

THE

BEACON

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INDORAMA
VENTURES

APRIL 2020



Outlook for
the 2020s



Corporate Strategy
announced at Capital
Markets Day 2020



Indorama Ventures and
Coca-Cola Beverages
Philippines Join Forces
to Establish PETValue



ONLINE VERSION

EDITOR'S NOTE

Dear Readers,

The Beacon's first issue of the new decade takes a close look at Indorama Ventures' ambitious strategies and robust portfolio.

While the course of the COVID-19 pandemic and its effect on global markets remains to be seen, we are well-positioned to weather current challenges and emerge stronger than ever. Our recent milestone of 50 billion bottles recycled proves the sustainability of PET and clearly defines the significance of recycling towards a circular economy.

As a major global supplier, our capability and responsibility to customers has only grown in recent times following a string of important acquisitions across various business segments, including Huntsman's \$2 billion integrated oxides and surfactants business.

On the heels of our major acquisitions in Brazil, this edition's travel feature transports you to the vibrant metropolises and lush jungles of the captivating nation. Elsewhere, a special contribution from Indorama Ventures' Senior Vice President and IVL Foundation Director Richard Jones sets the record straight on misconceptions about plastic production. Our CSR activities will also be highlighted in these pages, with particular attention on our collaboration with the Jan & Oscar Foundation in Ranong.

We hope you enjoy this issue of The Beacon – and as always, please email us any comments or suggestions that come to mind.

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OUTLOOK FOR THE 2020s

Dear Stakeholders,

The theme for IVL in the 2020's involves the intersection of two defining, but critical attributes: firstly, the increasingly important aspects of the global, circular economy and IVL's leading role within this ecosystem; and secondly, IVL's portfolio transformation and expansion, to ensure the business remains durable to perform under all conditions, a portfolio of all seasons if you like.

Globally and socially, there is unprecedented pressure on plastic. The truth is that our key product, PET remains as the only 100% recyclable plastic and produces a much more environmentally friendly bottle compared to materials such as glass and aluminum.

Following China's ban on waste plastics in 2018, a number of places around the world banned 'Single Use Plastics.' This social and political pressure on plastics and their recyclability actually creates a tremendous opportunity for IVL to enlarge our recycling investments and create a positive impact on global circular economy initiatives. I have personally made a pledge to the Ellen MacArthur Foundation to achieve 750 KMT recycled content by 2025.

Last year many global chemical companies had challenging results, including IVL; however, our overall business outlook remains positive with growing consumer needs and increasing urbanization supporting polyester and its value chain. IVL remains well positioned to leverage our global footprint, customer focus and diversified businesses.

In 2019 we made IVL's largest ever acquisition - the \$2 Billion Integrated Oxides and Surfactants business of Huntsman across USA, India and Australia. This acquisition supplements our already well-balanced Chemicals portfolio involving the polyester value chain and specialty fibers. Huntsman's assets helps us to enlarge our customer focus with a broader product offering under one umbrella, and marks our entry into the large and growing space of surfactants in customer segments.

A keyword for our business remains sustainability: It serves as a beacon of our business strategy, orienting all of our activities and shaping our product portfolio to ensure they make a positive contribution to the circular economy, ensure environmental protection, optimize our supply chain, minimize risks, and generate positive employee engagement.



Our objective remains to grow profitably and sustainably. We invest where we see opportunities for growth and where we believe we have relevant competence. At the same time, we will continue to rigorously reduce costs wherever it makes sense. Given our global leadership position in PET, we have set an internal target to drive the circular economy and have formed a dedicated team to focus on the recycling business.

We are at a turning point in IVL history – we are well positioned to effectively navigate the challenging horizons ahead. We have prioritized and committed ourselves to transforming the business, portfolio and processes to continue to lead in this new era of business and technology in the 2020's, in order to remain relevant – and highly essential – to our customers, our shareholders and to society.

2019 IN REVIEW:

INDORAMA VENTURES REMAINS STRONG IN UNCERTAIN TIMES

CONNECT

Corporate Communications



While 2019 was a challenging year on many fronts, Indorama Ventures proved its resilience, registering a volume growth of 18%. The China-US trade war, Brexit uncertainty, and the risk of global recession – compounded by the start of the COVID-19 outbreak towards the end of the year – caused industry-wide spreads to decline to historic lows in 2019. Nevertheless, the Company's operating cash flow grew by 33% to \$1.3 billion through the year, spurred by operational excellence and lower prices. Despite the volatile climate, Indorama Ventures has proposed a dividend of 1.225 THB per share for 2019.

2019 also marked our largest acquisition to date: Huntsman's \$2 billion integrated oxides and surfactants business. Huntsman's extensive assets will allow Indorama Ventures to expand its already extensive customer base. Moreover, Huntsman's production facilities in the US, India and Australia will further cement the company's global reach.

