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PROFIT FOR GOOD

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Trends, Analysis Green Products, Green Books, Entrepreneurship

Purpose
To excite entrepreneurs, executives and graduate students about immense opportunities in green business.

https://sustainabilitynext.in

Ola's Future Factory to be Carbon Negative

Bhavish Aggarwal, Founder, Ola

Ola is planning to set up the 'World's Most Sustainable electric two-wheeler factory' at Krishnagiri in Tamil Nadu, about 100 kilometres from Bangalore. **Bhavish Aggarwal**, founder of Ola, recently shared the vision of Ola Future Factory.

He said the factory would be the most advanced two-wheeler making facility in the world. Because of the 100 acres of forest, in the 500-acre facility, and two acres of forest inside the plant, it is planned to have carbon negative impact making it perhaps the most most sustainable factory in the world.

Carbon negative means that a company not only offsets greenhouse gas emission but also exports its carbon credit in multiple ways including uploading its excess renewable energy to the public grid.

Most responsible companies are announcing their pledge to become carbon neutral and set a timeline. In India, only Infosys turned carbon neutral late 2020. Microsoft and IKEA have announced that they expect to turn carbon negative by 2030.

Highlights

- 100 acres of forest cover
- Negative carbon footprint
- 2 acres of forest inside the plant
- 3000 AI-driven robots
- 10 million two-wheeler a year
- One scooter will be made every two seconds

Watch Video

India Gets First Digital Exchange For Plastic

Recycling has the potential to create six times more jobs and generate around Rs. 14 lakh crore of additional cost savings by 2030, which is approximately 11 per cent of India's annual GDP.

EcoEx, a start-up in the plastic waste management sector, launched India's first digital marketplace in February 2021 to facilitate exchange of plastic credit certificates and strengthen the plastic recycling infrastructure. It provides a transparent trading platform where members can trade plastic credits. It lets members use the power of the marketplace to gain access to real time prices.

As per the Uniform Framework for **Extended Producer Responsibility** (EPR, under Plastic Waste Management Rules 2016) released by Ministry of Environment, Forest and Climate Change, plastic producers, importers and brand owners (PIBOs) that use plastic for packaging are accountable for managing the end waste.

The revised EPR draft guidelines now allow PIBOs to meet their compliance targets by buying 'plastic credits' from accredited companies that recycle packaging or co-process the plastic packaging waste.

EcoEx brings together all the players in the plastic waste ecosystem to transparently trade plastic credit certificates. This model has three benefits: first, it ensures that plastic waste EPR compliance is met by brands in the most effective manner; second, it ensures that the plastic waste is ethically

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collected, transported and put to end of life and third, it incentives recyclers by giving them the monetary benefit for the recycled quantity and co-processors by helping them realise a better price.

According to a study by Un-Plastic Collective (co-founded by the Confederation of Indian Industry, United Nations Environment Program and WWF-India), India generates 9.46 million tons of plastic waste annually of which nearly 40% remains uncollected. A large quantity of this waste is ending up in landfills and oceans.

Mr. Nimit Aggarwal, Founder, EcoEx said, "The added advantage of recycling plastic is that it emits lesser CO2 as compared to producing virgin plastic. EcoEx being pro-recycling ensures that maximum plastic is collected from the environment. This in turn helps save marine life by ensuring lesser plastic being dumped into oceans."

EcoEx aims to streamline the unorganized recycling sector by educating recyclers about the benefits that can be availed by selling plastic credit certifications through a formal channel.

The EcoEx technology platform is supported by NCDEX e-markets Limited, the leading National Spot Exchange in India. It works with domain experts and offers trading platforms for trading in a host of commodities. These trading platforms combine technological efficiency and market-friendly trading features in a transparent atmosphere to make trading a rich and rewarding experience. Through auto market correction on its portal and direct exchange of credits EcoEx ensures that the cost benefits are derived by all parties.

Excerpts of SN interview with Mr Nimit Aggarwal, founder, EcoEx

What is EcoEx and how does the platform work

EcoEx is a unique digital marketplace that facilitates the exchange of plastic credit certificates between producers, importers, brand owners (PIBOs) and recyclers. The Plastic credit certificate is a bonafied document which ensures that the particular quantity of plastic has been recovered, channelized and disposed (either recycled or co-processed) as per Plastic waste management rules 2016 and further amendments.

Through this marketplace, PIBOs purchase plastic credit certificates that signifies the amount of plastic waste they are getting recycled/co-processed through an accredited co-processors or recyclers. Digital documentation of the entire process of recovery, transportation and disposal (recycling or coprocessing) of the post-consumer plastic waste ensures transparency and ethical handling of waste. A plastic credit certificate (PCC) is also used by brand owners to authenticate the fulfillment of their Extended Producers Responsibility (EPR). Through this digital ecosystem, EcoEx makes the process of buying and selling plastic credit certificates (PCC) quick, secure & equitable.

Your background and work experience in the plastic waste management sector

I come with more than 10 years of experience from leading organizations (BLS Ecotech) working towards sustainable solutions, plastic waste management and PET plastic waste. Hailing from a

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family background that is well versed with plastic waste management in last 70 years, I use an eco-minded approach that aligns with UNDP Sustainable Development Goals and have also consulted numerous foreign recycling organizations with their planning and business strategy.

