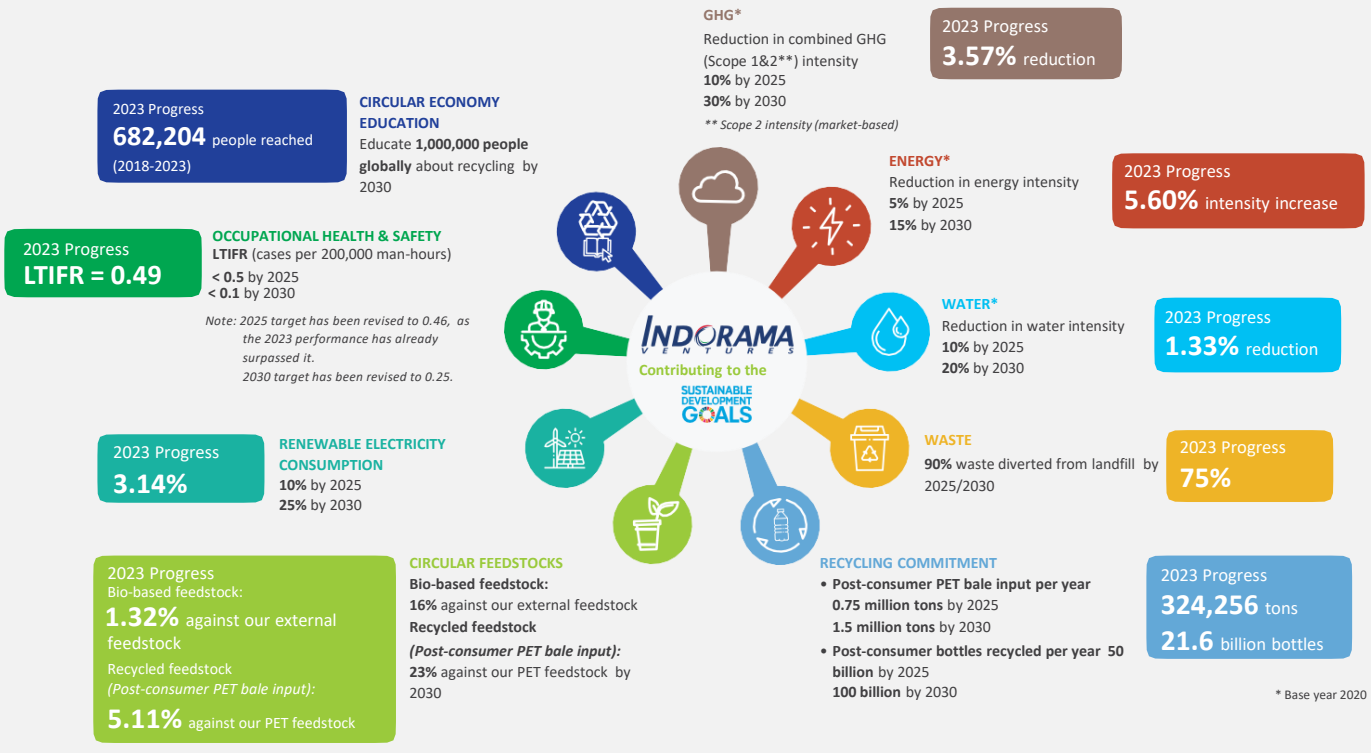


Our Natural Disaster Risk Assessment Guide focuses on extreme weather events to ensure that our risk assessment process and any related risk management outcomes are aligned with key partners around the world. In addition to this new guide, which serves to further support our businesses, the Indorama Ventures Business Continuity Management Program offers dedicated guidance to assist businesses in proactively notifying leaders about the potential impacts from upcoming extreme weather events on manufacturing plants and offices, leading to the activation of contingency planning where possible to reduce any potential impact.

4. METRICS & TARGETS

Indorama Ventures places high importance on contributing to the Sustainable Development Goals (SDGs), reducing our environmental footprint, and promoting a circular economy. We have made considerable progress against metrics used to assess our sustainability journey. Overall, we have ten metrics used to ensure the resiliency of our company towards a transitioning world that will help us mitigate climate-related risks. These are summarized in Figure 7.

