

**SHIFTING  
TOWARDS**



**GENERATION**

**SUSTAINABILITY EXECUTIVE SUMMARY REPORT 2022**

# KEY SUSTAINABILITY RECOGNITIONS AND AWARDS IN 2022



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Member of

## Dow Jones Sustainability Indices

Powered by the S&P Global CSA

Indorama Ventures Public Company Limited  
Chemicals

Sustainability  
Yearbook Member  
S&P Global ESG Score 2022

80/100

As of February 7, 2023.  
Position and Score are industry specific and reflect exclusion  
screening criteria. Learn more at [spglobal.com/esg](https://www.spglobal.com/esg)

S&P Global

Sustainable<sup>1</sup>

A member of the S&P Global Sustainability Yearbook 2022  
Listed in the DJSI-World and Emerging Markets Indices for the fourth  
and sixth consecutive years respectively in the Chemicals sector.  
IVL was ranked in the 96<sup>th</sup> percentile.



Achieved the 99<sup>th</sup> percentile  
in an assessment of  
basic chemical companies



Achieved an ESG Risk Rating in the 5<sup>th</sup> percentile  
among 227 commodity chemical companies  
(1<sup>st</sup> percentile = lowest risk)



FTSE4Good

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



Achieved an A rating



Achieved a B rating in the  
CDP's Climate Change Assessment



Achieved a #1 rank  
among 54 global chemical companies



Winner  
"Top Sustainability Advocates  
in Asia"



Winner  
"Best Sustainable Product"  
with our Deja<sup>TM</sup> product



Highly Commended  
"Circular Transition"



Highly Commended  
SET Sustainability Awards  
for companies with market  
capital beyond THB 100 billion



2022 Low Carbon and  
Sustainable Business Awards



# REIMAGINING CHEMISTRY TOGETHER TO CREATE A BETTER WORLD

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# DEPUTY GROUP CEO AND GROUP CHIEF FINANCIAL OFFICER MESSAGE



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"THE FUTURE BELONGS TO THOSE WHO EMBRACE SUSTAINABILITY AND FOCUS ON ITS SUCCESS, ALONGSIDE SOLID BUSINESS PRACTICES AND A GROWTH MINDSET.

WITH OUR TRACK RECORD OF EXECUTING GROWTH SUSTAINABLY, INDORAMA VENTURES IS PROUD TO BE A LEADER IN THE CHEMICALS INDUSTRY AS WE MOVE TO CREATE A BETTER WORLD THROUGH OUR COMMITMENT TO CIRCULARITY, INTEGRITY AND INNOVATION."

## **DILIP KUMAR AGARWAL**

- Deputy Group CEO and Group Chief Financial Officer
- Member of the Sustainability and Risk Management Committee





# CHIEF STRATEGY OFFICER MESSAGE



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"THE AGGRESSIVE DECARBONIZATION OF OUR BUSINESS BY 2030  
WILL BENEFIT OUR CLIMATE AND SET THE STAGE  
FOR A NEW GROWTH CHAPTER AT IVL."

**UDEY PAUL SINGH GILL**

- Chief Strategy Officer
- Member of the Sustainability and Risk Management Committee

*Remark: In the preparation of Mr. Udey Gill's retirement end of April 2023, Sanjay Ahuja becomes Group Chief Strategy & Transformation Officer as of February 1<sup>st</sup>, 2023.*



# CHAIRMAN OF THE ESG COUNCIL MESSAGE



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"IVL IS APPLYING AN INTEGRATED APPROACH TO SUSTAINABILITY BY ADDRESSING ESG FACTORS IN OUR DAY-TO-DAY OPERATIONS, FUTURE INVESTMENTS, PRODUCT PORTFOLIO, AND SUPPLY CHAIN MANAGEMENT."

**YASH LOHIA**

- Chairman of the ESG Council
- Member of the Sustainability and Risk Management Committee





# CHIEF SUSTAINABILITY OFFICER MESSAGE



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"SUSTAINABILITY HAS CEMENTED ITS ROLE IN BOTH PROTECTING AND CREATING VALUE AT IVL. TOGETHER WITH CUSTOMERS, SUPPLIERS, PARTNERS AND OUR PEOPLE, WE ARE REALIZING THE FULL POTENTIAL OF THIS WINNING FORMULA."

