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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

Kerala and TN Top PAC's Sustainability Index

The 2021 Sustainability Index of the Bengaluru-based Public Affairs Centre hasn't thrown up any surprise compared to its scores in recent years. In its sixth edition, it has reinforced the fact that how States manage their 14 Sustainability Development Goals influences their overall governance rankings significantly.

Continued on next page

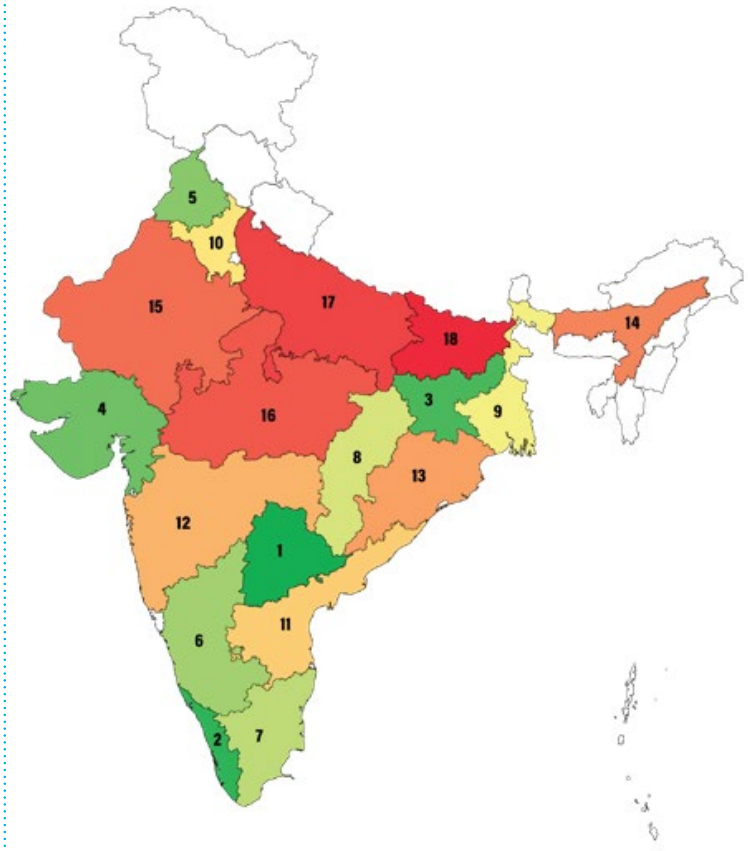
Why Switch to Green Laundry

Ambuja Cements' Clean Air Mission Helps 10,000 Farmers

In PAI 2021, PAC defined three significant pillars that embody Governance – Growth, Equity, and Sustainability. The Sustainability Pillar analyses the access to and usage of resources that has an impact on environment, economy and humankind. This pillar subsumes two themes and uses seven indicators to measure the effectiveness of government efforts with regard to Sustainability.

Heat Map - Large states

Top Performers- Telangana (1.380), Kerala (1.348) and Jharkhand (0.930)
Bottom Performers- Madhya Pradesh (-1.321), Uttar Pradesh (-1.521) and Bihar (-2.114)



Rank	Large States	Index
1	Telangana	1.380
2	Kerala	1.348
3	Jharkhand	0.930
4	Gujarat	0.805
5	Punjab	0.698
6	Karnataka	0.693
7	Tamil Nadu	0.673
8	Chhattisgarh	0.477
9	West Bengal	0.287
10	Haryana	-0.010
11	Andhra Pradesh	-0.101
12	Maharashtra	-0.201
13	Odisha	-0.556
14	Assam	-0.556
15	Rajasthan	-0.914
16	Madhya Pradesh	-1.321
17	Uttar Pradesh	-1.521
18	Bihar	-2.114