As an alumni of Indian School of Business and a member of the board of FICCI Youth Leader Committee, I believe that youth have immense potential to contribute to issues that are centric to the environment and to the country. With this belief, I founded EcoEx, a **first of its kind digital platform for stakeholders of the plastic waste management value chain to undertake secured and mutual beneficial plastic credit certificate transactions**

How many recyclers and brand owners are using your platform

Since the inception of EcoEx, we have had around 30 major players onboarded to trade plastic credits

How much plastic waste has EcoEx recycled till now

Under the plastic credit model, if a producer is purchasing 1 plastic credit from a recycler, it means that one kg plastic worth of recycling has taken place through the EcoEx platform. **In just five months, EcoEx, has closed recycling projects of more than 2000 metric tonnes (20,00,000 kgs) of plastic waste.** This comprises of converting waste from Delhi, Maharashtra, Haryana, Rajasthan, Tamil Nadu, Telangana, Andhra Pradesh, Karnataka, and Bihar.

What is the market size that EcoEx will capture in this year?

It is our goal to capture 10% of the total EPR market (Rs.3,000 crore) in 2021-22.

How does EcoEx stand out from other waste management digital platforms?

A plastic credit model is envisaged where a producer is not required to recycle their own packaging, but to ensure that an equivalent amount of packaging waste has been recovered and recycled to meet their obligation. However, producers are mandated to acquire evidence of recycling or recovery from properly accredited processors [recyclers, W2E plant operators, cement co-processors, users utilizing plastic in road] or exporters. The producers can exchange credits from processors that have been specifically accredited for this purpose and through proper registration at the EPR portal and all this has been made possible in a digital platform.

EcoEx has very stringent requirements while onboarding any stakeholder. We take all required documentary proofs as per PWM rules to ensure the authenticity and accreditation of all the stakeholders and the work they do. We have our inhouse moderation team that evaluates the documentation with scrutiny of highest degree. Once the recycler is accredited by the government, EcoEx cannot refute the given consents by the law of the land.

What are your goals for 2021?

We at EcoEx will be targeting recovery, channelization and disposal (recycling, W2E, W2O, road

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construction Etc.) of 1 lakh metric tonnes of post-consumer plastic waste. **We will be helping more than 50 brands to neutralize their plastic footprints.** We also understand that as EcoEx, we have a high social obligation hence we will be targeting more than 100 small level regional brands and aware them to start fulfilling EPR for making this world better to live.

Can the plastic credit model solve India's plastic waste management problem?

Plastic waste management ecosystem is a community of multiple stakeholders. The aim will only be achieved when all stakeholders will fulfill their responsibility.

Brands has been envisaged as a stakeholder who has the burden of financing this whole ecosystem. The plastic credit model will help the fund to flow in the right hands. The incentive scheme to other stakeholder will eventually make the whole ecosystem sustainable.

The plastic credit model is seen as an innovative recycling program that has the potential to overcome institutional, infrastructural as well as legislative challenges and accelerate recycling practices across the country.

Can you please share the market size of the plastic waste management industry?

It is estimated that the waste management market in India will reach around $ 13.62 billion by 2025 while the plastic recycling market in India is estimated to grow at a rate of 6.5 % to attain a market size of $ 53.72 billion by the end of 2023.

How much waste is the unorganised sector recycling yearly?

The Central Pollution Control Board reported that plastic waste on an average account for 6.92 per cent of municipal solid waste. The informal sector plays an important role in the management of plastics. The recycling rate of plastics in India is expected to be around 60 per cent, though 94 per cent of plastics that we use are of thermoset category and can be recycled.

Experts also say that recycling has the potential to create six times more jobs and generate around Rs.14 lakh crore of additional cost savings by 2030, which is approximately 11 per cent of India's annual GDP.

(Source: Environment and Waste Management Division in TERI)

plastic-recycling-the-only-answer-to-plastic-pollution

manage-plastic-waste-effectively

How is plastic credit model better than the existing waste management models in India?

The plastic credit model provides enforcement of extended producer responsibility on all PIBOs (Plastic producers, Importers and Brand Owners). Inability to comply with this obligation may have

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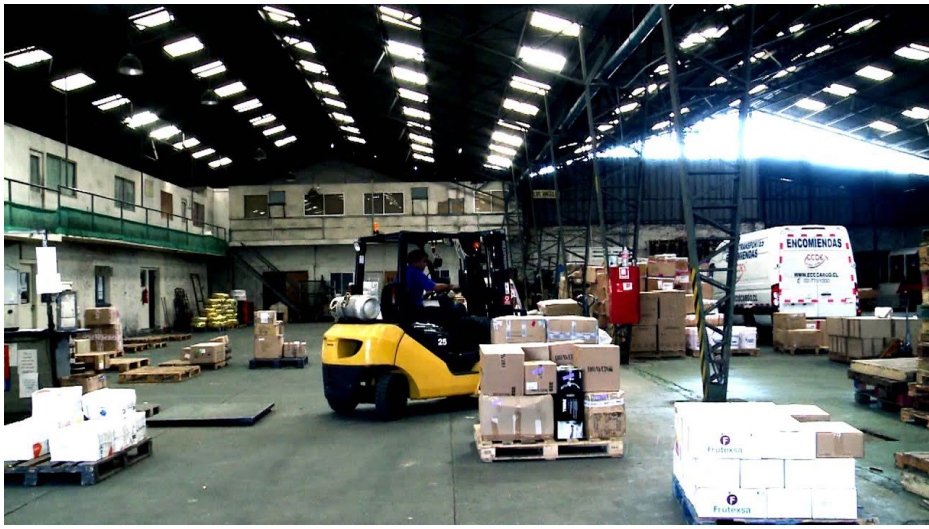
an immediate economic impact on the companies as authorities may cancel their consent to operate. In short, a company that manufactures and sells any product in plastic would need to fulfill its EPR obligations on monthly basis. Otherwise, they will be unable to produce the product they are selling. In a way, it promises compliance on part of producers which other existing models do not.