**ANTHONY M. WATANABE, PH.D.**

• Chief Sustainability Officer

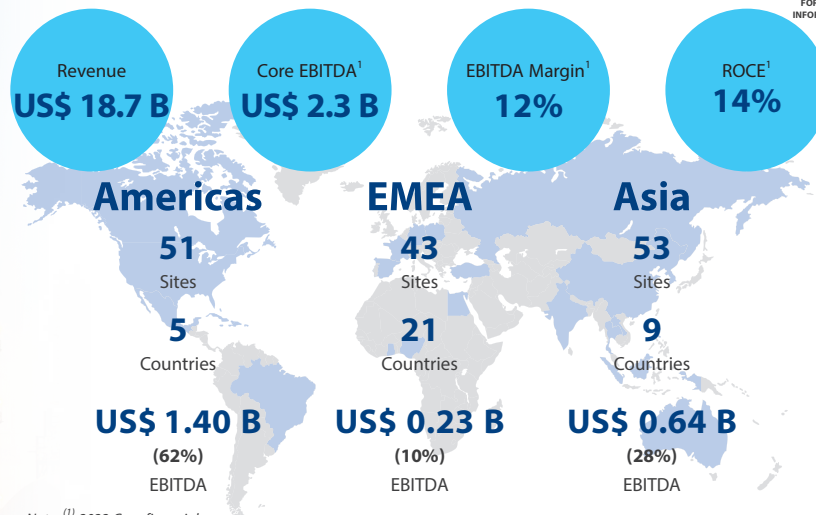


# ABOUT IVL



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## AT A GLANCE



Note: <sup>(1)</sup> 2022 Core financials

**30,201**



Total  
Employees

**24.64%**



Female

**147\***

Sites

**6**

Continents

**35**

Countries

**20**

Recycling  
facilities

**27**

R&D  
centers

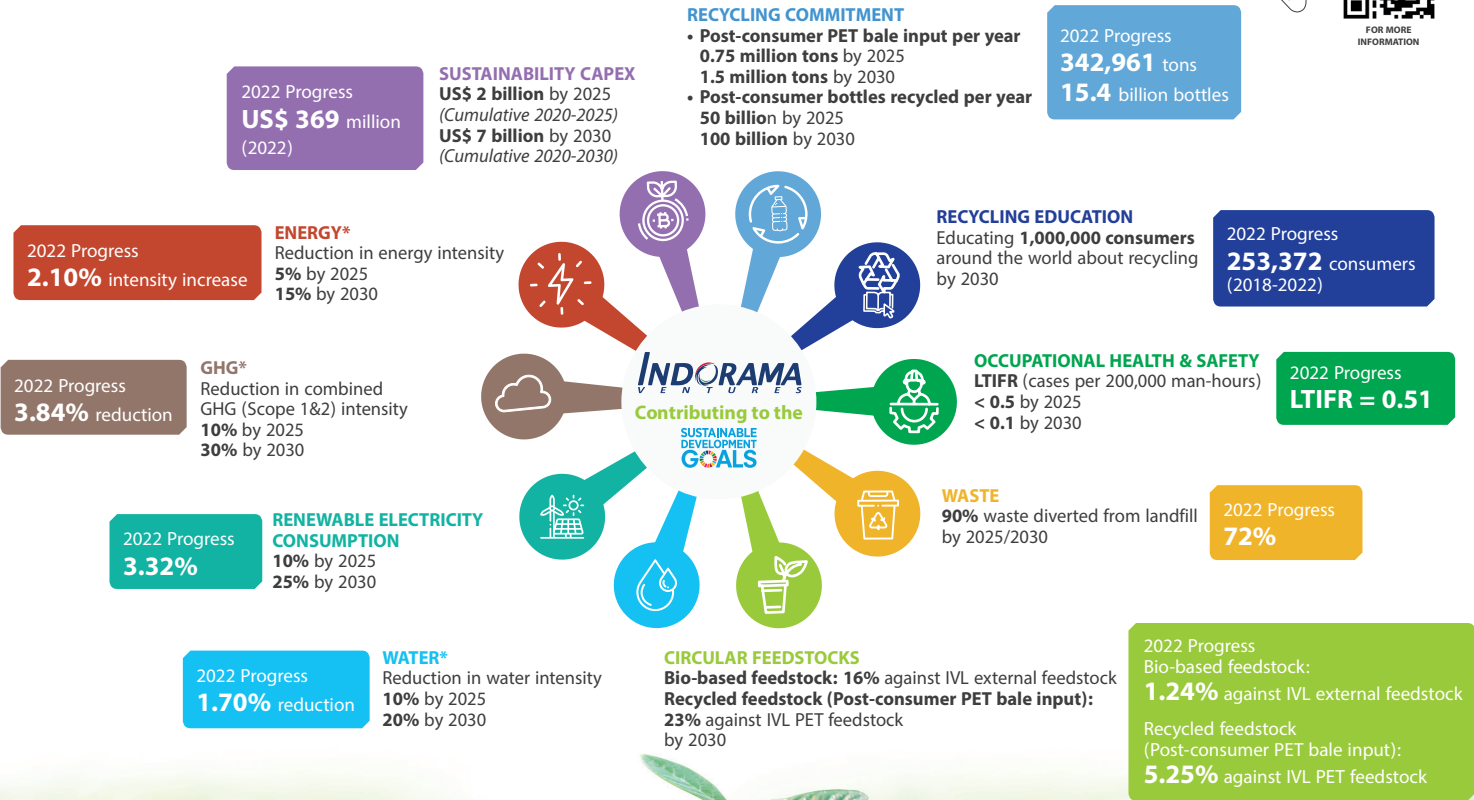
\* The Sustainability Report 2022 consists of data from 141 sites. Further details are provided in the full Sustainability Report 2022 (under "About this Report").

### Our platform

- 1** Integrated and diverse portfolio
- 2** Inter-connected businesses through raw materials, customers and R&D
- 3** Leading position in attractive and growing end markets



# IVL'S TARGETS AND PERFORMANCE



\* Base year 2020

# IVL'S KEY ESG HIGHLIGHTS 2022

## (YoY COMPARISON)



**Total energy consumption**  
**122.2** million GJ

+5.7%

**Total energy intensity**  
**7.29** GJ / ton of production

+4.1%

**Total renewable energy consumption**  
**1.33** million GJ

-44.2%

**Total renewable electricity consumption**  
**3.32%**

-4.2%



**Total water withdrawal intensity**  
**5.19** m<sup>3</sup> / ton of production

-2.8%

**Total recycled / reused water**  
**7.2%**

+1.3%



## ENVIRONMENT



### GHG emissions

**GHG emissions (Scope 1) intensity**  
**0.4296** tCO<sub>2</sub>e / ton of production

-1.5%

**GHG emissions (Scope 2) intensity\***  
**0.1556** tCO<sub>2</sub>e / ton of production

-0.4%

**GHG emissions (Scope 1&2) intensity\***  
**0.5852** tCO<sub>2</sub>e / ton of production

-1.2%

\* Location-based



**Hazardous waste intensity**  
**0.0093** tons / ton of production

+9.4%

**Waste diverted from landfill\*\***  
**72%**

-6%

\*\* including waste incinerated with energy recovery

## RECYCLING



**Recycling of post-consumer PET bale input**  
**342,961** tons

+8%

**1,934,253** tons  
(From 2011 - Dec 2022)



**Equivalent to**  
**15.4 billion** PET bottles

+8%

**87 billion** PET bottles  
(From 2011 - Dec 2022)

## CIRCULAR FEEDSTOCKS



**Bio-based feedstock:**  
**1.24%**  
against IVL external feedstock



**Recycled feedstock**  
**(Post-consumer PET bale input):**  
**5.25%**  
against IVL PET feedstock





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## SOCIAL

### HUMAN RESOURCES

Total Employees

**30,201**

+17%

Female

**24.64%**

+3%

Employee Net Promoter Score

**75.85%** (NPS)

-0.35%

Average Training

**30.66** hours

+3%

Overall Employee Attrition

**13.71%**

+2.29%

### CORPORATE SOCIAL RESPONSIBILITY

Total CSR contribution

US\$ **2.34** million

+41%

Total in-kind giving

US\$ **472,446**

+2.4 times

**22,864**

Volunteer hours

+2.4 times

Recycling education

**199,787**

people trained

+72 times

### HEALTH AND SAFETY

Total Recordable Injury Rate: TRIR

**0.82**

cases per 200,000 man-hours

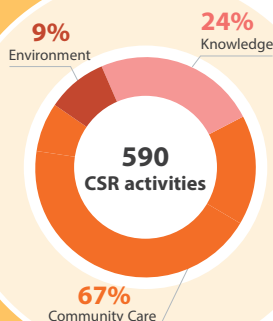
-16%

Lost Time Injury Frequency Rate: LTIFR

**0.51**

cases per 200,000 man-hours

-23%



## ECONOMIC & GOVERNANCE



### CORPORATE GOVERNANCE POLICY AWARENESS CAMPAIGN (CGPAC) IMPLEMENTATION

**86%**

Employee attendance

### HUMAN RIGHTS DECLARATION

**100%**

Signed by business Heads and site Heads

### CUSTOMER SATISFACTION STUDY\*

**84.82%**

Customer Satisfaction Index

**78%**

Customer Retention Rate (CRR)

**48**

Net Promoter Score (NPS)

\* A formal customer satisfaction study is conducted every other year as part of our group sustainability strategy. This study was conducted in 2022.