Public Affairs Index 2021

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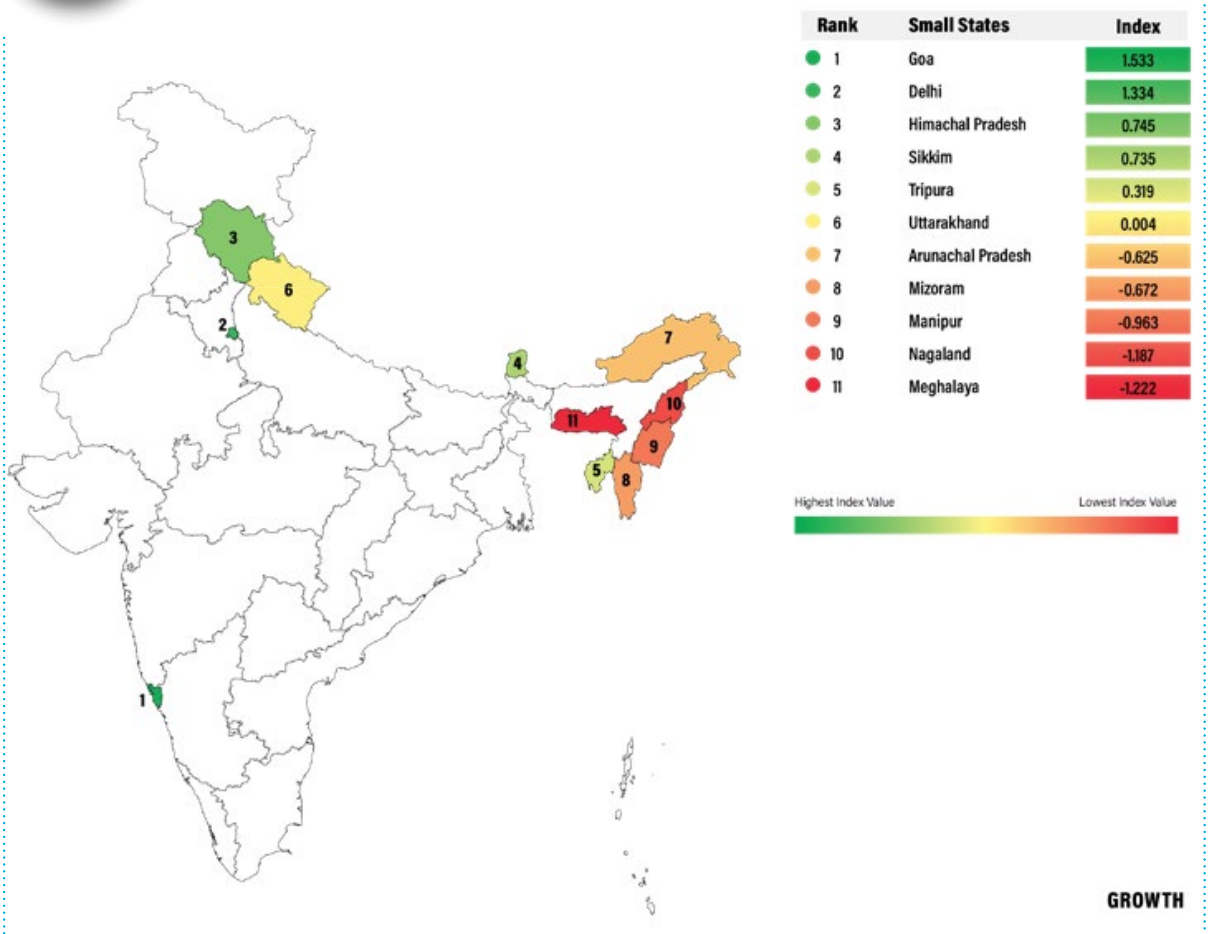
Key findings

- In the Large States category, the States positioned at 1st and 2nd rank are Kerala and Tamil Nadu, similar to last year.
- Chhattisgarh improved one place since last year.
- In line with the last year's sustainability score is the performance of the bottom performers West Bengal at 16th, Bihar at 17th and Uttar Pradesh at 18th rank respectively
- In the Small States category, toppers are Mizoram, Arunachal Pradesh and Goa.
- States placed at the bottom are Manipur, Uttarakhand and Delhi.
- Toppers in the Union Territory (UT) category are Puducherry, Jammu and Kashmir, Andaman and Nicobar Islands. The bottom performer in is Lakshadweep.

Heat Map - Small States

Top Performers- Goa (1.533), Delhi (1.334) and Himachal Pradesh (0.745)
Bottom Performers- Manipur (-0.963), Nagaland (-1.187) and Meghalaya (-1.222)