How has this model worked anywhere else in the world?

The Ministry of Environment, Forest and Climate Change (MoEFCC) notified Plastic Waste Management Rules, 2016 on 18th March 2016 and as per the rules, the generators of waste have been mandated to take steps to minimize generation of plastic waste, not to litter the plastic waste, ensure segregated storage of waste at source and handover segregated waste to local bodies or agencies authorised by the local bodies.

The rules also mandate the responsibilities of local bodies, gram panchayats, waste generators, retailers, and street vendors to manage plastic waste. Furthermore, MoEFCC then released the draft Uniform Framework for Extended Producer Responsibility (Under Plastic Waste Management Rules 2016) on June 26, 2020.



Courtesy: http://www.ecocargo.cl/

The draft rules offer three options to producers: pay a fee into a central corpus that would be spent towards managing the waste; buy credits from a system that would be established to offset the plastic waste they generate; or participate in and pay for establishing producer responsibility organisations (PROs) to collect and manage post-consumer plastic waste.

The draft rules propose to give manufacturers five years to achieve waste management targets, starting with 30% and moving up to 90% in the fifth year after the rules are notified. All stakeholders involved in the waste management process – producers, civic bodies, collectors, recyclers, etc. – would be registered with a new national registry through an online portal. These guidelines in a way, can pave the right direction for India's plastic waste management issues provided it is timely implemented with willingness.

At EcoEx, it is our strong belief that the plastic credit model has the potential to minimize the plastic crisis in India. It is the only credible model that can be implemented on a large scale without compromising on the EPR policy while helping both the stakeholders, i.e PIBOs and recyclers, to focus on their core businesses rather than investing money and time elsewhere.

Infosys, Tata Steel, Wipro Among 135 Most Ethical Global Companies

Ethisphere's research supports the conclusion that ethics and financial performance go hand-in-hand

Three Indian companies **Infosys, Tata Steel** and **Wipro Ltd** have made it to the list of 135 most ethical companies in the world. These companies are recognized by Ethisphere for their unwavering commitment to business integrity.

The honorees span 22 countries and 47 industries and includes 9 first-time honorees and six companies that have been named to the list every year since its inception in 2007. List of **World's Most Ethical Companies® in 2021**.

The 135 companies, **Ethisphere** says, " have demonstrated commitment to ethical business practices through programs that positively impact employees, communities, and broader stakeholders, and contribute to sustainable and profitable long-term business performance."

It adds, "Ethisphere's research supports the conclusion that **ethics and financial performance go hand-in-hand**. Our annual practice of tracking how the stock prices of publicly traded honorees compare to the Large Cap Index found that listed 2020 World's Most Ethical Companies outperformed the large cap sector over five years by 13.5 percent. **This "Ethics Premium" forms the basis upon which companies can correlate responsible behavior with shareholder value.**

US Dominates

Of the 135 shortlist, 97 companies were registered in the United States. UK with 5 was the second highest, followed by Ireland and Canada with 4 each. Only two Japanese companies made it to the list. The list didn't have any companies from China or Russia.

Ethisphere's proprietary Ethics Quotient® process includes more than 200 data points on culture, environmental and social practices, ethics and compliance activities, governance, diversity and initiatives to support a strong value chain. The process serves as an operating framework to capture and codify the leading practices of organizations across industries and around the globe.

This year, the parameter included how applicants are adapting and responding to the global health pandemic, environmental, social, and governance factors, safety, equity, and inclusion and social justice.

Recykal Picked for WEF's Circulars Accelerator Program

Recykal's unique, integrated approach marks India's first digital waste-commerce (w-commerce) company that connects waste generators with waste processors and recyclers, and brand owners to solve some of the biggest challenges faced by the industry.

Recykal, an end-to-end digital 'waste-commerce' solutions provider, has been selected as the first member from India for World Economic Forum's Circulars Accelerator Program 2021.

The program is led by Accenture, in partnership with Anglo-American, Ecolab and Schneider Electric, and in collaboration with UpLink and the World Economic Forum. It will connect industry leaders with 17 ground-breaking circular economy entrepreneurs to scale up disruptive, cross-sector value chain innovation.

Recykal's unique, integrated approach marks India's first digital waste-commerce (w-commerce) company that connects waste generators with waste processors and recyclers, and brand owners to solve some of the biggest challenges faced by the industry.