### FINANCIAL HIGHLIGHTS

Total Sales Volume

**14.65** million tons

-1%

Total Revenues

US\$ **18.715** billion

+28%

Core EBITDA

US\$ **2,278** million

+31%

Core Net Profit after Tax and NCI

US\$ **986** million

+44%

Operating Cash Flow

US\$ **2,224** million

+111%

Core Earnings per Share

THB **6.02**

+THB 2.26

### TRIS Rating

AA-



# INTEGRATED OXIDES AND DERIVATIVES (IOD)

## KEY ESG HIGHLIGHTS 2022



### ENVIRONMENT

#### GHG EMISSIONS

**0.8128** tCO<sub>2</sub>e / ton of production  
Scope 1 intensity

**0.1281** tCO<sub>2</sub>e / ton of production  
Scope 2 intensity\*

**0.9408** tCO<sub>2</sub>e / ton of production  
Scope 1 and 2 intensity\*

\* Location-based

#### ENERGY

**14.14** GJ / ton of production  
Intensity

**3.08%**  
Renewable electricity

#### WATER

**8.20** m<sup>3</sup> / ton of production  
Intensity

#### WASTE

**78.6%**  
Waste diverted from landfill\*\*

\*\* including waste incinerated with energy recovery

### HEALTH AND SAFETY

#### TOTAL RECORDABLE INJURY RATE: TRIR

**0.262**  
cases per 200,000 man-hours

#### LOST TIME INJURY FREQUENCY RATE: LTIFR

**0.109**  
cases per 200,000 man-hours



### 2022 Performance<sup>(1)</sup>



**US\$ 4.2 B**  
Revenue



**US\$ 0.7 B**  
EBITDA



**17%**  
EBITDA margin



**11%**  
ROCE

### Market Leadership

**#1**

Non-ionic  
surfactants  
producer in  
the Americas

**#1**

EO producer in  
the Americas

**#1**

Fabric and home  
care ingredients  
provider in the  
Americas

**#2**

Ethoxylation  
company  
globally

Note: <sup>(1)</sup> Core Financials

### INNOVATION

#### VITALITY INDEX\*

**22.1%**  
2022 Actual

**22%**  
2022 Target

**US\$ 28.0 million**  
R&D Spending

**8**  
R&D Centers

\* Revenue generated from the sales  
of products developed during the  
last five years.

### CUSTOMER SATISFACTION\*

**84.11%**  
Customer Satisfaction Index (CSI)

**84%**  
Customer Retention Rate (CRR)

**46**  
Net Promoter Score (NPS)

\* A formal customer satisfaction study  
was conducted every other year as part  
of our group sustainability strategy.



# COMBINED PET (CPET) KEY ESG HIGHLIGHTS 2022



## ENVIRONMENT

### GHG EMISSIONS

**0.2789** tCO<sub>2</sub>e / ton of production  
Scope 1 intensity

**0.1041** tCO<sub>2</sub>e / ton of production  
Scope 2 intensity\*

**0.3829** tCO<sub>2</sub>e / ton of production  
Scope 1 and 2 intensity\*

\* Location-based

### ENERGY

**4.23** GJ / ton of production  
Intensity

**2.79%**  
Renewable electricity

### WATER

**3.55** m<sup>3</sup> / ton of production  
Intensity

### WASTE

**49.8%**  
Waste diverted from landfill\*\*

\*\* including waste incinerated with energy recovery

Remark: Combined PET includes PET, packaging, and recycling

## HEALTH AND SAFETY

### TOTAL RECORDABLE INJURY RATE: TRIR

**0.747**  
cases per 200,000 man-hours

### LOST TIME INJURY FREQUENCY RATE: LTIFR

**0.347**  
cases per 200,000 man-hours

## 2022 Performance<sup>(1)</sup>

<b>US\$ 11.5 B</b>	<b>US\$ 1.3 B</b>	<b>12%</b>	<b>24%</b>
Revenue	EBITDA	EBITDA margin	ROCE

## Market Leadership

<b>#1</b>	<b>#1</b>	<b>#1</b>
PET producer globally	PIA producer in western markets	rPET producer globally

**The only integrated player** in Europe  
**A fully integrated player** in North America  
**Packaging** leadership in emerging markets

Note: <sup>(1)</sup> Core Financials

## INNOVATION

### VITALITY INDEX\*

**27%** | **31%**  
2022 Actual | 2022 Target

**US\$ 4.4 million**

R&D Spending

**3**  
R&D Centers

\* Revenue generated from the sales of products developed during the last five years.

## CUSTOMER SATISFACTION\*

**85.30%**  
Customer Satisfaction Index (CSI)

**78%**  
Customer Retention Rate (CRR)

**52**  
Net Promoter Score (NPS)

\* A formal customer satisfaction study was conducted every other year as part of our group sustainability strategy.





# FIBERS KEY ESG HIGHLIGHTS 2022



## ENVIRONMENT

### GHG EMISSIONS

**0.4972** tCO<sub>2</sub>e / ton of production  
Scope 1 intensity

**0.5368** tCO<sub>2</sub>e / ton of production  
Scope 2 intensity\*

**1.0339** tCO<sub>2</sub>e / ton of production  
Scope 1 and 2 intensity\*

\* Location-based

### ENERGY

**10.78** GJ / ton of production  
Intensity

**4.42%**  
Renewable electricity

### WATER

**8.54** m<sup>3</sup> / ton of production  
Intensity

### WASTE

**93.3%**  
Waste diverted from landfill\*\*

\*\* including waste incinerated with energy recovery

## HEALTH AND SAFETY

### TOTAL RECORDABLE INJURY RATE: TRIR


**1.135**  
cases per 200,000 man-hours

### LOST TIME INJURY FREQUENCY RATE: LTIFR

**0.798**  
cases per 200,000 man-hours



## 2022 Performance

  
**US\$ 3.7 B**  
Revenue

  
**US\$ 0.2 B**  
EBITDA

  
**6%**  
EBITDA margin

  
**3%**  
ROCE

## Market Leadership

**Lifestyle**  
**#1**  
in PET staple fibers  
ASEAN market

**Mobility**  
**#2**  
in airbag  
yarns

**Hygiene**  
**#2**  
in tire cord  
fabrics

**#2**  
in BiCo  
fibers

## INNOVATION

### VITALITY INDEX\*

**22%**  
2022 Actual

**23%**  
2022 Target

**US\$ 9.9 million**  
R&D Spending

**16**  
R&D Centers

\* Revenue generated from the sales of products developed during the last five years.

## CUSTOMER SATISFACTION\*

**84.15%**  
Customer Satisfaction Index (CSI)

**75%**  
Customer Retention Rate (CRR)

**42**  
Net Promoter Score (NPS)

\* A formal customer satisfaction study was conducted every other year as part of our group sustainability strategy.



COMMITTED TO  
**A SUSTAINABLE FUTURE**  
**ACHIEVED 96<sup>TH</sup> PERCENTILE,**  
with a score of 80/100 in the 2022 S&P Global Corporate  
Sustainability Assessment in the Chemicals Industry.

**IVL thanks its staff, customers, and partners**  
for continuously contributing to our sustainability commitment.

The Dow Jones Sustainability Indices (DJSI) are global benchmarks, looking at sustainability-driven companies. Companies are only listed if they are best-in-class within their industry for sustainability.

[www.indoramaventures.com](http://www.indoramaventures.com)





# ENVIRONMENTAL PERFORMANCE

Decarbonization	17
GHG Management	18
Energy Management	19
Waste Management	20
Water Management	21
Recycling	22
IVIH, A Sustainability Accelerator	23

*Note:* - 2020 and 2021 environmental data has been restated using a more stringent definition and methodology.  
- 2020 baseline was adjusted for an alignment.