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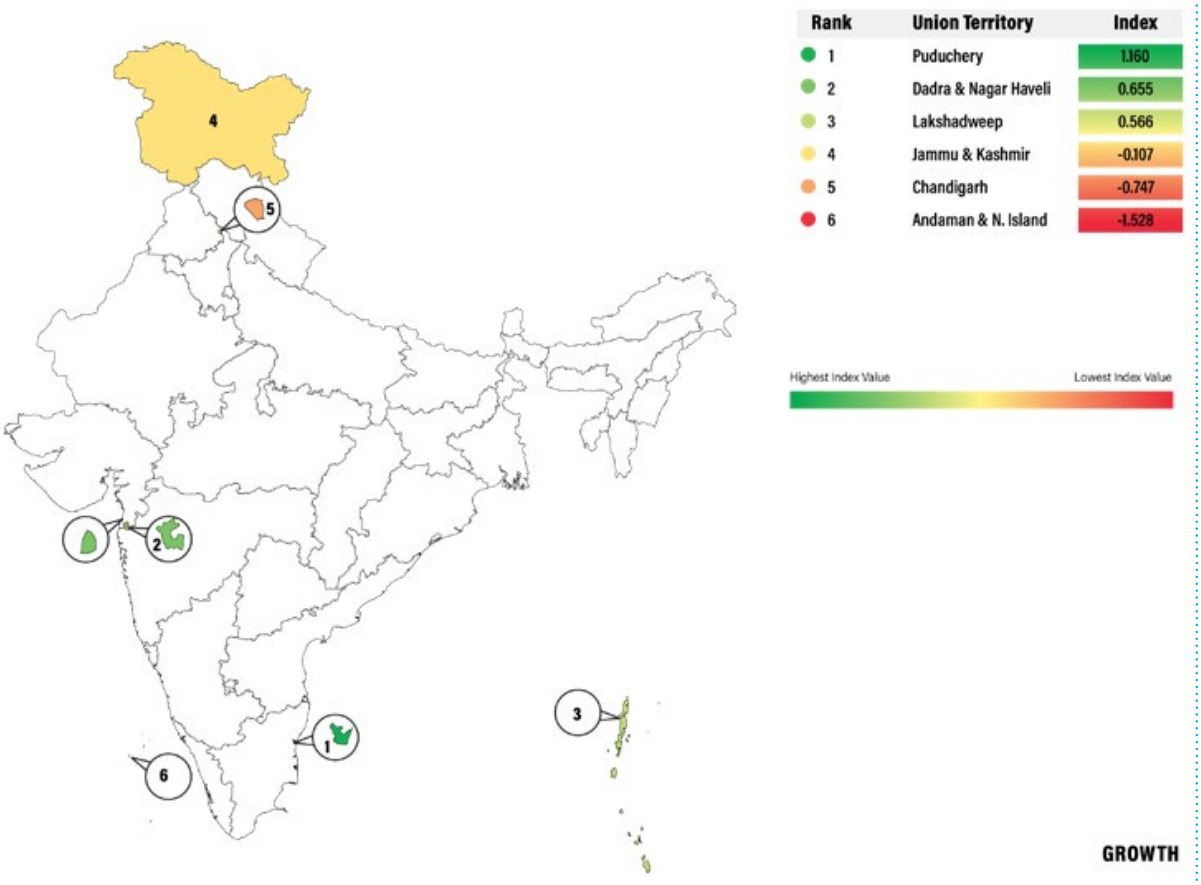
The PAI report notes that Sustainability Pillar does impact significantly in rankings of the States, especially Large States where the correlation coefficients are evidently very highly positive. For States and UTs to attain holistic development, they need to ensure ease of living through keeping in check the pollution levels and also do not ignore the factor of cleanliness through solid waste management.

https://pacindia.org/wp-content/uploads/2021/10/PACPAI2021SR.pdf

Heat Map - Union Territories

Top Performers- Puducherry (1.160), Dadra & Nagar Haveli and Daman and Diu (0.655) and Lakshadweep (0.566)
Bottom Performers- Jammu & Kashmir (-0.107), Chandigarh (-0.747) and Andaman & N. Island (-1.528)



Why Switch to Green Laundry

Five reasons why 'green' laundry pods are the perfect fit for an environment-conscious you

Laundry pods as a concept has been a hit with consumers. Compared to powder or liquid detergent laundry pods come in ready-to-use water-soluble pouches with correct dosage. This reduces wastage of detergent significantly. Over the years, these pods have also evolved to contain highly concentrated laundry detergents, softeners, and other related laundry products, enhancing the value proposition.

However, over time, and considering the evolved changes, particularly of the environment-conscious end-consumer needs, it is required that laundry pods assume a more eco-friendly identity.

Green laundry pods help in reducing the use of plastic

The harmful effects of plastic on our health and environment are widely known. In this context, 'green' laundry pods find relevance with an ability to reduce the use of plastic by as much as 47 percent.

Circular Economy-ready packaging

'Green' laundry pods come in packaging materials that are completely recyclable and thus are designed for a circular economy ecosystem.

Consumes less storage space

In an urban world where residential space is increasingly shrinking, 'green' laundry pods are designed in such a manner to consume 17 percent lesser space.

Helps in optimizing water usage

'Green' laundry pods reduce the need for water treatment to the extent that as high as 15.3 lakh litres of water can be saved annually by using them.

Reduction in carbon emission

It is estimated that there can be a yearly saving of 36 MT of CO_2 emissions from fuel for every 1 Lakh Household adoption to 'green' laundry pods.

