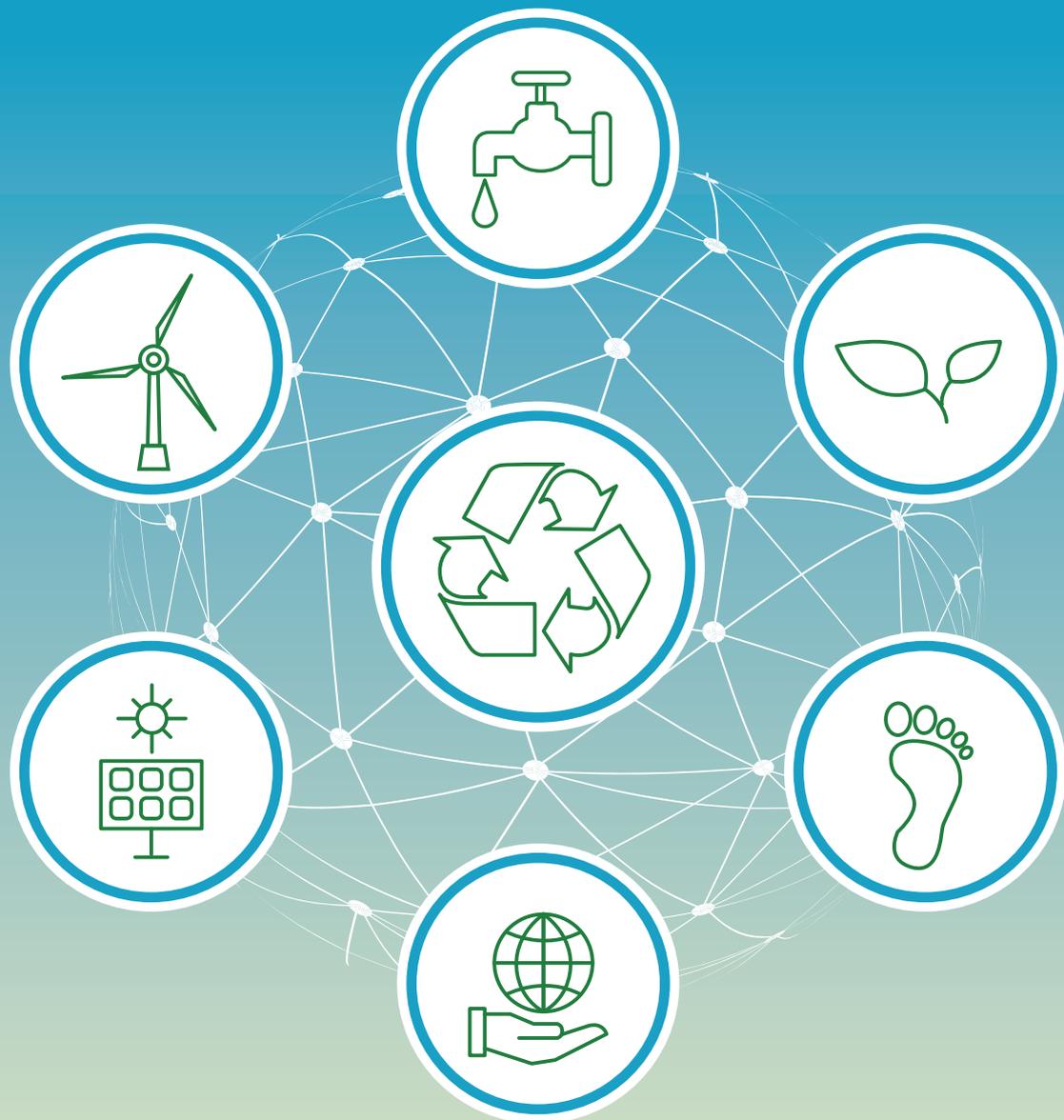




SASKEN

Sasken Environmental Sustainability Initiatives 2022-23





About Sasken

Sasken is a pioneer in Product Engineering and Digital Transformation delivering concept-to-market and chip-to-cognition R&D solutions to customers across the semiconductor, automotive, industrial, consumer electronics, enterprise devices, satellite communications, telecom, and transportation domains. Through the last thirty years, Sasken's deep engineering capabilities and technology patents have helped transform over a hundred Fortune 500 clients and powered more than a billion digital devices from its state-of-the-art facilities in India, Finland, Germany, and Japan. Sasken has always been at the forefront of technology in the cellular modem, radio access network, and satellite domains, more recently delivering state-of-the-art solutions to its automotive Tier 1 and OEM customers in the IVI, body electronics, instrument cluster, ADAS, autonomous vehicles, V2X, and telematics domains. Sasken's investments in technology and innovation have continued to benefit its customers. Sasken has been listed on the National Stock Exchange and Bombay Stock Exchange Ltd., Mumbai, India, since 2005.