# DECARBONIZATION

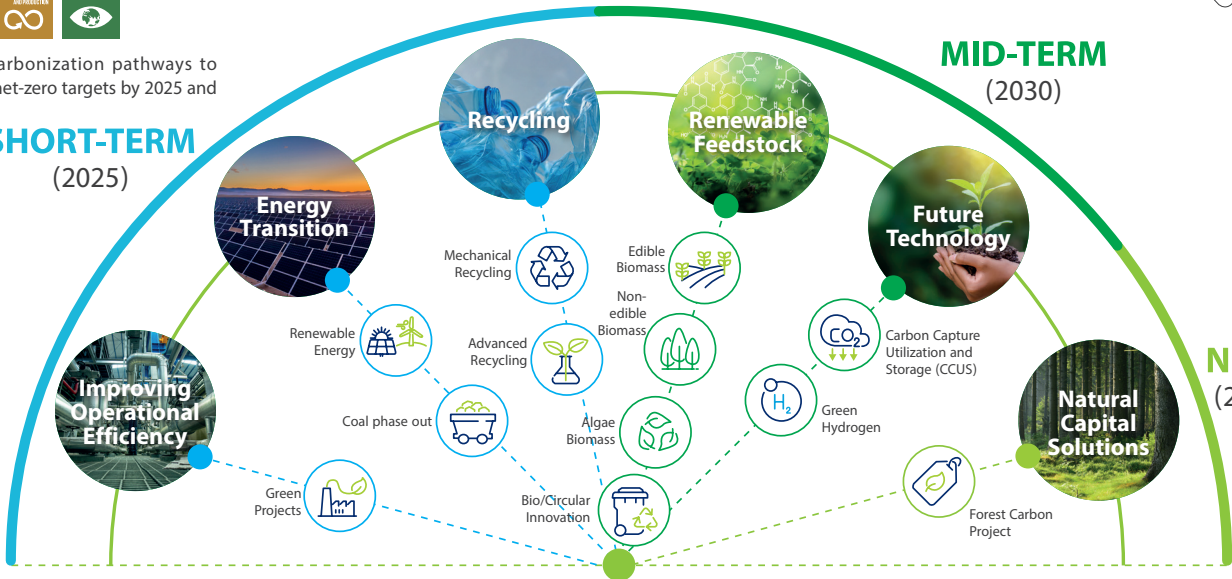


Key decarbonization pathways to achieve net-zero targets by 2025 and 2030

## SHORT-TERM (2025)

## MID-TERM (2030)

## NET ZERO (2050-2070)



**Decarbonization Playbook**  
The purpose of this playbook is to give guidance on working process, different decarbonization technologies, and how to implement projects and initiatives addressing GHG emissions and decarbonization.

## Decarbonization Strategy Towards Net Zero



On 31 May 2022 IVL has committed to set Science-based Targets.



We have more than 900 Green projects that support the pathway of our GHG emissions and energy reduction targets for 2025 and 2030.



Since 2020, we have been a signatory to the TCFD and have adopted its framework to continuously monitor and adapt our actions as well as to report our climate-related financial disclosures.



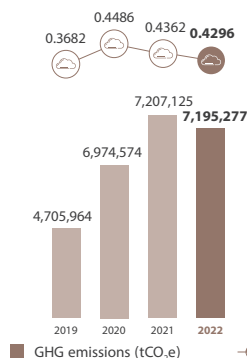
Achieved a B Rating in CDP's Climate Change Assessment, which is higher than the Asia regional average of C, and higher than the Chemicals sector average of B-.



# GHG MANAGEMENT

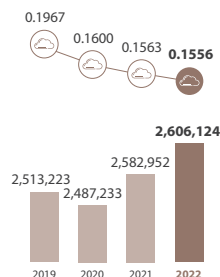


## Scope 1 Direct GHG Emissions

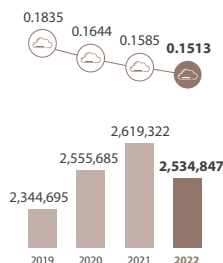


## Scope 2 Indirect GHG Emissions

Location-based

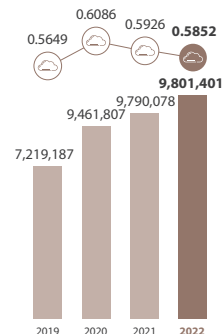


Market-based

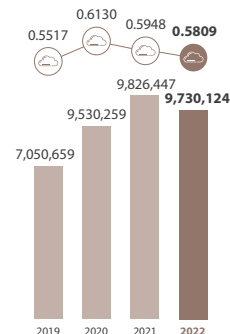


## Scope 1 & 2 Total GHG Emissions

Location-based



Market-based



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## Scope 3

Category 1: Purchased Goods and Services

Category 2: Capital Goods

Category 3: Fuel Energy-related Activities

Category 4: Upstream Transportation and Distribution

Category 5: Waste Generated in Operations

Category 6: Business Travel

Category 7: Employee Commuting

Category 9: Downstream Transportation and Distribution



### GHG (Scope 1 & 2) Intensity Reduction (2020 baseline)

#### Targets

**10%** by 2025 and **30%** by 2030

#### Performance

In 2022, IVL recorded an intensity of **0.5852** tCO<sub>2</sub>e/ton, a **3.84%** reduction against the 2025 target



### 2022 HIGHLIGHTS



**US\$ 11.3 million**

of implemented CAPEX for 55 GHG or energy reduction projects



**74,906 tons** of GHG reduction from renewable energy consumption based on location-based factors and

**59,637 tCO<sub>2</sub>e** of GHG reduction from biomass use.



**100%**

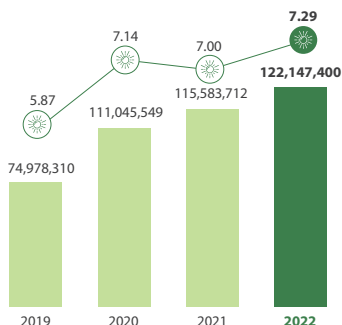
GHG accounting, verification and assurance in accordance with ISO 14064-1 and ISO 14064-3

# ENERGY MANAGEMENT



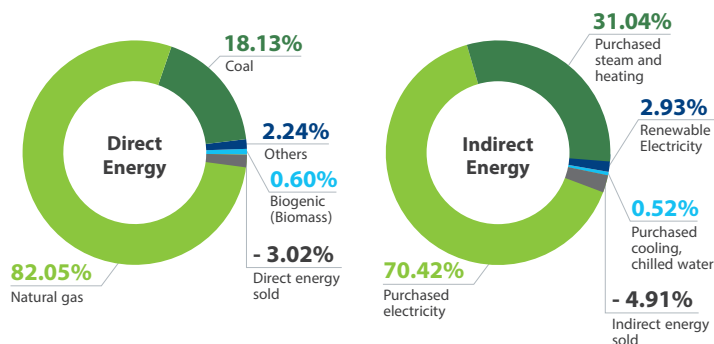
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## Total Energy Consumption



■ Total consumption (GJ)  
● Intensity (GJ / ton of production)

## Overall 2022 Energy Breakdown



## 2022 HIGHLIGHTS

**15** Onsite/Offsite Solar

**209,242 MWh** purchased renewable electricity with certificates through PPAs in USA and Europe

**58%** of our sites received ISO 50001:2011 / ISO 50001:2018 (including Oxiteno acquired in 2022)



### Energy Intensity (2020 baseline)

#### Targets

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

#### Performance

In 2022, IVL recorded an intensity of **7.29** GJ/ton, which was a marginal increase of **2.10%** from the 2020 baseline due to the lower operating rates in our assets especially in Europe.