The strategic acquisitions of Custom Polymers PET LLC and Green Fiber International – US recycling assets with a combined capacity of 71,000 tons – will enhance Indorama Ventures' contributions to the global circular economy.

Indorama Ventures also completed entry into the Brazilian fiber business in 2019, acquiring M&G Fibras Brasil, the country's largest polyester fibers plant. With its total capacity of 75,000 tonnes per annum, this plant will work in synergy with Brazil's largest PET asset – another property of M&G Group, acquired in 2018 – to further establish the company's strong presence in South America's largest economy.

Other recent moves have strengthened Indorama Ventures' market position worldwide. The completed acquisition of Invista Germany's specialty assets provides Indorama Ventures with intellectual property rights for specialty resin, which can be marketed worldwide. The finalized share purchase of Indorama Synthetics in India strengthens the company's foothold in the world's second-largest polyester market. The acquisition of Bevpak Nigeria, which has a production capacity of 18,000 MTS, further consolidates our packaging portfolio position in Africa.

Indorama Ventures also concluded its acquisition of Sinterama, a leading global manufacturer of high-performance colored yarns and polyester automotive interiors with facilities in Italy, Brazil, China and Bulgaria.

Now with over 24,000 employees working across 119 operating sites in 33 countries across six continents, the Company's diverse portfolio and well-matured presence around the world equips Indorama Ventures to turn changing global trade flows into new business opportunities.

"Our global reach, with around 80% of capital invested in Europe and Americas, makes our business model resilient to events happening in any particular country or region," said Mr. Alok Lohia, Group CEO of Indorama Ventures. "On the other hand, our end-product strategy of serving the packaging, hygiene and safety needs of society, leads to our growth in excess of GDP growth."

CORPORATE STRATEGY ANNOUNCED AT CAPITAL MARKETS DAY 2020



2020's Capital Markets Day earlier this year successfully unveiled the long-term strategies that will further establish Indorama Ventures as an industry leader in all business segments. Our experienced and professional leadership team has set in action a well articulated 2023 strategy focusing on 5 pillars:

1. **Cost Transformation** – Accelerate performance through cost optimization
2. **Asset Full Potential** – Focus on commercial excellence to grow revenues and margin
3. **Adjacency Growth** – Pursue organic and bolt-on growth in attractive adjacencies
4. **Recycling Leadership** – Build leading rPET business; set new bar for sustainability
5. **Leadership Development** – Invest in and develop the best management team in the industry

Mr. Alope Lohia, Group CEO of Indorama Ventures, said "Going forward, IVL will continue to pursue our strategic themes, with the ambition of achieving double-digit ROCE, strong cash flows across the cycle and above average returns to shareholders. Historically, we have always remained strong through the peaks and troughs of the chemical cycle and expect to continue to outperform thanks to our highly experienced and professional management team."

The above pillars are accompanied by specific goals for company performance, such as developing a global circular economy for PET, strengthening cost advantage, seeking to improve operational efficiency, asset integration, and innovation. A focus on generating working capital will enable healthy operating cash flow across the Company's entire network of operations.

The three-year strategy utilized advanced research and knowledge from previous accomplishments to analyze the current situation in order to envision an ambitious, yet realistic, future. Development of internal leadership is viewed as a crucial component to our operations as a truly global company. Prioritization of management practices comes as part of a larger investment in people, governance structures, and HR processes that will help enhance the working experience while also improving efficiency across the organization.

Working towards a new era of growth, this strategy captures every piece of the Indorama Ventures business with the expectation of creating maximum value from each asset, idea and stakeholder. Sustainability remains a key component in everything we do as the Company has gone beyond the requirements of a safe and responsible company.

IVL GROUP MANAGEMENT CONFERENCE 2020

CONNECT
by
Corporate Communications



Indorama Ventures' Global Management Conference (GMC) 2020 took place in Bangkok, Thailand on 30-31 January, with over 200 members of the global leadership team in attendance. The grand scale two day conference took place across three hotel venues and was tightly scheduled with presentations on business innovations and continuous improvement from our business segments. Plans, achievements and developments throughout the Company were discussed and communicated to the leadership, including announcements from new acquisitions and the newly formed Mobility group. The rising significance of recycling as a global concern and as part of the Company's growth strategy brought forward the progress of advanced technologies for the future, and the role of Indorama Ventures in fighting climate change.

Group CEO Mr. Alok Lohia opened the event with his annual letter to stakeholders, celebrating Indorama Ventures' achievements from the last decade, leading to assertive goals for the next. The results of 2019 were summarized and progressed to the planned strategic focus for the near future. Mr. Lohia also congratulated the Company's success in sustainability with the announcement of IVL's successive inclusion in the FTSE4Good Index Series and being listed in the Dow Jones Sustainability Emerging Markets Index and World Index, ranking second among top global chemical companies.