All above calculations are based on fresh pack annual consumption of 1 lakh households. In India, end consumer awareness on matters related to environmental causes is rapidly increasing, and the onus is on ecosystem players to realign themselves for an eco-friendly tomorrow.

Ambuja Cements' Clean Air Mission Helps 10,000 Farmers

Ambuja Cements' clean air mission demonstrates how corporate funding can have multiple impact – clean air, higher farmer income, richer soil and better livelihood

The Ambuja Cement Foundation (ACF), the CSR arm of **Ambuja Cements** is facilitating farmers to sell their crop residue to the company. It collects crop residue from Farmer Producer Organizations (FPO) and uses it as alternative fuel resource. Under its agro-based livelihood program, ACF forms FPOs to enhance the productivity and profitability of all farmers.

This value chain routed via FPOs encourages farmers to gather the crop residue and produce biomass fuel for the company's plants. So far, 10,000 farmers have been covered through FPOs thereby facilitating long-term sustainability for farmers and their families.

Neeraj Akhoury, MD & CEO, Ambuja Cements, said, "Community well-being is deeply ingrained in Ambuja Cements' culture. Our efforts not only aim to enhance the socio-economic status of rural communities, they also aid in promoting sustainable agricultural practices."

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The company uses latest technology for Juliflora Biomass cutting and chopping. The technology was designed by farmer groups and fabricated at a local level. It helps farmers save on costs as it requires minimal maintenance. By purchasing biomass fuel for its plant operations, Ambuja Cements generates a multiplier effect by creating resources for farmers and farm labourers to earn from their waste and boost incomes.

Prahlad Baoria, a farmer, was able to improve his quality of life after joining Balaji Farmer Producer Company, a partner of ACF. He earns Rs. 30,000 additional income a month from this initiative. He was able to clear his debts and also employs more than 10 workers. He is now able to send his children to private schools and fund his wife's entrepreneurial dream by opening a cosmetic shop.

Ambuja Cements Ltd. is a member of Holcim, the global leader in innovative and sustainable building solutions. Among the leading cement companies in India with a capacity of 29.65 million tons, Ambuja Cement has five integrated cement manufacturing plants and eight cement grinding units across the country.

Register Now

Why Give Ramky Your Old Car

The climate crisis will need harsher and smarter policies for removing polluting older vehicles off Indian roads. The transport sector spews nearly a quarter of the total greenhouse gas into the air. The options for dealing with old vehicles are two - dump them in car graveyards like America does, or strip them part by part and extract what's valuable like metals, rubber, plastic etc.

India is reported to have more than 2.5 crore vehicles that need to be scrapped immediately. To begin this process, the Government of India announced a new End of Life Vehicle policy in August 2021. Analysts have given mixed response to the policy. Some think it is too weak to address a big problem. Some believe the policy, if communicated well, offers attractive incentives for owners to replace their old vehicles. **Masood Mallick**, MD of Ramky Enviro Engineers Ltd, belongs to the second lot.

Ramky is pioneering India's efforts at extracting value out of scrapped vehicles. The company announced that it is setting up 26 facilities across India that can strip down old vehicles and recover metals and other valuable resources. Mr. Mallick seeks fiscal and GST support from the government for his company's ambitious plans to be viable.

In a free-wheeling chat with **Benedict Paramanand**, Editor of **SustainabilityNext**, Mr. Mallick delved deep into the dynamics of the new business opportunity. More than that, he is excited about the positive environmental impact as well as the circular economy benefits for everyone in the ecosystem. Edited excerpts:

Your View on the GOI's New ELV Policy

I think it's a very progressive policy. It's the first time there is a policy that speaks very clearly about vehicle scrappage and how to extract resources from it. I think the policy is not understood well, yet. Someone needs to articulate it better.

Without making much noise the policy addresses opportunities lying idle inside scraps.

If India can scientifically recover value from old rusting scrap vehicles, it will have a significant impact on the environment. India can mine less by using steel or aluminium recovered from the

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scraps. India imports 1.5 million tons of scrap a year for its mills even when it is sitting on mounds of old vehicles all over the country. If executed well India can reduce its import bill significantly and save on foreign exchange outflow.

There is an opportunity here, and there's also a need. When you bring them together it can honestly make a big change. I think this is truly a forward-looking policy. You have the fleet that has aged and needs to be renewed. This is an opportunity to do it responsibly. You can get new vehicles on the road that are nicer, are safer and cleaner.

Stick not long enough, but the carrot is good

As an environmental student I agree that the stick is not long enough to ensure compliance to the new scrappage policy. Is the carrot big enough? Incentives on the registration fee is good. With 25% incentive on lifetime road tax and 5% or 6% discount on the value of the new vehicle are attractive. Finally, if you don't want to buy a new vehicle, you can sell that certificate, it's tradable.