### Renewable Electricity Consumption

#### Targets

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

#### Performance

In 2022, IVL consumed **3.32%** of renewable electricity.

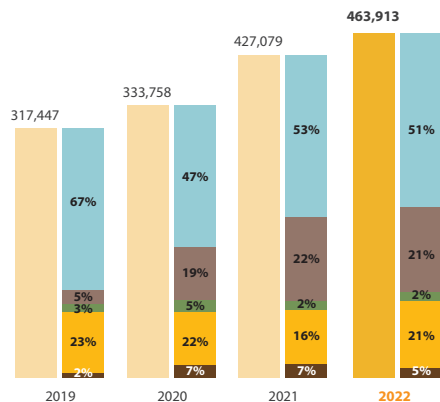


# WASTE MANAGEMENT



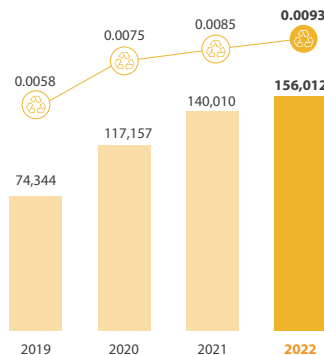
## Total Waste

Generated, recycled & reused, incinerated (with and without energy recovery), landfilled, and others



- Total generated waste (tons)
- Recycled & reused (% of total generated waste)
- Incinerated with energy recovery (% of total generated waste)
- Incinerated without energy recovery (% of total generated waste)
- Landfilled (% of total generated waste)
- Others (% of total generated waste)

## Total Hazardous Waste



- Total hazardous waste (tons)
- Intensity (tons / ton of production)

## 2022 HIGHLIGHTS

Total waste intensity  
**0.0277 tons / ton of production**

**51%** of total waste was recycled and reused

**21%** of total waste went to incineration with energy recovery



## Waste Diverted from Landfill\*

### Target

**90%** waste diverted from landfill by 2025

### Performance

In 2022, **72%** of our waste was diverted from landfill against our 2025 target

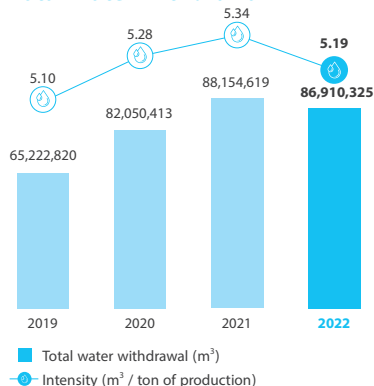
\* including waste incinerated with energy recovery



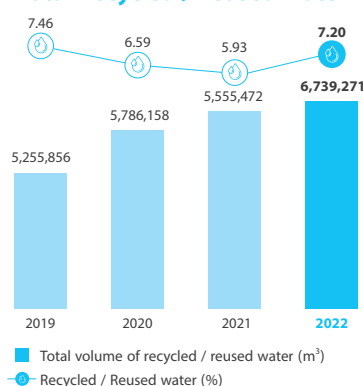
# WATER MANAGEMENT



## Total Water Withdrawal

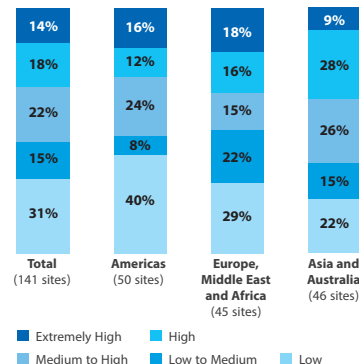


## Total Recycled / Reused Water



## 2022 Water Stress Assessment

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



## Water Intensity Reduction (2020 baseline)

### Target

**10%** by 2025 and **20%** by 2030

### Performance

In 2022, IVL recorded a water intensity of **5.19 m³/ton** of production, a **1.70%** reduction against 2025 target.



## 2022 HIGHLIGHTS



**5 projects** with actual water savings and implemented CAPEX



**US\$ 1.68 million** implemented CAPEX in water consumption reduction projects



**178,200 m³** water consumption reduction



**5 sites** have achieved Zero Liquid Discharge

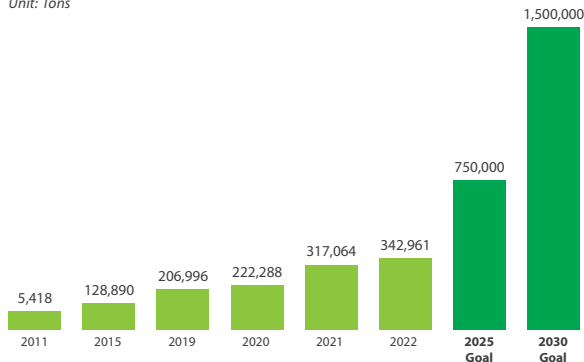


# RECYCLING



## Post-consumer PET bale input to recycling

Unit: Tons



## CELEBRATE WITH US

As of March 24, 2023, we successfully **recycled 90 billion bottles** (since 2011) - and counting.



Our real-time bottle recycling counter is available on our website.



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**Reduced**  
**2.7 million tons**  
of carbon footprint  
from the product  
lifecycle



**Recycled**  
**87 billion\***  
post-consumer  
PET bottles

**Prevented**  
**1.9 million tons**  
of plastic waste from  
going to landfill



## Circular Feedstock

### Target

Recycled feedstock  
(Post-consumer PET bale input):  
**23%** against IVL PET  
feedstock by 2030

### Performance

In 2022, IVL recorded **5.25%**  
against IVL PET feedstock.



## 2022 HIGHLIGHTS

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

UCY Polymers CZ  
polymers.cz Member of UCY Group

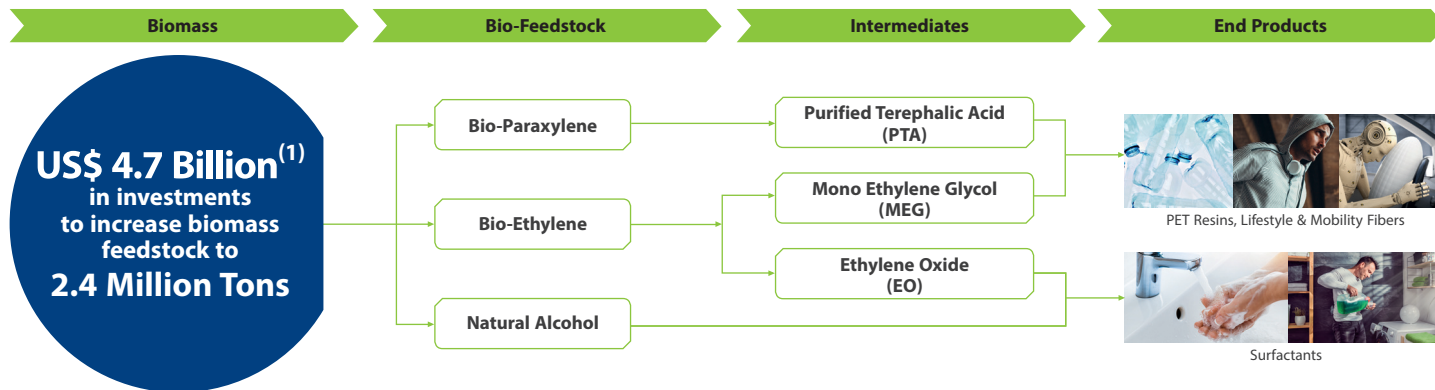
CARBIOS  
Climate partner by the Circular Bioeconomy

BOTTLE-BOTTLE RECYCLING  
**PETVALUE**

# IVIH, A SUSTAINABILITY ACCELERATOR



## DECARBONIZING OUR PRODUCTS THROUGH BIOMASS



Note: <sup>(1)</sup> Including investments in a natural alcohol plant which is part of the Oxiteno acquisition

## IDENTIFYING AND ADVANCING SUSTAINABILITY-LINKED TECHNOLOGIES AND INNOVATION THROUGH IVIH

### Acting as a sustainable business incubator across:

In 2022, Indorama Ventures Investments & Holding (IVIH) was established with 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



With 30 additional projects identified and being evaluated.