Lining up to our awareness as an environmentally conscious and sustainable company, the theme of the event this year was "Practicing Healthy Habits: Healthy Mind in Healthy Body". Simple exercise sessions led by professional trainers were scattered throughout the schedule, from basic stretching in the meeting room, tips for long haul flights, to a morning workout for general health - to refresh your focus and reboot your body. The theme was also heavily reflected in culinary selections, proportionately balanced meals, healthy snacks and nourishing drinks were served along the event. After a full day of productivity, a cocktail dinner and entertainment was arranged for all guests.

An important aspect of an event as such is the opportunity for Indorama Ventures leaders to interact and personally get to know the people they have been working with. Awards were given to recognize the performance and dedication of team members, upholding our value that our people make the difference. The gathering of the leadership reinforces our ambition in striving towards enhancement and development, creating opportunities in determination for business growth and fulfilling the roles of a responsible industry leader.



Trevira GmbH, an Indorama Ventures company, successfully showcased their newest innovations at the 2020 Heimtextil trade fair in Frankfurt. Across the 2,000 m2 stand, a special showcase "Textile Future by Trevira CS" was curated especially for the contract market by renowned Berlin design company studio Aisslinger, giving visitors an opportunity to find out more about future-oriented, innovative applications of Trevira CS fabrics.



FTSE4Good

Indorama Ventures has been selected as a member of the FTSE 4 Good Index Series for the fourth consecutive year, with an increase in overall score from 4.3 in 2019 to 4.6 in 2020 and the highest ESG score out of all chemical companies. The company has also been highly ranked by an international non-profit organization, The CDP, and received a B Rating in Climate Change for the fourth consecutive year.



In January 2020, the leadership team from our FiberVisions site in Varde, Denmark received a prestigious award for being one of the best places to work in Denmark, achieving second place overall. We sincerely congratulate the management and all employees at our site in Varde for this meaningful accomplishment and for upholding IVL's value that our people make the difference.



Wilbur Ross, United States Secretary of Commerce, and Kobsak Pootrakool, Thai Deputy Secretary - General to the Prime Minister for Political Affairs, joined Dilip Kumar Agarwal, CEO of Feedstock and PET at Indorama Ventures, and Ramesh Narsinghpura, COO of Indorama Ventures to announce the company's acquisition of \$2 billion worth of petrochemical assets from Huntsman Corporation at the 2019 Indo-Pacific Business Forum.



In December 2019 Indorama Ventures was involved in the creation of Wonderfruit Festival's Creature stage, aiming to raise awareness on the versatility of recycled PET in alignment with the festival's ethos towards environmental care. We also took part in a debate on the role of plastics within a circular economy and set up a PET bottle recycling workshop to encourage attendees to recycle in everyday life.



As an official partner of BURIRAM UNITED Football Club for 2020, Indorama Ventures proudly supports the use of recycled PET (rPET) products in daily life. Buriram United's jerseys are now made of 100% rPET fibers, with one jersey being made of approximately 14 post-consumer PET bottles. We will be cooperating with the club on waste management and recycling education towards a vision to permanently change how PET bottles are perceived and processed.

MULTIPLE ACQUISITIONS EXTENDS INDORAMA VENTURES' GLOBAL REACH



Three fully completed acquisitions have yet again expanded the reach and production capacity of Indorama Ventures' footprint. These landmark agreements underscore the Company's continuous commitment to provide sustainable products to our customers around the world.

An impressive addition to our facilities was completed at the beginning of this year, that is the \$2 billion acquisition of Huntsman's world-class integrated oxides and derivatives businesses which will comprehensively enhance our business strategy. With facilities in the USA, India and Australia, Huntsman represents Indorama Ventures' largest acquisition to date with resources of over 900 patents and numerous intellectual properties, bringing a deep understanding of various end markets to bring us closer to consumer needs.

Last year, Indorama Ventures also concluded the acquisition of Sinterama, Europe's leading supplier of polyester automotive interiors and high performance colored yarns. With operating sites in Italy, Brazil, China and Bulgaria, Sinterama's market presence adds greatly to our existing specialties business and with new market addition of Bulgaria expands our reach to 33 countries worldwide.

Mr. Alope Lohia, Group CEO of Indorama Ventures, commented on the acquisitions by saying, "I would like to heartily welcome our new colleagues to the IVL family. I am confident that together we will drive this important business to generate significant value for all our stakeholders, reduce earnings volatility, and underpin IVL's earnings growth opportunities for years to come."

As contribution to our pledge regarding recycling investments came the acquisition of California-based Green Fiber International Inc., a recycling company that produces 40,000 tons of rPET flakes per annum. By increasing our recycling volume, the acquisition aligns with our long-term sustainability objective of integrating PET into a fully circular economy.