There is a need for an ecosystem to support the translation of the policy intent into reality. And two areas where a lot of work needs to be done – one by the government and two by the private sector. We need a large number of automated testing facilities They have to certify vehicles really professionally.

We also need ecosystem around the collection, recycling and then putting the resource that we recover to responsible use. **This is where people like us come in. We need hundreds of players like us in this space who will help collect these vehicles, aggregate and recycle them and take them to steel, aluminium, copper and plastic recovery facilities. There are plenty of circularity opportunities.**

Masood Mallick
MD of Ramky Enviro Engineers

What Will These Facilities Really Do?

They will take the vehicles apart in a safe mechanical way especially oil, chemical substances, brake pads, potentially hazardous friction material, rubber etc. It is done using automated processes, hydraulic machines, cutters shears. We have to ensure that the fumes are being sucked into a filter system. Various such pollution control precautions are being taken.

Now to make this work, you know you need to have a large number of vehicles coming in. Our plants have a capacity to deconstruct 100 vehicles a day. And to put in so much capital and technology and to ensure there is no pollution we need scale, otherwise, we will lose money.

We have about one crore vehicles facing end of life today. Totally, it is estimated that India has 2.5 crore crore vehicles ready for scrapping. Even if it does not make a lot of commercial sense in the first few years, there is a big opportunity out there. **It is better to recover resources than mine them afresh.**

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Who Will Pay for the Services

I'm a firm believer of the 'polluter pays' concept Who is the polluter here? Is it the person who uses the car? Is it the manufacturer? Or is it both? If you look at it from a philosophical standpoint, anyone who benefits from this activity should have the responsibility for the consequences.

Many original equipment manufacturers (OEMs) and auto companies are in touch with us because they want to see this ecosystem come up.

How Can Single Owners Take Advantage?

We are going to set up a technology platform and an application. If an owner comes and says he wants to get rid of his old vehicle and wants to do it responsibly, we should be ready to offer this service. **It can be done both as a B2B and B2C play.**

Lessons from Developed Markets

The Europeans are doing it the best. The US is still crushing old cars.

Will Auto Get Into Scrap Business if Lucrative?

I don't think they will get into the business of recovery of steel or copper or plastic. That's not their core business. They will prefer a different player to do it for them. They will be happy that we are there so that fleet renewal could be quicker.

What's Your Revenue Model

Our revenue will come from essentially selling off the recovered materials. Until we reach a particular scale, our revenues will be low, and costs will be high. We basically will have to wait for scale to build so that these facilities become viable.

Are Recovered Steel Poorer than New Steel?

No, recovered steel is of very high-quality.

Are Government Incentives Attractive?

We are hoping so. We are hoping that through market-based instruments we can make it work to help make transition quicker and efficient.

We have a wish list – some capital subsidy and support through lower custom duty on some imported items will certainly help. We also want GST subsidy to promote the use of recycled materials. **We think if the government pushes recycled materials, even a little bit this industry can take off.**

Exchange for Recycled Materials?

Europe has had many material exchanges for recycled materials. We see that eventually getting

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formed here. But for this to work we need at least 300 players. In the long term I see all of these recovered/recycled commodities being traded to enable circular economy to work well.

Carbon Offsets Benefits?

Yes, carbon offsets are possible. If I just take the aluminium example, per tonne of aluminium spews out 17 tonnes of carbon. When you use recycled aluminium like the one that we will be offering, it will be only 0.3 tonnes of carbon per tonne of aluminium. There is a significant upside.

How do we monetize it? I don't know that yet. I don't have the foresight for that yet. The crystal ball that will allow me to predict the tradable value of carbon? If that happens, instead of losing money in the first five years, I might lose money only in the first three years.

We will be auditing the whole process stringently. Because if there is that opportunity to sell that material along with the accumulated sort of sustainability benefit, then we want the audit trail to certify that. So from a technical standpoint, we are ready but in our financial models, we're not factoring any value of carbon at this moment.

Cost of Setting Up Your Units

Depending on the location each plant can cost from Rs. 30 to 50 crores. But we think once we see scale investment cost will drop. The key is to localise our expertise. Localization is extremely important and therefore we are doing our best to leverage technology, but make it in India. And I think that is the balance that we're trying to maintain, which is sourced technology from the best in the world, but localize it and build that in India.

Now our demand for this equipment is significant and therefore that is an incentive for foreign companies to localize fabrication or the assembly. We want to minimize import. And typically beyond the first few such plants, we don't want to import.

Leading European auto majors are also engaging with us on this aspect of technology because it's part of their sustainability program. And it's good for them, right? I mean, they don't have to worry about doing it, somebody is doing it for them so they can sort of leverage that, which forms some of these potential partners, as well.