The company's digital solutions are ensuring higher rates of waste collection, recycling and unlocking value for stakeholders across the waste value chain thereby paving a way for a circular economy by ensuring more materials are entering the recycling streams and less to landfills. In doing so, **Recykal has saved 12.86 million-kWh energy, 57.71 million – litres oil, 18.23 million cubic feet landfill space, 44.44 million litres water and 28,047 trees.**

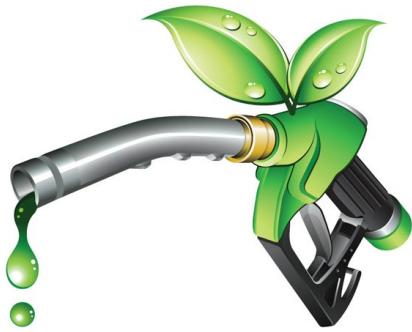
Abhay Deshpande, founder, Recykal, said, "As India becomes one of the world's biggest waste generators, it is crucial that business leaders recognize waste management and recycling as an industry. **Effective management of waste will not only bring $650 billion plus GDP savings to our economy by 2030, it will create two million jobs by 2025."**

Recykal plans to channelise over 10,000 metric tons of recyclables every month, with plans to scale and influence upwards of 2 million metric tons of plastic annually by 2025. Waste collected from various segments like consumers, businesses, aggregators, informal sector are channelized to recyclers, coprocessors, cement kilns.

Recykal has received several recognitions including Grant Thornton Responsible Business Award, NASSCOM EMERGE 50 Awards, FICCI Indian Circular Economy Awards and ASSOCHAM Best Waste Management Digital Technology Player. Since 2016, Recykal has responsibly channeled supply and demand for dry waste and recyclable materials, with the aim of having a positive environmental and social impact in India.

Focus on Clean Fuels Also, Not Just Electric Vehicles

At a time when Indian economy has slowed down due to the pandemic focusing on alternate fuels is an easier way of boosting the economy



The Indian Auto LPC Coalition has urged the Indian government to promote a number of alternate fuels with the same zest as it promotes electric mobility.

The coalition cited the recent power grid failure in Texas and showed the perils of turning to an all-electric future.

"For India which is planning an almost complete switch to electric vehicles the Texan crisis serves as a reminder of the need to promote a basket of clean alternative fuels, rather than focus single-mindedly on electric mobility. The threat of power failures and grid disruptions is real across the world and this raises questions over the viability of a strategy that shifts all transport solutions to electricity," it said.

The body noted that Auto LPG is one such immediately available solution that can replace petrol and diesel right away and reap immense benefits for the environment. India has been lax in promoting ethanol and methanol as well despite massive potential. These not only offer cheaper and environment-friendly fuel but also help raise gross domestic output of rural India along with opening up employment opportunities significantly. At a time when Indian economy has slowed down due to the pandemic focusing on alternate fuels is an easier way of boosting the economy.

India Inc. Ups Ante on Climate Action

CDP survey shows a good number of Indian businesses are at the forefront in tackling climate impact on their business

Days of waiting for the 'right time' is over. Indian businesses, known for their 'dhekenge' (let's see) attitude, have no choice but to commit and act on climate threats. Latest data by **Carbon Disclosure Project** (CDP) reveal that Indian growth could be affected by climate change in the near to medium future.

However, CDP survey shows a good number of Indian businesses are at the forefront in tackling climate impact on their business.

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Highlights of the recent CDP data

- 60 of the Top 200 Indian companies on the BSE were among the 220 that disclosed through CDP in 2020 (up 17% from last year)
- 51 Indian corporates are driving India's transition to a net- zero economy by committing to science-based targets, (a significant growth of over 37% from 2019), positioning India ahead of Switzerland & The Netherlands (refer table below)
- Water security disclosure requests witnessed a staggering 80% increase in response rate in 2020
- 58 companies (25 new) are pricing carbon or are planning to do so in the next two years (up 12% from 2019)

Despite 2020's catastrophic economic climate, 220 Indian companies responded to investor requests and disclosed climate data through CDP, an environmental non-profit. Out of the companies requested to disclose by investors, 60 of the Top 200 on the BSE (Bombay Stock Exchange) responded (out of a total 69). The rest were requested to disclose through CDP's supply chain program by their corporate customers.

Out of these, four Indian companies have made it to the prestigious CDP A List for the first time and are amongst the 16 that have secured the Leadership Band in recognition of their bold climate action. The findings were released today in CDP's annual India report, ***"Building Back Greener: India Inc. Demonstrates Climate Resilience".***

Five years on from the Paris Agreement, and months away from COP26, India Inc. is ramping up environmental action to help the country build back a green and resilient economy. Findings indicate that investor driven increased market pressure is compelling companies to embed climate concerns into their economic decision-making processes – 88% of responding companies report incentivizing top management for climate related issues; **66 companies, a whopping 99% of the responding sample have board level oversight of climate-related issues.**

Damandeep Singh, Director CDP India, said: "Data shows that Indian companies have really upped their game on climate action. This bodes well future-proofing India's ambitious growth plans which are manufacturing centric."

CDP's recent **global supply chain** report highlights the increased engagement between companies and their suppliers on climate related issues. It underscores the critical role value chainsplay in a company's attempt at decarbonization. Indian suppliers have reported a staggering US$3.2 billion in extra costs by 2026 from environmental risks.

While climate conscious investors continue to pressurize companies to improve sustainability by disclosing data, 13 Indian companies have taken a big leap forward by aligning their climate goals with the most ambitious aim of the Paris Agreement – limiting global temperature rise to 1.5°C above preindustrial levels. Two carbon-intensive sectors, automobiles & components and real estate

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have emerged as leaders, and all Indian companies in the real estate sector now have approved targets that align with the 1.5 degrees scenario.