### Circular Feedstock

#### Target

Bio-based feedstock:  
**16%** against IVL external feedstock by 2030

#### Performance

In 2022, IVL recorded **1.24%** against IVL external feedstock.



# SOCIAL IMPACT

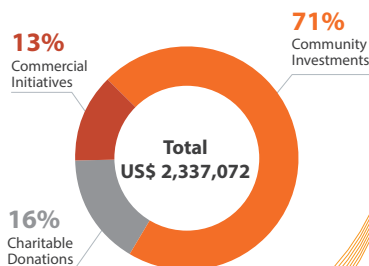
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# GIVING BACK TO COMMUNITIES



## CSR PERFORMANCE 2022

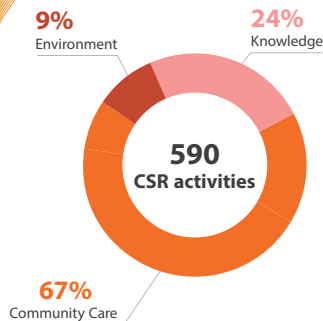
### SOCIAL CONTRIBUTIONS



Total in-kind Giving:  
**US\$ 472,446**

Total Management Overhead:  
**US\$ 155,874**

### CSR ACTIVITIES



Time Volunteered by Employees:  
**22,864 hours**

Estimated Employee Cost of Volunteering:  
**US\$ 560,385**

## RESULTS AND OUTCOMES



### KNOWLEDGE

#### Recycling Awareness

- 199,787 people educated
- 167 schools, universities, and organizations
- Expanded to more than 10 initiatives in 8 countries: The Czech Republic, Poland, the Netherlands, Brazil, Mexico, the United States, Ghana and Thailand

#### STEM Education & Social Innovation

- 5 initiatives to support STEM education and innovation programs
- 12 scholarships on STEM education
- 10 sponsorship programs



### COMMUNITY CARE

- Over 290 health and well-being initiatives for local communities
- 24 initiatives to support vulnerable groups (disabilities, the elderly, and orphans)
- 29 sports initiatives for students
- 40 initiatives to provide basic needs to underprivileged communities



### ENVIRONMENT

- 20 biodiversity programs and responsible waste management initiatives
- 13 initiatives to enhance nature conservation
- 24 partnerships to support environmental advancements and recycling
- 25.2 tons of post-consumer PET bottles collected
- 25 tCO<sub>2</sub>e reduced by PET recycling



# RECYCLING EDUCATION



## 2022 HIGHLIGHT

IVL is pleased to be working with the Bangkok Metropolitan Administration (BMA), Thailand to organize training sessions on sustainable plastic waste management. We have engaged with 73 schools since Nov 2022 and expect to reach over 100 schools covering more than 10,000 teachers and students by Jun 2023. IVL also provides educational materials to 400 BMA schools to help them pass on waste management and PET recycling knowledge to their students and educational personnel.



## NEW EDUCATION MATERIALS IN 2022



## 2022 Recycling Education



Target

Educating **1,000,000** consumers around the world about recycling by 2030



Performance

**253,372** Consumers  
(Cumulative 2018-2022)



**199,787**

People Received Trainings



**184,482**

Students



**7,179**

Teachers



**4,103**

Public and  
Community People



**150**

Schools and  
Universities



**17**

Organizations



**12**

Virtual Training  
Sessions



**57**

Classroom Training  
Sessions



**346**

Teaching Hours



**6**

Public Events



**686**

Downloads  
of Recycling  
Education Materials



**3,337**

Downloads  
of Recycling  
Education VDOs



**128**

Recycling Articles



**1,135,643**

Bottles Collected



Bottles Returned to  
Recycling Factories

**25,200** kg

# INVESTING IN OUR PEOPLE



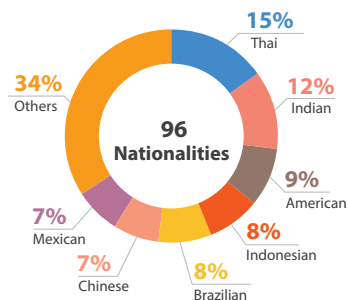
FOR MORE  
INFORMATION

**24.64%**  
Female  
(of permanent employees)

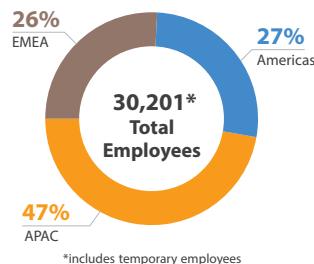


**369**  
Employees  
with Disabilities

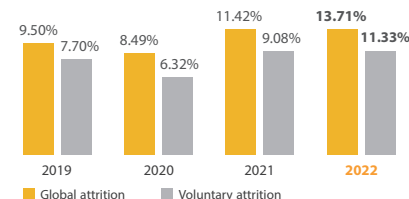
## NATIONALITIES (% of total employees)



## EMPLOYEES BY CONTINENT (% of total employees)



## EMPLOYEE ATTRITION RATE



## Targets

About **1,000** leadership positions involved in succession planning by 2023

**3,500** leaders involved in the leadership development curriculum by 2024



## Performance

**791** leadership positions

**3,381** leaders were trained through leadership training programs and leadership e-Learning.



'Thailand Best Employer Brand Awards 2023' is a recognition of Indorama Ventures' achievements which include the Thailand Top Talent program and Succession Planning Implementation.



Indorama Ventures Poland (IVP) was **certified as a great place to work®** for the June 2022-2023 period due to its unique workplace culture. This award has allowed IVP to attract more job applicants, strengthen its employer brand, retain top talent, and more.