Mr. Yash Lohia, Executive Director and Chief Recycling Officer of Indorama Ventures, said: "At Indorama Ventures, we play a key role in promoting the circular economy and environmental sustainability globally by pursuing the right opportunities to fill gaps that are intrinsic to a sustainable future. We strongly feel that this acquisition will contribute to profitable future growth in the sustainable recycling business with the potential to expand further."

INDORAMA VENTURES AND COCA-COLA BEVERAGES PHILIPPINES

JOIN FORCES TO ESTABLISH PETVALUE

SUSTAINABILITY

by
Corporate Communications



With the shared goal of making a more sustainable future happen today, Indorama Ventures and Coca-Cola Beverages Philippines, Inc. (CCBPI)—the bottling arm of Coca-Cola in the country—have signed a joint-venture agreement to establish PETValue, the largest state-of-the-art bottle-to-bottle recycling facility in the Philippines.

“PETValue will help ensure that used PET plastic bottles—packaging that is 100% recyclable, and therefore not ‘single-use’—will be given new life and function as they are collected, processed, and used again and again within a circular economy,” said Gareth McGeown, CEO of CCBPI. “PETValue will deploy cutting-edge technologies and industry-leading best practices to employ the safest and most advanced recycling process for plastic bottles made from PET (polyethylene terephthalate) material. Its projected capacity, or the amount of used plastic bottles it can process, is 30,000 MT per year or almost 2 billion pieces of plastic bottles, with an output of 16,000 MT per year of recycled PET resin.”

“We are very proud of our partnership with Indorama Ventures; they’ve been helping us with innovative initiatives on sustainable packaging—from light-weighting efforts that allow us to lessen the amount of plastic we use in our packaging, to developing the country’s the first-ever beverage

bottle made from 100% recycled plastic,” added McGeown. “Through PETValue, Indorama Ventures and Coca-Cola are introducing to the Philippines green technologies that will help strengthen Filipinos’ commitment to sustainability—a major step in making our World Without Waste vision a reality in the Philippines.”

Yash Lohia, Chief Recycling Officer of Indorama Ventures commented “Indorama Ventures has always been committed to sustainability, and to ensuring that the technologies we use are advanced, efficient, and meet or even surpass industry standards so that we can better manage our environmental impact. We firmly believe that a circular economy for plastic bottles, particularly PET plastic bottles, is possible and must be established. We cannot let the potential of this recyclable resource go to waste. This is a philosophy shared by Coca-Cola, and our partnership with them is testament to how two organizations that share the same principles can institutionalize sustainability practices among industries and be of benefit to local communities.”



The IVL Family at Indorama Ventures Europe dedicated their time and effort in a fundraising campaign for the Erasmus MC-Sophia Children's Hospital through sporting events and donation. This voluntary activity reflected the company's contribution to help enhance living quality for people in society.



Bangchak Corporation PCL collected and contributed 600,000 PET bottles to Indorama Ventures PCL as part of the 'Rak Pan Sook' collaboration towards a circular economy of plastic waste. Bottle collection points were set up at Bangchak facilities around Bangkok to encourage citizens to maintain a clean environment. IVL will recycle these bottles into polyester fiber products and return the revenue to charity organizations.



In February 2020, the Joint Foreign Chambers of Commerce of Thailand launched the CAP (Care About Plastics) initiative at the residence of H.E the Ambassador of The Netherlands. As an industry leader, Indorama Ventures donated a plastics compactor in support of this initiative and also participated in the launching event with an exhibition space on PET and plastic recycling.



Indorama Ventures Polimeros donated uniforms to children in need at Creche Califórnia, Ipojuca, Brazil. Through this donation, the company aims to take any possible action to support the education of children and is happy to make the first day of daycare enjoyable for everyone at the center.



IVL Foundation visited underprivileged children and young adults born with facial deformities at Srisangwan Hospital, Mae Hong Son province in Thailand for their Operation Smile weeklong medical visit in February. The team was able to offer the chance to receive safe surgeries at no cost, providing an opportunity for the children to heal physically and thrive emotionally.



IVL invited colleagues at Head Office and the surrounding community to exchange their PET bottles for gifts including candy, plants and DEJA™ recycled shirts. All bottles collected were transported to our facility in Nakhon Pathom to be recycled, promoting PET as a 100% recyclable material and encouraging the community to separate their waste by putting PET bottles in the correct bin.

INDORAMA VENTURES' CSR PROJECT

RAISES ENVIRONMENTAL AWARENESS

IN RANONG



In collaboration with the Jan & Oscar Foundation, Indorama Ventures conducted an educational roadshow on waste separation and recycling at several schools and communities in Ranong. The Mayor of Ranong Province, Mr. Jirawach Charoennitiphokin, was in attendance at the Khao Niwet Municipal School stop and gave the opening speech.

Our team brought the roadshow to the Koh Payam Child Development Center and Koh Lhao Home School to educate children and other members of the Moken community. Where suitable, waste banks were set up to create a waste management infrastructure for the locals.