The CDP India Annual Report 2020, **"Building Back Greener – India Inc. Demonstrates Climate Resilience"** is available on **www.cdp.net**

About CDP

CDP is a global non-profit that runs the world's environmental disclosure system for companies, cities, states and regions. Founded in 2000 and working with over 590 investors with $110 trillion in assets, CDP pioneered using capital markets and corporate procurement to motivate companies to disclose their environmental impacts, and to reduce greenhouse gas emissions, safeguard water resources and protect forests.

Over 10,000 organizations around the world disclosed data through CDP in 2020, including more than 9,600 companies worth over 50% of global market capitalization, and over 940 cities, states and regions, representing a combined population of over 2.6 billion. Fully TCFD aligned, **CDP holds the largest environmental database in the world**, and CDP scores are widely used to drive investment and procurement decisions towards a zero carbon, sustainable and resilient economy. CDP is a founding member of the Science Based Targets initiative, We Mean Business Coalition, The Investor Agenda and the Net Zero Asset Managers initiative. www.cdp.net or follow **@CDP.**

New Skill-Ready, Job-Ready AI-Powered Platform for Curated Learning

Elite maps over 2000 skills to the user's career path

Amidst a plethora of online learning courses with multiple outcomes, the one that links learning to skill enhancement for the job market appears to be timely. That what EdSanta Education is aspiring to do.

EdSanta Education has rolled out its AI powered e-learning platform 'Elite' which it says is "set to create a paradigm shift in learning." It's a platform for curated learning that maps over 2000 skills to the user's career path. It says it uses advanced data mapping algorithms to provides content in a byte sized format. The platform caters to users in India, Middle East and other Asian countries.

Elite works on the premise that learning is not done just through courses along. The most effective learning happens when you need to learn to solve a problem at work. "It aids individual empowerment by keeping the learner engaged, motivated & skilled."

Also, EdSanta's **'Elite for Campus'** product aims to empower students with "strategic and effective career guidance that makes them skill ready – job ready."

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Elite's patent-pending AI engine curates and personalizes daily learning from latest podcasts from influencers, videos from technology veterans and blogs from thought leaders. **With more than 356,000+ courses, 2.3m+ videos, 1,50,000+ podcasts, and 75,000+ webinars, Elite aims to become the primary source of learning.**

Rohan Krishna, CEO, EdSanta Education said at a recent launch: "The pandemic emphasized the skill gaps in the existing workforce. A plethora of Edtech brands emerged to make the most of the market condition, making the sector highly fragmented. While there are many EdTech brands to choose from, none of them solves the pain points of e-learning; attention span, completion rate, and individual approach. **It's alarming that the course completion rate today is 6 among 100 learners.**"

Apart from Elite, EdSanta has also on offer several learning and skilling solutions like 'Get me A Course,' 'Get me a Guru,' 'Get me Employed' and AdSmart. "With Elite, EdSanta completes the lifecycle of an Individual from learning- employment- mentorship."

EdSanta Education says it already has 250+ corporate customers, 2,00,00+ monthly active users, 30mn+ learning resources and, 150% monthly skilling growth rate.

Sustainability Brings Profits

LeaderChat - Georg Graf, Freudenberg Group's Regional Representative for India

Freudenberg is one of the world's top MNCs that practices what it preaches. It is one of the top businesses which has started seeing profits from treating Sustainability as a business strategy. The German MNC has a strong foot and hand print in India as well.

Georg Graf, Regional Representative, President of IGCC.

Georg Graf has 35 years of experience in Germany and Asia managing operational businesses in diverse corporate functions. He joined the Freudenberg Group in 1992, relocated to India in 2008 and has been responsible for the Freudenberg Regional Corporate Center India, based in Bangalore, since 2013. Since 2016, he's the Freudenberg Regional Representative for India.

From September 2016, he has been a member of the Indo-German Chamber of Commerce and its President for the 2019-2020 period. Mr. Graf is known for his outstanding intercultural skills from his many years of experience in international and Indo-German business.

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In a free-wheeling chat with **Benedict Paramanand**, Editor of **SustainabilityNext**, Mr. Graf, covers a lot of ground from fuel cells for running ships to drinking water solutions to the world. Edited Excerpts:

In 2017 you had a group strategy on Sustainability, what has been your learning in the last 3 to 4 years and how can Indian businesses learn for this experience?

Freudenberg Group is a 172-year-old entity, Sustainability is a part of our DNA. In 172 years, we market ourselves as a values-based technology group. It comes with responsibility as an integral component of our spirit. It is very easy for us to market sustainability in each and every material, in each and every process, in each and every product and in each and every value addition to what we bring to our customer.

Freudenberg is present in 60 countries and in India it is in 8 out of its 10 businesses. **Sustainability is a very logical step, which is really a part of our DNA, and is also something which is value-adding for us.**

Measuring is very important to drive sustainability

Freudenberg has been successful in measuring CO_2 emission across the Group. Our governance model is a strategical guide model. This means that these strategies will be extended and executed by our operative business group as well. They have to track it according to the strategy.

We have learnt what CO_2 emission directly means for Freudenberg. For example, we calculated how many tonnes of CO_2 was produced to generate a million euro of sales. I think this was not known before.