How About Learning from the Chinese

Two different types of lines exist in China. Some of the Chinese are going down the American route – the whole body compaction route. We don't believe in that. But some Chinese facilities are very much like European facilities where every component is taken apart and is separately de-polluted. That is the philosophy that we are aligned with, and **I think what we need to learn from and understand from China is doing it at scale.** We have been researching this space for several years now. There is a reasonable body of work already. I am pretty sure whatever I'm saying to you right now, a year from now I will have better insights because obviously, we would have learnt more, we would have known more, and five years hence you know, maybe we will be doing things even better

Call to End 'Forced Labor' in China at COP 26

Freedom United, which claims to be the world's largest community dedicated to ending human trafficking and modern slavery, has raised the issue of forced labor in solar panel manufacturing at the COP 26. It says, everyone who has been importing these panels, are complicit.

It has started a signature campaign to raise this issue at the climate change meet of global leaders at Glasgow, UK, in the first week of November 2021. It said, "While we understand that time is of the essence, we are also keenly aware that modern slavery exists in "clean" energy supply chains."

In its campaign post, Freedom United wrote: "In May 2021, through the Coalition, we released an academic report conducted by researchers at Sheffield Hallam University that revealed the shocking fact that almost the entire global solar panel industry is implicated in the Uyghur forced labor system. Almost half of the world's solar-grade polysilicon supply, a primary material in solar panel production, is sourced from the Uyghur Region. Further, the world's four largest solar panel suppliers all source polysilicon from manufactures implicated in the Uyghur forced labor system."

It added, "We have launched a **new action** for you to tell world leaders that clean energy must be free of forced labor."

The **forced labor** of Uyghurs and other people from Turkic or mainly Muslim ethnic groups has become a significant part of the Chinese economy. A complex system of buying and selling their labor has developed, with many brokers and local officials advertising "government sponsored workers" online.

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Freedom United has also said that "Countless Western companies are also profiting from this system of forced labor in their supply chains. Over 20% of the global apparel's cotton supply is grown in **Uyghur** Region, with 84% of China's supply grown in the province. Recent reports implicate at least 83 companies, in numerous different industries, in profiting from the forced labor.

Tim Cook, CEO of Apple Inc. told US Congress in 2020 that "forced labor is abhorrent," several current Apple suppliers operating in China have been implicated in the Uyghur forced labor system. "Apple keeps saying it has "zero tolerance" for forced labor so why do they continue to work with companies implicated in modern slavery?" Freedom United asked in the campaign note.

Through garment supply chains, the entire fashion industry, including products sold by Western brands, are potentially tainted. We are calling on leading brands and retailers to ensure that they are not supporting or benefiting from this pervasive and extensive system of forced labor.

The Chinese government has defended the camps where cotton and garments are produced as voluntary "vocational training centers" that serve to provide professional opportunities and eliminate extremism. "But these stories are just some among the mounting evidence that reveal this system of modern slavery for what it is." The coalition is happy that there is a growing movement calling for these changes. "Now we have ample evidence to argue for it. Some officials in the U.S. government and around the world have already started calling for laws banning imports from the Uyghur Region. Some companies have cut ties with their factories in the Uyghur Region, while others have pledged to investigate their supply chains. Let's take advantage of this momentum and use our voice as civil society to cement real change."

Textile Sector Will Make it Worse for the Planet

A cKinetics study finds that greenhouse gas emissions from the textile and apparel sector will not come down despite claims by leading producers. In fact, it will reach nearly 10% of GHG emissions by 2030.

Even as the COP 26 meeting got underway early November 2021 in Glasgow it's becoming clear that emissions from the textile goods and clothing is going to go up significantly. According to the study, "Increasing consumer demand for textile goods and clothing as well as increasing use of polyester are the factors contributing most to the increase."

The study notes that currently this sector generate 2.5 billion tons of greenhouse gas emissions annually. This represents 7.25% of total man-made emissions presently and is expected to reach 9.5% by 2030.

The sustainability advisory firm's findings were presented in the **Briefing of the Textile and Apparel Sector.** The study aims to identify solutions to reduce emissions and provide a framework for analyzing the entire production value chain. "It brings granularity on the key levers to move."

Rekha Rawat, associate director of the Sustainable Industries practice at cKinetics notes that the textile sector employs over 400 million people globally and its highest impact is in emerging economies.

The briefing finds that 165 companies across the globe and across the production value-chain (from fiber all the way to product) generate and influence 608 million tons of greenhouse gas emissions (or about 24% of the sector's emissions).