Sasken's solutions are backed by CMMI-DEV-V2.0-ML3, ISO 9001 (quality), ISO/IEC 27001 (information security), and ISO/IEC 27701 (privacy) certifications. Sasken's proprietary quality management system strengthens its business offerings and ensures client satisfaction. Sasken's commitment to the environment, health, and safety is backed by its ISO 14001 (Environment) certification. Sasken is compliant with the ISO 26262 Road Vehicles-Functional Safety standard for the management of functional safety, software product development, and supporting processes, and our quality management systems are compliant with the Automotive SPICE standard.





We need to take a long-term view when it comes to using fragile natural and environmental resources. We must pass on a world that is economically, socially, and environmentally better than what we inherited for generations to come. Our values and beliefs enshrine our commitment to adhere to pro-environmental principles. Since our inception, we have pioneered, or readily adopted, and promoted 'environmentally sustainable' practices.

We have a core group called 'Prakriti,' who have made it a point to implement the ideology of embracing eco-friendly practices by all Sasians. I take this opportunity to promise that I will wholeheartedly support our sustainability initiatives. I invite all fellow Sasians to renew their pledge to embrace a culture that is committed to helping our natural environment flourish.



As a responsible corporate citizen, Sasken is committed to creating a sustainable future for all. We firmly believe that combining our expertise in cutting-edge technology with our unwavering commitment to ESG principles will help us build a better future for the world we share.

Our efforts are driven by our commitment to the environment, health, and safety. We are constantly striving to become one of the most sustainable organizations in India by leveraging technology to solve underserved problems and embracing eco-friendly practices. We value transparency and are dedicated to reporting our progress in ESG through our Business Responsibility Report and compliance with various international standards. I firmly believe that leaders who prioritize ESG and sustainability within their organizations not only enhance their bottom line, but they also build a better world for future generations.