In 2018 we got an opportunity to draw up KPIs for waste, and it was significant to understand the quantity of waste produced for generating **1 million euro of sales.** This is something which really has opened a lot of thinking and awareness. Because, if you don't measure, how can we set KPIs?. It is very important to measure and gain learnings out of this.

You company has a big interest in Fuel Cell Technology

In fuel cell systems we focus on heavy duty applications. For example, in buses fuel cells can help improve air quality of the cities like Delhi. Freudenberg was successful in replicating such models in the utility vehicles segments, in ships and trains.

Freudenberg Group is investing more time, resource and opportunity into these components for the operations and sub systems of ships, trains and heavy utility vehicles. Freudenberg has a strategic cooperation with a German shipyard, the Meyer Werft Shipyard. There are plans to develop the next generation of fuel cells for use of ocean-going passenger ships.

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You are here since 2008, so what significance changes you have seen in the B2B market space

There is a shift from commodities to specialties. Today Indian companies also produce for the global market. Freudenberg Group looks at "Make in India" as a skills development project, this is a part of sustainability. Now, there's a shift in mind set. Ten years back, it was not possible to talk about sustainability. There is a shift in branding activities as well. **I think the mentality to not throw things away but to fix it, has changed a lot in India.**

Training Gaps in India

I think education is an area where we have a long way to go. I come from a country where dual educational system is the norm. I don't see this in India where academia and solid vocational training are not given equal importance. **Societies have to accept the fact that a vocationally trained person is equally important as compared to someone with one or even two MBAs.**

It's surprising to me that we only have 20,000 students from all over India in Germany. Ideally, we should have at least two lakh students. Of them, 1.8 lakh should come back to India and 20,000 students could stay back in Germany because we need more trained people to fill vacant jobs.

PET bottles to nonwovens

Freudenberg is one of the largest recyclers of PET bottles in the world. They are shredded into flakes and processed to nonwovens, given a new life as headliners and are made into roof membranes or sound and thermal insulation in buildings. In Europe, the Freudenberg Performance Materials sites in Novedrate and Pisticci, Italy and Colmar, France process some 2.5 billion bottles a year. In Japan, the Japan Vilene Company Business Group also recycles PET bottles at its Oyama site. Every year over 57,000 tons of reyclate are made from pet bottles. **Freudenberg Performance Materials in India uses raw materials recycled from the PET bottles for manufacturing nonwovens and technical textiles.**

Credit: https://insights.basf.com/

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Saving Water in Chennai

In India, Gunasekaran Sivasailam started to think hard about water. The head of the Freudenberg Performance Materials site in Chennai, India, which also manufactures nonwovens, was worried about having a sufficient supply for production, as the city and its 12 million inhabitants generally consume ground water faster than it can be replenished by rain. As a result, the soil has become salty and, in some cases, sea water has been penetrating the aquifer.

Sivasailam Gunasekaran
MD, Freudenberg Performance Materials

Sivasailam and his team members analysed water circulation and usage at their sites and worked out optimal solutions. A project team tested various improvements and introduced a reverse osmosis process. **It reduced water consumption by 202 tons a year and significantly improved the quality of the treated water.**

This allowed him to recycle 100 percent of wastewater. The unit no longer needs 4.4 liters of water to produce a kilogram of textiles but only 2.7 liters. Another bonus: The solid particulate matter generated during the filtration process is sold to the cement industry, where it is used as fuel.

Clean drinking water is a valuable resource in many world regions. The Freudenberg Filtration Technologies Business Group produces a broad range of filter media for drinking water filtration, which helps to improve water quality by filtering out hazardous suspended particles.

Physiologically harmless raw material together with state-of-the-art production technology guarantee filter media that meet tough hygiene, efficiency and economic feasibility standards needed for water treatment. **Freudenberg is helping the growing world population with clear drinking water.**

Aditya To Crowdsource Funding for 'Suraksha Box'

BY SN Staff

The relevance of Suraksha box extends beyond the pandemic. It's a long-term and affordable solution to the challenge of effectively and quickly sanitizing vegetables and groceries for households and for the vegetable vendors

In the early days of Covid 19, **Aditya Pachpande**, the 14-year old student entrepreneur who was at home as his school moved to online classes observed his mother spending time and struggling to sanitize the vegetables and groceries being delivered home. Like other children, his first reaction or thought was how do I help my mother. It was then that he recalled reading somewhere about the power of UV light in destroying most known bacteria and viruses including the new coronavirus.

He set out to build a simple box that can be used at home with materials available at home like cardboard for the box, using etc. To his surprise the experiment worked and there has been no looking back since. Suraksha box, the name he coined for his invention now has a government of India (MC&I) patent published besides being approved and certified by CSIR-CMERI (ICMR- approved lab). It has been tested and certified to protect against viruses, bacteria, fungi including COVID-19. And for Aditya this was a red herring moment as it validated his own belief and mission which made him turn a social entrepreneur last year with **NextGenInnov8**, a non-profit venture. **Aditya is currently in Class 8 at Indus international school, Pune.**

Says Aditya, "Once the power of innovation is sparked in every child worldwide they will come up with creative ideas and solutions to problems faced by their families, communities and even global issues. Children just need the right guidance, resources and an ecosystem, to support that which is what am trying to do through NextGenInnov8. Have lots of plans in the years ahead to make that happen not just in India but beyond as well."