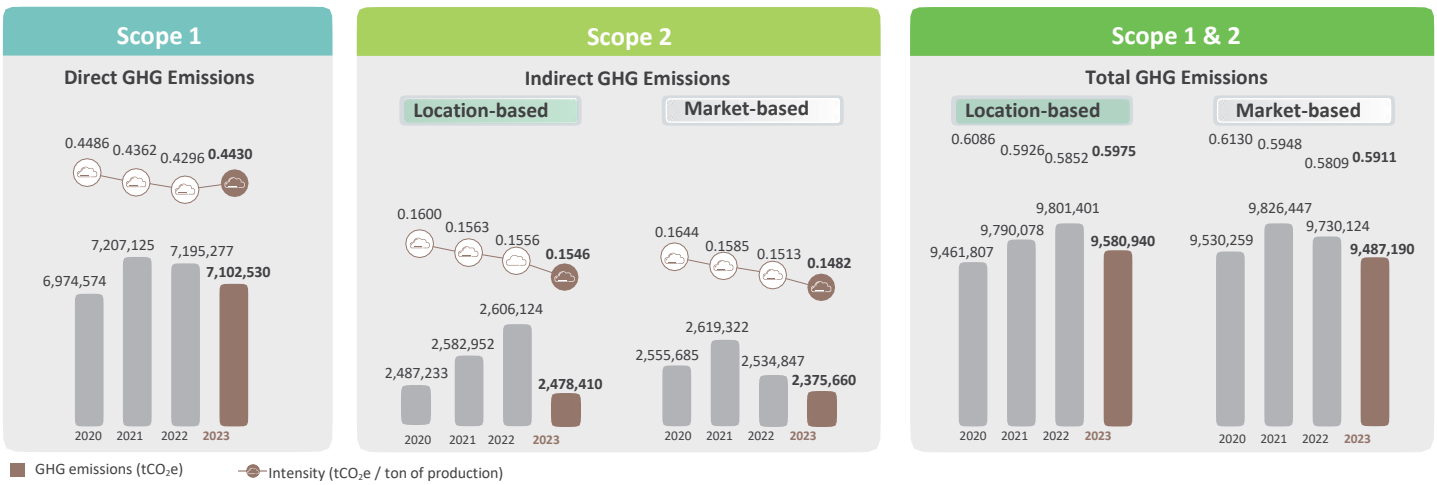
Figure 7: Indorama Ventures' Sustainability Targets



Greenhouse Gas Emissions

Understanding GHG emissions from our operations at Indorama is critical to meeting our targets, fulfilling customer requirements, and reducing climate transition risk. We place high emphasis on ensuring that our emissions across our global 149 sites are accurately recorded to fully grasp the context of our climate footprint. We adhere to the guidance of the GHG Protocol for calculations of Scope 1, 2, and 3 emissions to establish a consistent, accurate, and transparent inventory. These emissions (including 9 Scope 3 categories) are audited annually by a credible third party.

Figure 8: Indorama Ventures' GHG performance from 2020-23



[1] See disclosure on climate-related metrics and targets in the Sustainability Report Executive Summary 2023