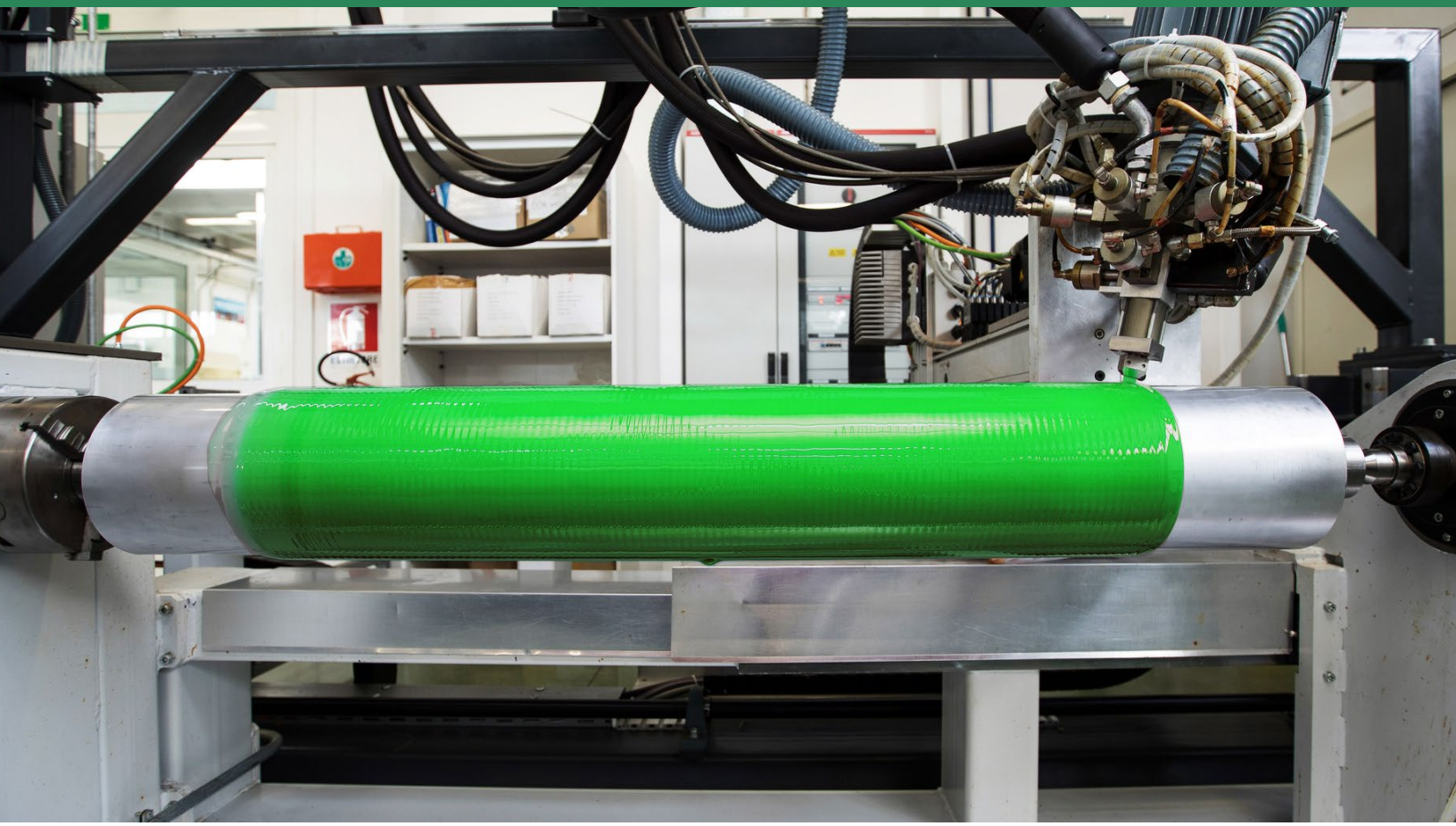
In the last few years, 56 of the companies have set climate goals and shared details on them. "However, these goals are not sufficient as per the analysis and more companies would have to step up."

Hard to abate?

Global GHG emissions level increased by 26 % in the last decade whereas the GHG emissions level due to textile sector increase by 42% in the last decade.

In the upcoming 'decisive' decade of the climate change fight, the global emissions are expected to increase by 5% while the emissions due to textile sector are expected to increase by 30% during the same time period.

Textile and Apparel sector contributed to 5.23% of total global GHG emissions in 2010 which increased to 7.25% in 2020; and expected to reach 9.5% by 2030.



LANXESS Launches Green Plastic

In a significant breakthrough, LANXESS has launched a 100% bio-based plastic material made from polylactic acid and flax fabrics. This high-performance plastic for the automotive industry contains more than 90% sustainable raw materials.