He adds, "I must thank my father for his unstinted belief and support in this which has been critical to all that I do. Despite running a large educational group he found the time to take me to different countries and different cities within India, for my talks. He has never stopped me whenever I have tried to do new things or experiments," he added.

Sandeep Pachpande, Aditya's father and Chairman, **ASM Group of Institutions**, said, "Aditya was driven and highly focused on certain things of interest to him beyond what his school demanded. It was his desire to pursue this path and am happy that he has been able to make so much progress and impact in such a short time. As parents, we have kept him focused on his studies as well in the meanwhile, teaching him how to balance both."

How Suraksha Box Works

The contents kept in the box are 360-degree sterilized by utilising UVC light in a controlled environment. The UVC light used has a range of 240nm which is optimal to destroy the RNA and DNA of most viruses. Bubble wrap aluminium is the material used to reflect UVC light and which makes it easy to clean as well. The boxes have since been used in dozens of vegetable markets, kirana stores, police stations, schools, colleges and salons in Mumbai and Pune to satisfactory results.

The relevance of Suraksha box extends beyond the pandemic. It's a long-term and affordable solution to the challenge of effectively and quickly sanitizing vegetables and groceries for households and for the vegetable vendors. **It's priced at Rs. 4999/- and is available on Amazon & www.adityapachpande.com among other places.**

Aditya is raising money to gift 15,100 Suraksha boxes to vegetable vendors, government schools and deserving households, with 1500+ delivered already for free. Recently his venture also partnered with leading crowd funding site **Fueladream** to raise funding for this initiative. Aditya says schools have been highly receptive to the idea. Much of the funding till now has come from ASM Group of Institutes, Indus International School, SNBP International School and The Kalyani School among others.

The real test will lie in how many people are willing to buy Suraksha Box for that price. Considering the big need for it, the biggest challenge will be how it can be scaled up. Perhaps he should come up with different sizes for different needs.

Incidentally, Indus School Pune, where Aditya studies, opened the **Indus Start Up School** in September 2020 to build a culture and mindset of entrepreneurship among the students. It's the first such initiative anywhere in the world. Students of all three Indus schools – Bangalore, Hyderabad and Pune – close to 3,000, will get an early head-start in entrepreneurship.

BOOKSHELF

The annual State of India's Environment 2021, was released jointly by over 60 environmentalists of India February 25, 2021.

The pandemic is a default template for every assessment; such has been its impact on our lives. As Sunita Narain, editor of Down to Earth, writes in her opening appraisal of the year just passed by: "The crisis has no precedent. But it is a result of our progressively worsening dystopian relationship with nature."

"Resetting our relationship with nature." This has become an expression of mea culpa in the age of Anthropocene.

This theme that runs through the report's 14 chapters: From the pandemic to sustainable development goals to poverty. From energy to rural development.

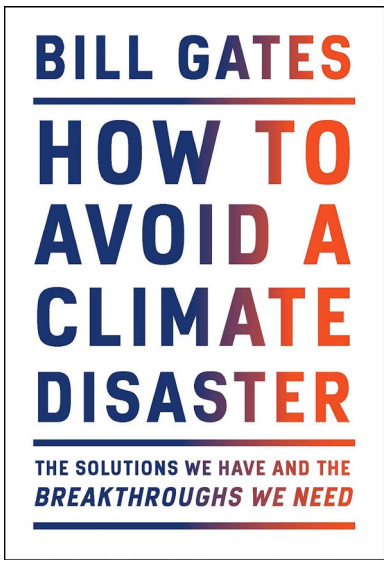
The report's special chapter on the pandemic points out:

- The world is going to face a pandemic like the current one more frequently. We know just 0.1 per cent of potential zoonoses. In other words, the world remains ignorant of 99.9 per cent of potential zoonotic viruses.
- The adult generation of 2040 would be stunted, with a lower human capital. This would be the toughest development challenge for the world due to the impacts of the pandemic.
- The pandemic has demonstrated another brutal reality: A crisis's impacts trickle faster to the poor. It is estimated that 12,000 more people would die every day due to hunger extended by the pandemic.

The chapter titled **Habitat**, researchers have elaborated on how the pandemic brought out aspects of unnoticed urban lives. It said: "While the government aims to build 11 million houses for the urban poor by 2022, it must ensure that their new addresses do not render work, health services and education inaccessible."

The report carries a special section on the state of the Indian states, particularly on their performance on Sustainable Development Goals (SDG). Only a decade away from meeting these globally committed development goals, India occupies 117th position among 192 countries on the progress list.

No state was found to be on track to meet all the SDGs by 2030.



Everything you need to know about avoiding the worst climate outcomes.

When I worked at Microsoft, it was always a thrill to see a product we'd been working on for years finally get released to the public. I'm feeling the same sense of anticipation today. My new book on climate change is available now online and in bookstores.

I wrote How to Avoid a Climate Disaster because I think we're at a crucial moment. I've seen exciting progress in the more than 15 years that I've been learning about energy and climate change. The cost of renewable energy from the sun and wind has dropped dramatically. There's more public support for taking big steps to avoid a climate disaster than ever before. And governments and companies around the world are setting ambitious goals for reducing emissions.

What we need now is a plan that turns all this momentum into practical steps to achieve our big goals. That's what How to Avoid a Climate Disasteris: a plan for eliminating greenhouse gas emissions.