Rajiv C Mody

Chairperson & Managing Director
Sasken Technologies Limited



Abhijit Kabra

Chief Executive Officer
Sasken Technologies Limited



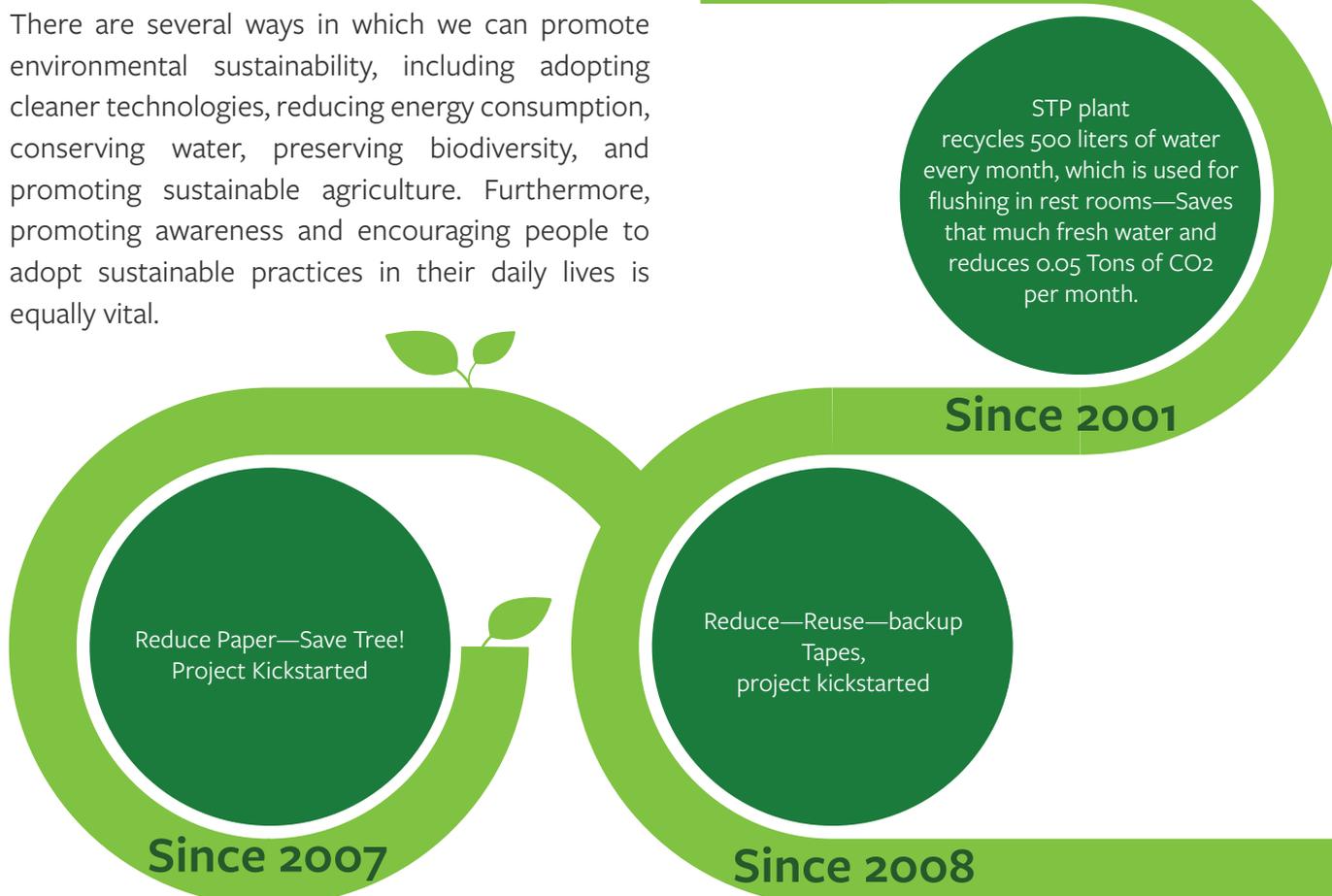
As we encounter a range of significant environmental challenges, it has become increasingly clear that environmental sustainability is a vital concern impacting us all. Factors such as deforestation, climate change, and pollution threaten the health of our planet and all those who rely upon it. Therefore, it is even more crucial to adopt sustainable practices to decrease our impact on the environment, ensuring that future generations inherit a livable planet.

Environmental sustainability involves making informed decisions that balance social, economic, and environmental factors and entails moving away from non-renewable resources, efficiently utilizing resources, and reducing pollution and waste. Achieving environmental sustainability requires a shift in our mindset and practices, and it requires the participation of all individuals, organizations, and governments.

There are several ways in which we can promote environmental sustainability, including adopting cleaner technologies, reducing energy consumption, conserving water, preserving biodiversity, and promoting sustainable agriculture. Furthermore, promoting awareness and encouraging people to adopt sustainable practices in their daily lives is equally vital.

However, achieving environmental sustainability requires collective effort and a willingness to modify our behaviors and practices. It also requires significant investments. At Sasken, in line with the vision of our Chairperson & Managing Director, we have taken various small and simple steps to reduce environmental pollution, minimize the factors that adversely affect the environment, and contribute our share towards ecological sustainability. At every step of our work process, we continually evaluate the extent to which that process impacts our carbon footprint, always striving to do better. We strongly believe there is plenty of scope for improvement and promise to do our best!

Milestones At Sasken



Since 2011

Purchase orders converted to e-purchase orders sans printing.

Extending the life of desktops and laptops, donate and support underprivileged schools in the remote villages.

Since 2012

A mandatory e-learning module on environmental care has been launched. Train, educate Motivate is the mantra to drive the initiatives on environment.

250 tube lights in the two vehicles Parking floors are completely converted into LED lights, lit through the roof-top DC-Solar plant.

Since 2013

2015

Sasken campus is now a Plastic-free Zone.