The Moken are an ethnic minority of semi-nomadic sea gypsies who still live mostly as hunter-gatherers, making their livelihood from the Andaman Sea. In recent years, large amounts of marine litter have been filling their fishing nets, threatening their way of life. Most of them live under the absolute poverty line and are not registered citizens.

"With Moken kids, we hope to inspire the connection of tradition with modern life while tackling present day problems," said Dr. Michel Pardos, Project Manager for the Jan & Oscar Foundation. "The Moken have traditionally always had high respect for their environment and would never exploit their natural resources, that to them were never just a product but their kin. We would like to inspire them to join forces to connect to old roots of harmonious coexistence with nature through education and the right actions towards living well. Trash reduction and recycling is a great start for that."

The team worked closely with the children, learning that they were familiar with types of waste but were not sure how to separate them. Afterwards, the children said the education session and knowledge books helped them understand plastics and that it can be used for a lot of things. They were very impressed that so many things can be made from PET plastic and were encouraged to make a change.

In keeping with the United Nations' 2030 Agenda and its 17 sustainable development goals, the initiative promotes a circular economy and is based on three pillars:

1. Recycle or upcycle plastic waste out of the Andaman Sea as well as the rivers and canals that flow into it. This work will be conducted and partly managed by the local Moken population.
2. Reuse or recycle plastic waste – along with paper and glass – in Ranong City to reduce plastic leakage into the sea. This will be managed by Ranong Recycle for Environment Social Enterprise.
3. Promote waste separation and the 3R concept (Reduce-Reuse-Recycle) with educational programs, and set up waste banks in governmental primary schools and Moken villages.



JUST THE FACTS, MA'AM.

RICHARD JONES

Joe Friday (a television detective in the 60s) was right, the facts will help more than colorful or emotional descriptions. When it comes to plastic, so much poorly researched information is being passed around that people are unable to comprehend what effect a ban on plastic would have in the future and just get emotional.

CONTEXT IS KING

Numbers are always interesting but sometimes we do need a little context to understand them. Here is a typical example.

Plastic bottles last for 300-400 years.

By itself, it seems that plastic bottles will last a helluva long time. However, put in context it becomes more difficult to get the point. Aluminum will also last hundreds of years and glass lasts for millions of years, so what is the point of mentioning longevity if such durability is seen as a positive in other materials? Once you add that some plastics are easier and cheaper to recycle, with a lower carbon footprint than other materials, the lack of context can be misleading.

Context would help the reader greatly in articles that state the manufacture of plastics from crude oil is on the rise. Without any context, this may sound disturbing, but when you understand that, while plastics today account for about 4% of crude oil use (no agency has exact numbers), fuels for transportation take up to 50%. Why is this important?

Oil demand for transport is expected to slow by 2050 due to the rise of electric vehicles and more-efficient combustion engines, but that would be offset by rising demand for petrochemicals, the International Energy Agency or IEA, said in a 2018 report. What is missing here is that a lot of the plastics being made are destined to lightweight the very vehicles that are mentioned. About 50% of the volume of an automobile today is made of plastic, or about 10% of its weight, and that saves fuel. Airplanes have been the worst polluters by

weight of any other mode of transportation, but are lightweighting to save fuel and thus lower global warming. Aircraft have used plastics in their construction since World War II and quickly replaced rubber tires. New, high-tech plastics are helping make passenger aircraft lighter, more durable, and more fuel-efficient. Carbon-fiber-reinforced plastics, or CFRP, are made of one or more plastics combined with fibers made from carbon, resulting in lightweight, extremely strong, materials. These composites help reduce the weight of the aircraft and contribute to a 20 percent reduction in fuel consumption. Better fuel efficiency also translates into lower carbon and other emissions during the lifetime of the aircraft and the planes can fly longer without refueling.

TECHNICAL NO-HOW

Misunderstandings also arise from the fact that plastics can be quite a technical matter and the public, understandably perhaps, doesn't want to get into it that much. During a recent public panel discussion on the necessity (or not) of plastics came the statement that polyethylene terephthalate, abbreviated as PET and commonly used to make water bottles, was dangerous because it contains phthalates, an endocrine disruptor (let's just say that it is bad for you). When an explanation was offered that there are two major types of phthalates, ortho- and tere-phthalate, and that ortho-phthalates are the dangerous ones, the moderator panicked and said that the explanation was too detailed and changed the subject. As British politician Michael Gove famously said in 2016, "People have had enough of experts."

Besides context and science, incomplete facts are often taken at face value and repeated on social media. The most famous is the statement that by 2050 there will be more plastic than fish in the ocean. While estimating the amount of plastic reaching the ocean may be possible, unless someone counts the fish it becomes difficult to accept the whole statement without a very large pinch of salt.