I kept the jargon to a minimum because I wanted the book to be accessible to everyone who cares about this issue. I didn't assume that readers know anything about energy or climate change, though if you do, I hope it will deepen your understanding of this incredibly complex topic. I also included ways in which **everyone can contribute** — whether you're a political leader, an entrepreneur, an inventor, a voter, or an individual who wants to know how you can help.

The effort I founded called **Breakthrough Energy**, which started with a venture fund to invest in promising clean energy companies, has expanded to a network of philanthropic programs, investment funds, and advocacy efforts to accelerate energy innovation at every step. We'll be supporting great thinkers and cutting-edge technologies and businesses, as well as pushing for public- and private-sector policies that will speed up the clean energy transition. Over the coming weeks and months, we'll be turning the ideas in my book into action and trying to turn this plan into reality.

Below is an excerpt from the introduction, which gives you a sense of what the book is about and how I came to write it. I hope you'll check out the book, but much more important, I hope you'll do what you can to help us keep the planet livable for generations to come.

This book suggests a way forward, a series of steps we can take to give ourselves the best chance to avoid a climate disaster. It breaks down into five parts:

Why zero? In chapter 1, I'll explain more about why we need to get to zero, including what we know (and what we don't) about how rising temperatures will affect people around the world.

The bad news: Getting to zero will be really hard. Because every plan to achieve anything starts with a realistic assessment of the barriers that stand in your way, in chapter 2 we'll take a moment to consider the challenges we're up against.

How to have an informed conversation about climate change. In chapter 3, I'll cut through some of the confusing statistics you might have heard and share the handful of questions I keep in mind in every conversation I have about climate change. They have kept me from going wrong more times than I can count, and I hope they will do the same for you.

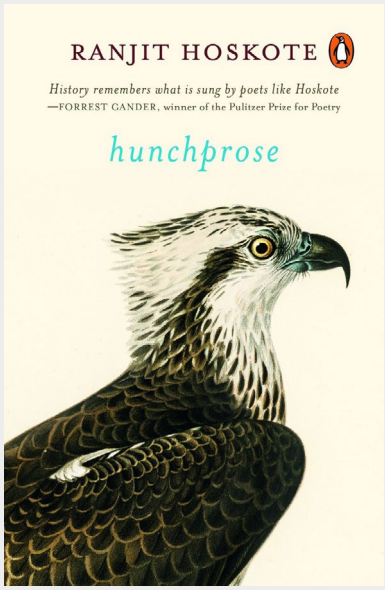
The good news: We can do it. In chapters 4 through 9, I'll break down the areas where today's technology can help and where we need breakthroughs. This will be the longest part of the book, because there's so much to cover. We have some solutions we need to deploy in a big way now, and we also need a lotof innovations to be developed and spread around the world in the next few decades.

Steps we can take now. I wrote this book because I see not just the problem of climate change; I also see an opportunity to solve it. That's not pie-in-the-sky optimism. We already have two of the three things you need to accomplish any major undertaking. First, we have ambition, thanks to the passion of a growing global movement led by young people who are deeply concerned about climate change. Second, we have big goals for solving the problem as more national and local leaders around the world commit to doing their part.

Now we need the third component: a concrete plan to achieve our goals.

Just as our ambitions have been driven by an appreciation for climate science, any practical plan for reducing emissions has to be driven by other disciplines: physics, chemistry, biology, engineering, political science, economics, finance, and more. So in the final chapters of this book, I'll propose a plan based on guidance I've gotten from experts in all these disciplines. In chapters 10 and 11, I'll focus on policies that governments can adopt; in chapter 12, I'll suggest steps that each of us can take to help the world get to zero. Whether you're a government leader, an entrepreneur, or a voter with a busy life and too little free time (or all of the above), there are things you can do to help avoid a climate disaster.

That's it. Let's get started.



What affirms our humanity, enduring beyond our barbarism? Where is home, in a world beleaguered by climate crisis, pandemic and genocide? **Hunchprose** is **Ranjit Hoskote**'s fierce, poignant testament to these urgencies.

The title of this dazzling new collection asserts poetry's claim to be heard above the buzz of data, to transform language, broken by history, into music. Vibrant with linguistic experiment, Hunchprose weaves unpredictable patterns, celebrates our plural selves. In the erasure of ancient scripts, the melting Arctic ice, a lion tamer's primal fear, we recognize vulnerability and rupture. A dancer's courage, a leather worker's revolutionary promise, a locksmith's passion for ruins inspire us to redeem ourselves through love, doubt, hope and dream.

Infused with wry humour, informed by the wisdom traditions, Hunchprose urges us to look at our world, and within ourselves, with renewed ardour. Ranjit Hoskote is a poet, cultural theorist and curator. His seven collections of poetry include *Vanishing Acts, Central Time and Jonahwhale*. He is also the author of *I, Lalla: The Poems of Lal Ded*, the editor of *Dom Moraes: Selected Poems* and a translator of the legendary Urdu poets Mir and Ghalib. Hoskote curated India's first-ever national pavilion at the Venice Biennale. He has received the Sahitya Akademi Golden Jubilee Award, the Sahitya Akademi Translation Award and the S.H. Raza Literature Award. His poems have been translated into German, Hindi, Bengali, Irish, Marathi, Swedish and Spanish.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