Reduction in paper and plastic usage - Removal of paper cups and plastic stirrers from café and pantry operation-, saves 2.1Ton CO₂ per month and makes it almost a zero-waste pantry

Since 2016

Started a new initiative of Seed Ball making and rolling with the commitment of making and rolling at least 5000 seed balls every year.

2016

Starting organic farming on company-owned land, providing organic vegetables to employees, and protecting soil erosion and contamination

Since 2016

Converted common areas into LED lighting as a first step towards converting CFL to LED.

2017

Converted 80% of the electricity consumption on campus to renewable energy sources.

Since 2018

Set up an RO plant to ensure the reduction of CO₂ and the elimination of plastic water bottles.

Since 2019

Bio-Gas Plant to treat wet waste in-house in order to minimize land contamination and air pollution.

Since 2019

A rainwater harvesting project was completed to recharge 6100 KL of water per year, which is 78% of Sasken's annual water requirement.

Since 2020

An E-Waste Collection Drive was organised for the Amarjyoti Layout residents with the help of the Sasken Prakriti team & NGO EnSyed.

2019

E-waste donation: 1100 tube lights were donated to an NGO. The light fittings were utilised for restoration work across 106 schools in two districts.

2020

2021

6 benches made of 50 kg of plastic waste & 5 benches made using 25 kg of plastic waste were received. We diverted 550 kg of plastic from going to landfills.

CSR

Women Empowerment: Sasken helps semi-literate, marginalized 10 lakhs plus women of SEWA (Self Employed Women Association), and entrepreneurs with app-based financial management.

Solar lighting project for Belagavadi village (Karnataka state): lighting of all 250 houses in the village with rooftop DC -Solar

Since 2014

Since 2015

1.2 Tonner Dry leaf composting unit setup in Domlur ward, ensuring no open area burning of dry leaf in the ward area.

Initiatives Taken for the Community

Education (Scholastic Awards): Partnering with NGO Guardians of Dreams, Sasken is supporting 100 to 150 meritorious students each year from shelter homes with Rs 25,000 each for pursuing their higher education.

Since 2018

Since 2018

Healthcare: Partnering with Baptist Hospital, Sasken set up a center for children with Neuro-Developmental Disabilities (NDD) to prevent blindness among the rural poor by providing ophthalmology equipment.

2019

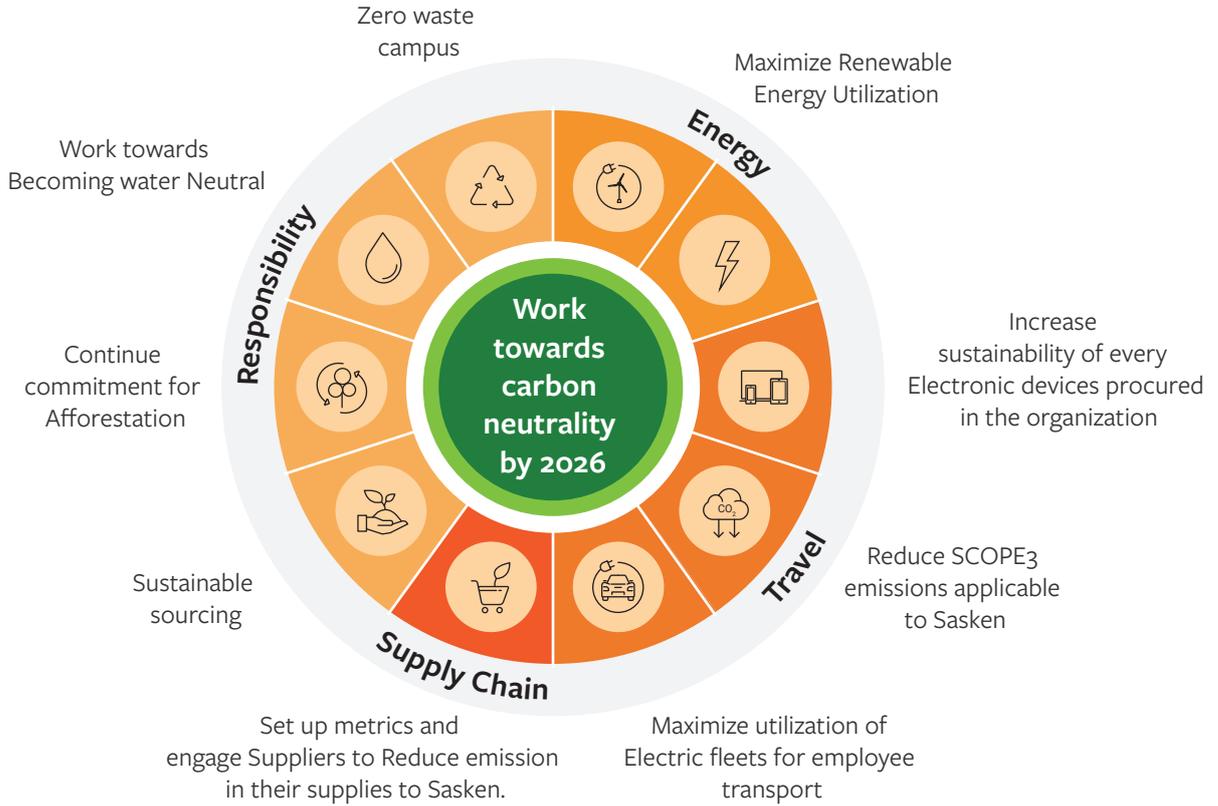
While we add new initiatives every year, each of the above programs has sustained and improved year after year, and we are seeing tremendous process improvement and increased benefits to the organization as well as to society.