## 2022 HIGHLIGHTS

**17.24%** increase in our employees

**73.31%** employee engagement (actively engaged employees)

**13.71%** overall turnover rate

**42.35%** of our employees are covered by collective bargaining agreements

**789,313** total training hours

**30.66** average training hours

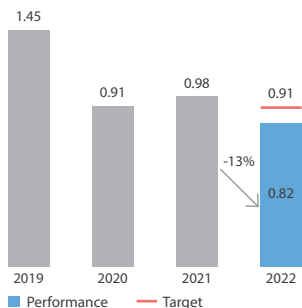
# HEALTH AND SAFETY



## IVL'S EHS SYSTEM IMPROVEMENT WHEEL



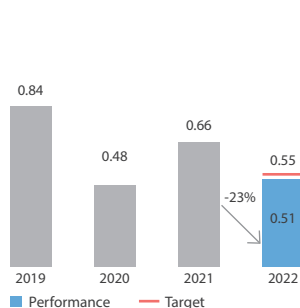
## Total Recordable Injury Rate: TRIR (cases per 200,000 man-hours)



## FIVE CORE ACCOUNTABILITIES

- GOVERNANCE**
- STANDARDIZATION**
- CAPABILITY BUILDING**
- ASSURANCE**
- CULTURE**

## Lost Time Injury Frequency Rate: LTIFR (cases per 200,000 man-hours)

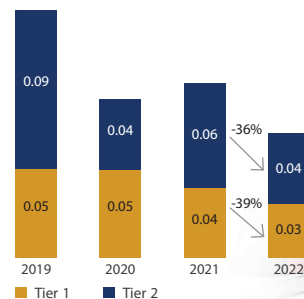


**LTIFR**  
(cases per 200,000 man-hours)  
**< 0.5 by 2025**



**0.51 cases**  
per 200,000 man-hours

## Process Safety Event Rate (events per 200,000 man-hours)



## 2022 HIGHLIGHTS

**31 new standards** released by corporate EHS providing guidance on various topics to IVL sites worldwide.

Digital advancements:  
**EHS Software Solutions**

**68%** of sites received **ISO 45001:2018 certification** (including Oxiteno)

**120 of IVL's top leaders** participated in safety leadership training

**54%** of our sites achieved **zero recordable injuries**

# INNOVATION AND PRODUCT STEWARDSHIP



## VITALITY INDEX\*

### COMBINED PET (HVA) Business

2022  
Target 31%  
Actual 27%

### FIBERS Business

2022  
Target 23%  
Actual 22%

### IOD Business


2022  
Target 22%  
Actual 22.1%

\* Revenue generated from the sales of products developed during the last five years.

## ENSURING PRODUCT SAFETY

 **100%**  
of European entities **were compliant**  
with **REACH** regulations

 **100%**  
compliance with the **ECHA SVHC** list

 **Zero violations**  
of domestic and international  
regulations

## chemsec CHEMSCORE ChemScore Report 2022

For the second year in a row, Indorama Ventures was ranked at the top among the 54 largest chemical companies in the world according to ChemScore, a ranking system by ChemSec. This recognition is due to our continued efforts to reduce our chemical footprint.



FOR MORE  
INFORMATION



## 2022 HIGHLIGHTS



**US\$ 42.4 million**  
in R&D spending



**355** R&D employees



**27** R&D centers



**264** collaborative projects



**More than 472**  
new products introduced in 2022

Chemical Week  
Sustainability Awards 2022

**Winner**  
Best Sustainable Product

**Indorama Ventures**  
(Deja™ Carbon Neutral pallet)

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*Rob Westerhoff*  
Global Head  
Chemical Week by SSP Global



Indorama Ventures' Deja™ brand recognized as the 'Best Sustainable Product' at the Chemical Week Sustainability Awards 2022.

Sustainable innovation is the key to our success of PET circularity while meeting our decarbonization targets. Deja™ supports the UN Sustainable Development Goals (SDGs) of promoting a sustainable, greener, and circular economy.

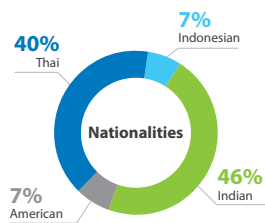
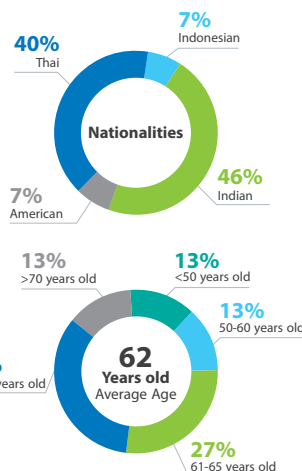
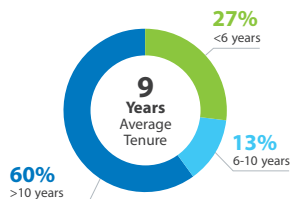
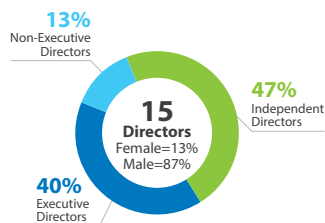




# ROBUST GOVERNANCE

Corporate Governance and Business Ethics	31
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# CORPORATE GOVERNANCE AND BUSINESS ETHICS



IVL received an “Excellent - 5 Star” CG score by the Thai Institute of Directors (IOD) for the 10<sup>th</sup> consecutive year.



**A score of 100%** for the 2022 Annual General Meeting of shareholders, judged by the Thai Investors Association. This was our the 11<sup>th</sup> consecutive year with a full score.



Directors on the Nomination, Compensation and Corporate Governance (NCCG) and Audit committees are **fully independent**.

## Corporate Governance Policy Awareness Campaign (CGPAC) Implementation Report 2022

**86% of employees** attended the Corporate Governance Manual Training in the past 3 years.

**76% of IVL sites** achieved full training coverage in 2022.



## 2022 HIGHLIGHTS

**No** material cases or incidents of corruption or bribery

**No** legal cases involving corruption or anti-competitive practices concerning IVL or our employees

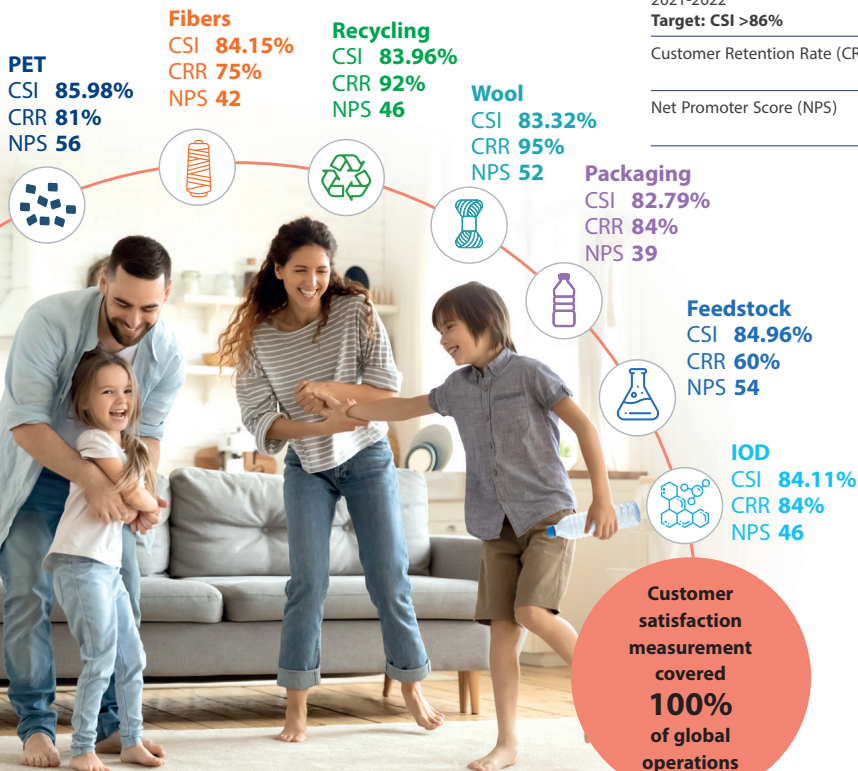
**No** material litigation against IVL or our subsidiaries that negatively impacted our business