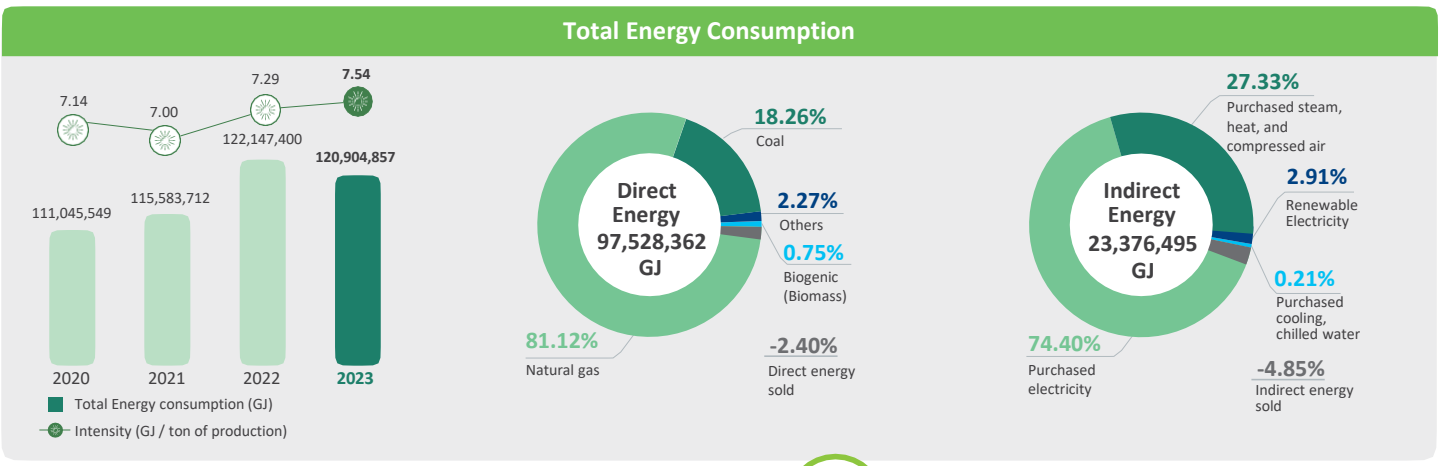
4. METRICS & TARGETS

Energy Consumption Reduction

Reducing energy consumption is one of our key efforts in decarbonizing our portfolios as we strive towards a Sustainable Future. Our commitment involves striving for efficient energy consumption and management across all operations within our business segments, aiming to significantly reduce our carbon footprint.

To ascertain our energy management system, we underwent the ISO 50001:2018 certification and 58% of our operations received the certification up to 2023. In addition, our energy transition initiatives (e.g. coal phase out) is aligned with our decarbonization strategies. We actively identify opportunities to improve energy efficiency and conservation, and further develop our action plan with quantifiable targets to measure and evaluate the progress of our performance. More than 1,278 training hours on energy management were provided to leaderships and sites to ensure sufficient knowledge and skills in order to advance these actions and drive success. Over $ 13.1 million was invested in energy consumption reduction projects through various process innovations, as well as plant modifications and new unit installations to procure cleaner and greener alternative fuels. Our energy data is annually verified and audited by an external third party. In 2023, our energy intensity was recorded at 7.54 %, due to changes in our product mix combined with lower operating rates in our assets, particularly in the European region.

Figure 9: Indorama Ventures' energy performance from 2020-23



Energy Intensity
(2020 baseline)

Target
5% by 2025 and **15%** by 2030

Performance
In 2023, we recorded an energy intensity of **7.54** GJ/ton, which was an increase of **5.60%** from 2020 baseline.

Renewable Electricity Consumption
(2020 baseline)

Target
10% by 2025 and **25%** by 2030

Performance
In 2023, Indorama Ventures consumed **3.14%** of renewable electricity against total electricity. consumption.

HIGHLIGHTS
From 2014 to 2023

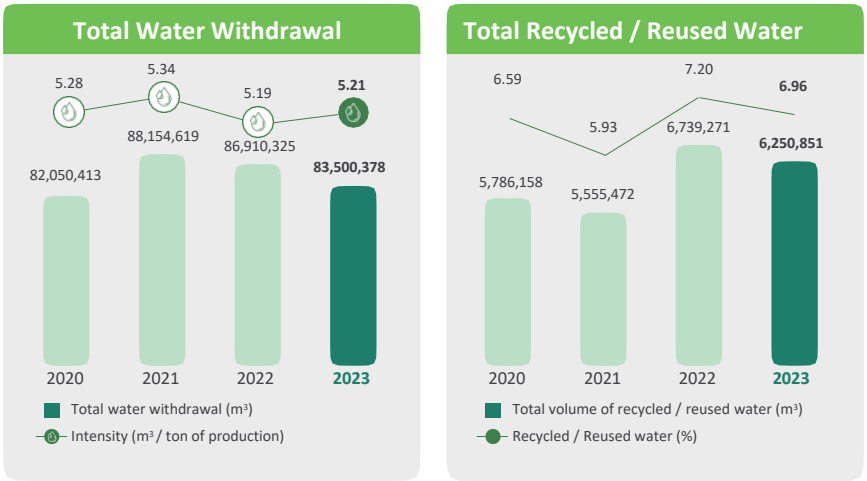
16 Onsite/Offsite solar installations in China, India, Indonesia, Thailand, Lithuania, USA, Italy, and Egypt

98,878 MWh of solar based renewable electricity generated and used in plants

49,162 tCO_2e of total cumulative GHG reduction from renewable electricity consumption