THE FUTURE IS ALWAYS DIFFICULT TO FORESEE

A lack of foresight by both governments and individuals could well have a significantly negative effect on global warming and climate change. In February 2019, Aamirah Patel, writing in an article for TRT World, mentioned that, "Sikkim was the first Indian state to ban disposable plastic bags in 1997 and instead shifted to paper bags or newspapers." This is truly horrifying for anyone who knows that paper bags have a larger negative effect on global warming than plastic bags for several reasons. Obviously, the manufacture of paper means cutting down trees and relieving the world of effective natural carbon sinks and oxygen production. Secondly, whoever thought paper bags jumped out of trees without a manufacturing process that in itself has a large carbon footprint is being irrational. Paper bags are single-use products that release methane when biodegrading, a worse contributor than carbon dioxide to global warming, while the chemicals used to produce paper sink into the soil.

DESTROYING THE ENVIRONMENT IS NOT A GOOD WAY TO SAVE THE WORLD

In a strange aberration of memory, people have forgotten that Swedish engineer Sten Gustaf Thulin created plastic bags in 1959 to save the planet. As The Independent newspaper and the BBC noted in 2019, plastic bags were developed as an alternative to paper bags, which were considered bad for the environment because they resulted in forests being chopped down. Plastic bags were invented with

the idea that they were reusable - something the planet forgot. It is this blind return to deforestation in the name of saving the environment that is most disturbing. China already cuts about eight million trees annually just to make single-use wooden chopsticks when plastic ones can be easily washed and reused. Now, restaurants are handing out single-use paper straws, which is simply continuing the throwaway lifestyle of modern man.

One problem society faces is it is often unaware of where plastics are used and therefore makes an assumption that certain materials must be plastic-free. It isn't that simple. Want to use an aluminum canister for your water or coffee? Well, metal containers and cans are frequently lined with plastic to stop the "metallic" taste you would otherwise get. Prefer a paper coffee cup over a foam one? Most paper cups are now lined with plastic so your coffee doesn't leak out.

What the world needs at this time is more awareness, factual answers and context. Few people even consider that all alternatives, like biodegradable plastics made from plants, are single-use and often have a greater impact on global warming, via the water use associated with growing the plants to the carbon footprint coming from transportation and their end-of-life degradation and the temperatures required to achieve this. Using biodegradable plastics in transportation is clearly impractical.

We know that plastic is a durable product that can be recycled and we know that it must be increasingly used if we are to fully develop our vision of lightweight, efficient, transportation. If recycled plastics can be used for this purpose, all the better. But let us not make rash decisions today that result in further environmental problems down the road.

INDORAMA VENTURES REACHES A MAJOR MILESTONE: 50 BILLION RECYCLED PET BOTTLES



Properties of PET

- Increase shelf life of food and drink products
- 100% recyclable
- Fully circular
- Environmentally friendly
- Lightweight
- Lowest carbon footprint compared to alternative packaging

In March 2020, Indorama Ventures reached a total of 50 billion PET bottles recycled since the Company first started recycling in 2011. This ongoing effort represents a massive contribution to the environment and the global circular economy. Recycling 50 billion bottles has saved three million barrels of crude oil and eliminated 1.65 million tons of carbon emissions.

“As a Thai company, we are very proud to have achieved this fantastic milestone,” said Mr. Yash Lohia, Indorama Ventures’ Chief Recycling Officer. “It is the result of our firm commitment to expand our recycling capacity over the years.”

Indorama Ventures went from recycling 3,500 tons in 2011 to over 200,000 tons in 2019 – a 56-fold increase. The recycled content is used to create long-lasting products in the apparel and industrial equipment sectors. For example, recycled PET, in the form of polyester, is increasingly used to lightweight vehicles, which further reduces their carbon emissions.

“By recycling 50 billion PET bottles we have averted about 1.1 million tons from being landfilled – that’s the equivalent of 203,700 elephants in weight or if they were all 500ml bottles laid end-to-end, they would stretch to the moon and back 15 times,” Mr. Lohia said.

He added, “In five years’ time we aim to recycle 50 billion bottles a year. To achieve this, we have committed up to US\$ 1.5 billion to expand our recycling business. Our work will support household brand names who are using more and more recycled PET in their bottles. No recyclable PET bottle should leak into our environment. We are building the recycling infrastructure the world needs. Our facilities close the loop and deliver a circular economy for PET bottles.”

- Three million barrels of crude oil is equivalent to 500 roundtrips from Atlanta in the USA to Sydney in Australia by car.
- If 50 billion bottles were all 500ml bottles laid end-to-end, they would stretch to the moon and back 15 times.
- PET is the most used packaging materials for soda and water bottles with 41% of volume share compared to that of aluminium and glass.