**No** case of material non-compliance

## 51 Reports Received through Whistleblower Reporting Channels

Environment, Health and Safety	1 report	2%
Conflict of Interest	5 reports	10%
Corruption	1 report	2%
Human Rights-Harassment/Hostile Behavior	8 reports	15%
Human Rights-Discrimination	4 reports	8%
Human Rights-Unfair Disciplinary Action	3 reports	6%
Human Rights-Unfair Termination	5 reports	10%
Miscellaneous	4 reports	8%
Not qualified as a whistleblower case	20 reports	39%

# CUSTOMER RELATIONSHIP MANAGEMENT



Performance Metrics	Purpose	Overall Score
Customer Satisfaction Index (CSI) 2021-2022 <b>Target: CSI &gt;86%</b>	Measures customer satisfaction pertaining to our products, services etc.	<b>84.82%</b>
Customer Retention Rate (CRR)	Measures the number of customers we continued to do business with throughout the year.	<b>78%</b>
Net Promoter Score (NPS)	Measures customer loyalty and the likelihood of recommending our products and services to others.	<b>48</b>



## 2022 HIGHLIGHTS



**Avgol wins Procter & Gamble's prestigious Supplier Excellence Award**

Procter & Gamble's global Baby Care program unanimously recognized Avgol Industries, a subsidiary of Indorama Ventures, as the most noteworthy and valuable supplier of the previous fiscal year. This acknowledgment was awarded to Avgol due to its exceptional strength in collaborative efforts and consistent improvement initiatives across all regions of the program.

# SUSTAINABLE FINANCE

The sustainable financing supports our company's expansion in line with our strategy for Vision 2030, which takes Environmental, Social, and Governance (ESG) factors into account.

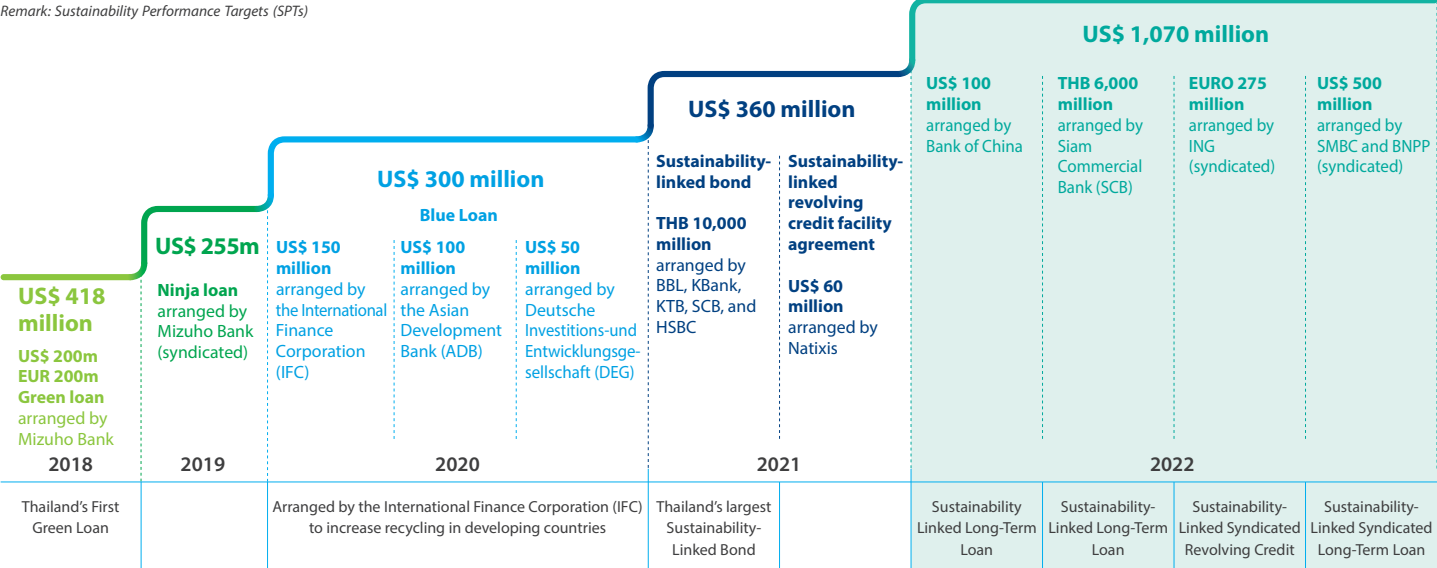


## TOTAL US\$ 2.4 billion

(2018–2022)



Remark: Sustainability Performance Targets (SPTs)



UN Sustainable Development Goals (SDGs)





# PERFORMANCE EXCELLENCE AWARDS



Underway since 2017, this award is based on stellar performance across 10 criteria covering: Financial Performance, Operational Performance, and Sustainability Performance (environment, health and safety). The best Business Units are identified by benchmarking their performance across these criteria and are awarded at the annual Group Management Conference (GMC).



## Fibers Winner



Indorama Ventures Polymers Mexico S. de R.L.  
de C.V. Technical Fibers plant, Mexico

## IOD (North America) Winner



Indorama Ventures Oxides LLC  
Indorama Ventures Propylene Oxides LLC Port  
Neches, USA

## IOD (South America) Winner



Oxiteno S.A. Indústria e Comércio, Maua, Brazil

## PET Winner



Guangdong IVL PET Polymer Company Limited,  
China

## Packaging Winner



Petform (Thailand) Limited,  
Pathumthani, Thailand

## Recycling Winner



Indorama Ventures Recycling Poland Sp. Z o.o.,  
Bielsko Biala and Leczyca, Poland

## Aromatics Winner



Indorama Petrochem Limited, Rayong, Thailand



## DATA REPORTING, VERIFICATION AND REPORT ASSURANCE

This report was prepared in adherence with the **Global Reporting Initiative (GRI) standards** core option and the **International Integrated Reporting Council (IIRC)**'s International Integrated Reporting Framework 2021.

**100% Reporting Certification and Assurance** in accordance with the GRI Standards, Framework and AA1000AS by an independent auditor.

**100% GHG Accounting, Verification and Assurance** in accordance with **ISO 14064-1** and **ISO 14064-3** by an independent auditor.

### CONTACTS AND FEEDBACK



sustainability@indorama.net



Sustainability Report 2022



Annual Report 2022  
(Form 56-1 One Report)



Indorama Ventures - ESG Profile



For More  
Information



For More  
Information



For More  
Information



**INDORAMA**  
VENTURES

**Celebrate with us!**

Since 2011, we have ACHIEVED

**90** billion   
**PET bottles**  
RECYCLED ON  
24 MARCH 2023  
AND COUNTING

With a total reduced  
GHG emission of  
**2.8 million tons**



Please visit our website for  
The real-time bottle recycling counter

## SUSTAINABILITY REPORT EXECUTIVE SUMMARY 2022



For More  
Information

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