LANXESS is a specialty chemicals company. It is increasingly using bio-based or recycled raw materials in its plastics production. A new variant of the composite Tepex is 100% based on the biological raw materials flax and polylactic acid. "We have combined fabrics made from the natural flax fibers with bio-based polylactic acid as a matrix material and thereby developed a composite manufactured entirely from natural resources. We are now able to produce it to a level of quality suitable for large-scale production," Stefan Seidel, head of Tepex Research and Development at LANXESS said recently.

The material is suitable for use in sports articles, in the production of automotive interior parts and in electronics for case components. LANXESS produces the composite at its site in Brilon, Germany.

Tepex can be recycled completely. After its use, the product can be shredded and easily processed into new plastic.

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LANXESS also relies on sustainable raw materials for its Durethan brand polyamide-6 plastics. In the latest product, 92% of the raw materials have been replaced by sustainable alternatives; the long-term plan is to increase the proportion to 100 percent.

The sustainable origin of the raw materials is certified according to the rules of ISCC Plus ("International Sustainability and Carbon Certification") using the mass balance approach. This method compares the quantities of raw materials used with the quantities of products produced and creates an accounting link between input and output, similar to the purchase of green power.

In the production of the high-performance plastic, LANXESS uses "green" cyclohexane from sustainable sources such as rapeseed oil or other biomass as raw material. For the supply of "green" cyclohexane LANXESS has entered into a strategic cooperation with energy company bp. The high-performance plastic is also reinforced with 60 percent by weight of glass fibers recycled from industrial glass waste.

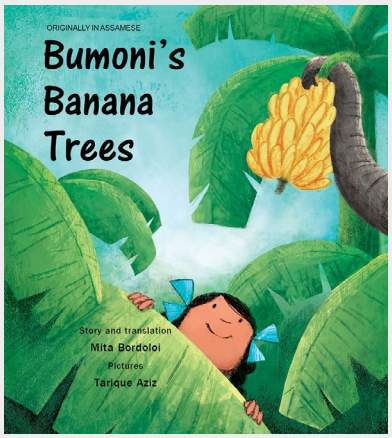
The alternative raw materials are chemically identical to their equivalents of fossil origin. Therefore, the plastic has the same properties as its fossil-based counterpart. It was developed at the LANXESS site in Dormagen, Germany, and is manufactured at the site in Krefeld, Germany.

"A climate-neutral future can only become a reality if we increasingly use sustainable products," says Frederique van Baarle, Head of the High Performance Materials business unit at LANXESS.

New "Scopeblue" brand label

In the future, LANXESS will add "Scopeblue" to its most sustainable products. The brand label marks products that either consist of at least 50 percent circular (recycled or biobased) raw materials or whose carbon footprint is at least 50 percent lower than the one of conventional products. LANXESS is a leading specialty chemicals company with sales of EUR 6.1 billion in 2020. The company currently has about 14,800 employees in 33 countries. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World and Europe) and FTSE4Good.

BOOKSHELF



Making Room for Elephants

By Archana Natraj

Little Bumoni lives across the river from the Kaziranga National Park. She loves eating bananas and her backyard is bursting with banana trees. Every part of this amazing plant finds its way into her life – the stems are used to make boats and bowls, the blossoms are cooked into curry and the leaves are turned into biodegradable plates that are later fed to the cows! But one day, a herd of wild elephants barge in from the forest, eat all the bananas and trample the plants. As it becomes a daily intrusion, the worried family scrambles for ways to stop the plunder. When Bumoni finds a way to repel the elephants, the family rejoices and sleeps peacefully. However, it dawns upon kind little Bumoni that she has not solved the problem but simply diverted it. What will the elephants eat now?

Through **Bumoni's Banana Trees**, published by **Tulika** and originally written in Assamese, author Mita Bordoloi speaks volumes on understanding the consequences of wildlife habitat loss and the paramount need to coexist in harmony with the natural world. Tarique Aziz's delightful illustrations add a special, affectionate touch to this tale. The vivid sunset illustration showing the animals of the national park, with the one horned rhino, hoolocks and herons is a treasure! However, the most heartwarming bit about this book is that it's based on a true story.

Human-elephant conflicts are extremely common in India. With its large elephant population, Assam is especially vulnerable. Every year, several elephants fall victim to deterrents like arrows and electric fences. The newspapers are full of grizzly tales of injured or dead elephants. Meanwhile, the perspective of local people usually goes unreported. Yet, solutions are being found on the ground and this endearing and inspiring story makes one such formidable effort come alive for nature lovers of all ages.

Also available in Hindi, Tamil, Malayalam, Kannada, Telugu, Marathi, Gujarati, Bengali and Assamese

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