BEAUTIFUL BEACHES AND BOUNTIFUL BANQUETS IN BRAZIL



With its lush rainforests, white sandy beaches, lively metropolises, savory cuisine, and vivacious parties, Brazil is one of the world's most captivating countries. From the bustling streets of Sao Paulo to the depths of the untouched Amazon, this gem of South America offers endless possibilities for the visitor.

A stroll along the famous Copacabana Beach in Rio de Janeiro gives you an excellent first taste of the country's easy-going culture, as many friendly (and often scantily clad) locals will be sure to greet you with an 'Olá'. From certain vantage points on the beach, you'll be able to see the legendary Christ the Redeemer statue looming high over the city at the top of Corcovado Mountain. Stepping deeper into the Marvelous City will reveal an enchanting combination of vibrant culture and beautiful architecture. While you wander the streets, you'll hear the scintillating sounds of Samba and Bossa Nova, as this, after all, is the home of Carnival.

Brazil's many other magnificent metropolises are also not to be missed. Marvel at the modernist architecture in the capital of Brasilia, dubbed the 'City of Design' by UNESCO. Admire the finest collection of paintings and statues in the Southern Hemisphere during your visit to Sao Paulo's Museum of Art. And, savor sumptuous Afro-Brazilian cuisine in one of Salvador's many markets.

Outside of the bustling cities, you'll find a world of natural wonders to explore. This tropical nation is home to the most diverse ecosystems in the world. Off the coast, you can spot sea turtles, pink dolphins, and several species of whale. Further inland, you'll have the chance to see capybaras, howler monkeys, scarlet macaws, toucans, three-toed sloths, and perhaps even an elusive jaguar.

All manner of adventure is possible in Brazil: Kayaking on the famous Amazon River, rock climbing Sugarloaf Mountain in the heart of Rio de Janeiro, and hiking to the foot of the iconic Iguazu Falls.

Indorama Ventures' 2018 acquisition of the PET business of M&G Group in Brazil marked its maiden entry into this key South American market. In 2019, the Company followed up with the acquisition of M&G Group's Polyester Staple Fiber business.

These moves solidified Indorama's position as a major global player in fibers, and cemented its place as the number one PET player worldwide. The Company is now the most important fiber producer in South America and the largest upstream producer of PET in the Americas, establishing a firm foothold on the continent.

PARTNERSHIP TOWARDS SUSTAINABILITY

CONNECT
by
Corporate Communications

As a global leader in PET recycling, Indorama Ventures proudly supports the use of recycled PET (rPET) products in daily life and has become an official partner of Buriram United Football Club for 2020. This season, the club's jerseys are made of 100% rPET fibers from DEJA™, with one jersey being made of approximately 14 post-consumer PET bottles. Buriram United Football Club plays at the top level of Thai football with 7 Thai League championship titles and a 32,000 capacity home stadium located in Buriram province, Thailand.

Club jerseys made of rPET fibers are part of the campaign called "BURIRAM GO GREEN" which sets a goal for all parts of the club and their partners to increase efforts towards the sustainability in 2020 and onwards. Under this idea is an aspiration to work towards building a waste management system to reduce the amount of waste going to landfills and affecting the environment. This will be largely driven by the promotional influence of Buriram's sports and media to convey knowledge on waste separation and recycling. The initiative has developed into a province-wide project that will influence other sectors including agriculture and tourism, working towards the "BURIRAM HEALTHY MODEL" to help the city operate sustainably, focusing on health of people and the environment.

In February 2020, the club's official partners of the season were revealed with Indorama Ventures representatives in attendance. Throughout the year, we will be working closely with Buriram United on waste management and recycling education initiatives, with a goal to permanently change how post-consumer PET bottles are processed. The club has a vision to bring a sense of environmental consciousness to local communities and club supporters, calling for a change not only for the province or the team, but to react for the bigger cause – our planet.



DEJA

Indorama Ventures' 100% rPET (recycled PET) brand DEJA™ is part of our continuous commitment to deliver responsible and sustainable growth. With complete traceability from source to supply, DEJA™ is available in flake, pellet, fiber and filament applications. Recognizing plastic as a valuable resource, the ingredients are made from recycling PET bottles and save millions of bottles from landfills each year.



THE COVID-19 PANDEMIC



As of February 2020, the World Health Organization had declared the novel coronavirus, now named COVID-19, assessed at a high-risk level worldwide. Amidst this crisis, Indorama Ventures products has played a role in prevention efforts against this outbreak, once again truly justifying our vision to create great products for society. The most common form of PET to the public is the plastic water bottle, yet many people outside of the industry will be surprised to learn that the same base material is also used in the manufacturing of respiratory or surgical masks.