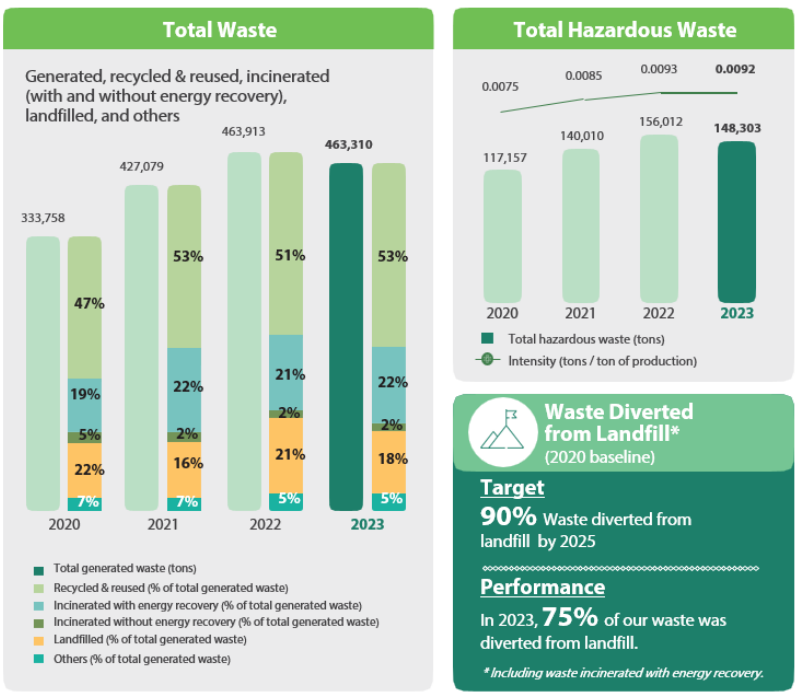
4. METRICS & TARGETS

Figure 10: Indorama Ventures' Water performance from 2020-23



In accordance with our Water Management Policy, we are committed to advancing water stewardship throughout our entire value chain, reducing our water consumption and its intensity across our operations and minimizing water-related risks globally, as well as conserving water resources to maintain good relationships and avoid conflicts with communities. Our dedication extends to improving sustainable water efficiency management practices, encompassing both water withdrawal and discharge. The 3Rs (Reduce, Reuse, Recycle) principle and circular economy concept are adopted by our operations to increase the overall efficiency of water management and to achieve water reduction targets. We are committed to ensuring 100% of our water discharge is treated to improve its quality to below regulatory limit before release.

Figure 10: Indorama Ventures' Waste performance from 2020-23



Indorama Ventures initiated the Zero Waste to Landfill Audit in 2021, which is still ongoing, and received the Zero Waste to Landfill (ZWL) certificate from an external party that provides quality assurance to industries worldwide, ensuring the quality and safety of products, processes, and systems. This Zero Waste to Landfill certification provides credibility and visibility for an organization's efforts to improve environmental impacts. This certification recognizes the achievement of over a 99% diversion rate management.

This audit helps us to better understand waste management practices and utilize more waste in line with a circular economy approach.
In total, 35 sites were audited by an external auditor:

- 17 sites received Platinum certification (diversion rate of more than 95%)
- 12 sites received Gold certification (diversion rate of more than 90%)
- 1 site received Silver certification (diversion rate of more than 85%)

DISCLAIMER

Forward-Looking Statements

This Climate-Related Risk Management Report contains 'forward-looking statements' - i.e. statements relating to our projected future performance. These statements can be identified through the use of language such as 'aim', 'believe', 'estimate', 'expect', 'goal', 'intend', 'may', 'plan', 'target', 'will' and other similar terms. Forward-looking statements offer investors and other stakeholders with important insights into our vision and how we believe our strategy sets us up for long-term success. In their nature, they also include making some assumptions in the future or wider business environment which may affect our ability to deliver on our targets.

For example, shifts in legal and regulatory frameworks, national fiscal complexities which can affect our ability to compete effectively, or unforeseen economic and social challenges in the countries where we operate, etc. There is, therefore, a degree of uncertainty inherent within forward-looking statements which readers are asked to accept when assessing the information provided therein. Investors are cautioned not to place undue reliance on any such forward-looking statements, which speak only as of the date they are made. Indorama Ventures undertakes no obligation to update any forward-looking statements, whether as a result of new information, future events, or otherwise.

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