Even though they may not be the most effective, disposable surgical masks made from a combination of spunmelt nonwoven fabrics are most commonly used. The external layer is an SMS (Spunbond-Meltblown-Spunbond) fabric that acts as the first barrier for inhaled air, the meltblown layer acts as a filter, and the inner layer is manufactured for skin contact. The meltblown filter layer is made from superfine filaments that are formed when molten polymer is blown using hot air upon extrusion, developing interlacing fine filaments which create

microscopic voids to capture particulate matter. Indorama Ventures' subsidiary, Avgol Nonwovens, is a global producer of spunbond and meltblown nonwovens, with manufacturing sites in the USA, Israel, Russia, China and India. Avgol's products meet highly demanding performance and safety standards specified by regulatory authorities and governments.

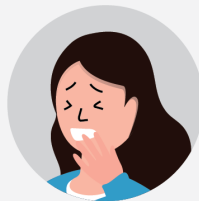
Other disposable respiratory masks are made using carded nonwoven fabrics. Such fabrics typically use polyester (and/or other fibers) that are carded and then bonded by different processes depending on the functionality required. IVL supplies specialty polyester fibers that are converted by IVL's customers into carded nonwoven fabric.

In many parts of the world, local authorities have placed regulations to prevent further spread of COVID-19, advising the population to wear respiratory masks in public and avoid attending crowded events or travelling abroad. We would like to remind all Indorama Ventures colleagues to take any appropriate precautions to keep yourselves safe and healthy.

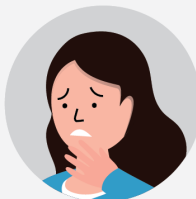
The main symptoms of COVID-19 are:



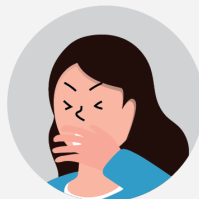
Fever



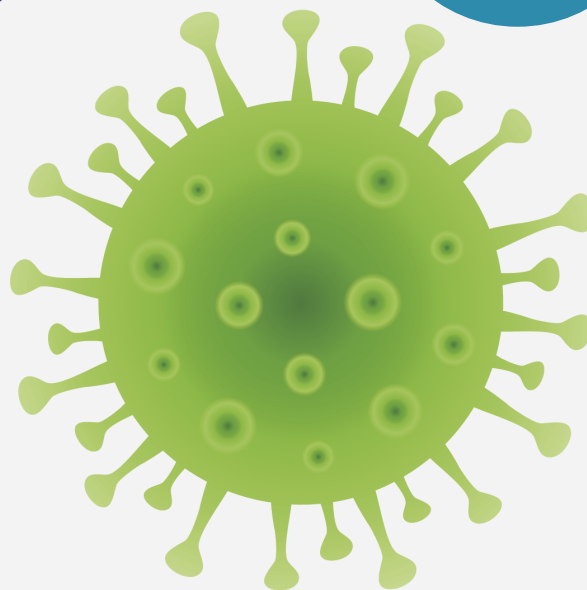
Cough



Sore throat



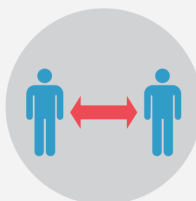
Difficulty breathing



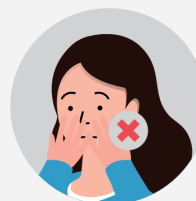
How to protect yourself from COVID-19:



Wash your hands frequently and thoroughly



Distance yourself from other people

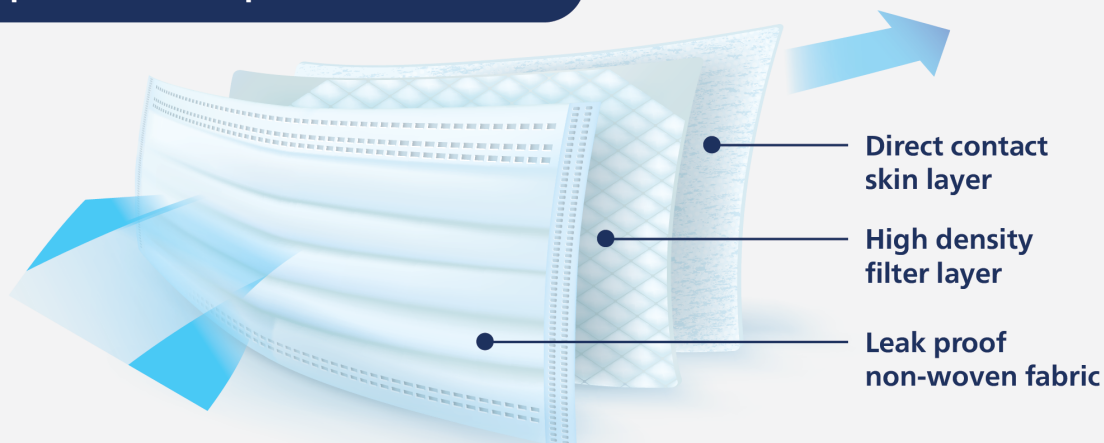


Avoid touching your face



Cover your mouth and nose when coughing or sneezing

Components of a disposable face mask:



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