A detailed environmental sustainability report for previous years can be accessed at <https://www.sasken.com/sustainability>



Environment Sustainability | Our Approach

Sasken has a long-term commitment to environmental sustainability, with a focus on reducing our own environmental impacts. We have a high ambition goal to reach Carbon Neutrality by the year 2026.



OUR COMMITMENTS

Achieve carbon neutrality by the year 2026 for our India operations

Become water-positive for our Bangalore operation by the year 2027

Maintain zero-waste campus status for the corporate head

KEY 2023 ACHIEVEMENTS

80%
of our electricity comes from renewable sources

99%
of our employees are covered by Global Environmental Management ISO 14001 training



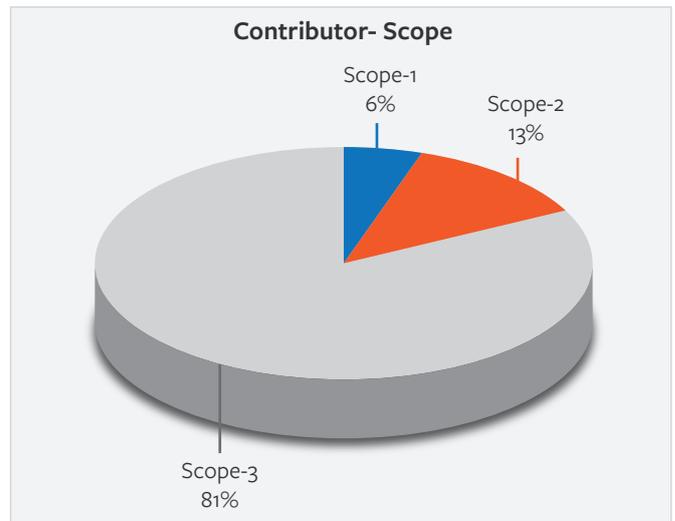
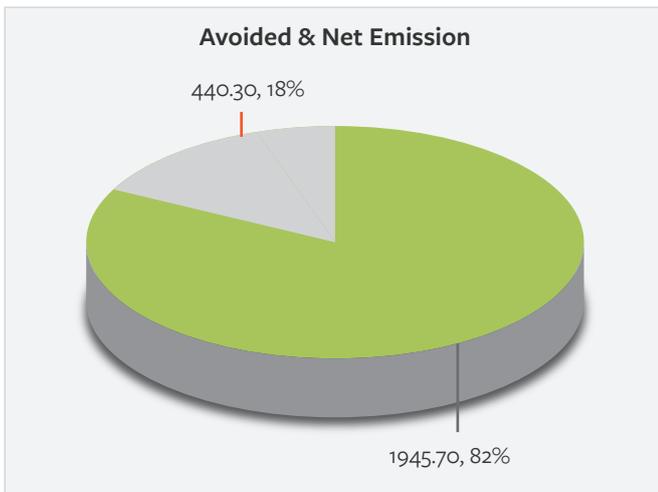
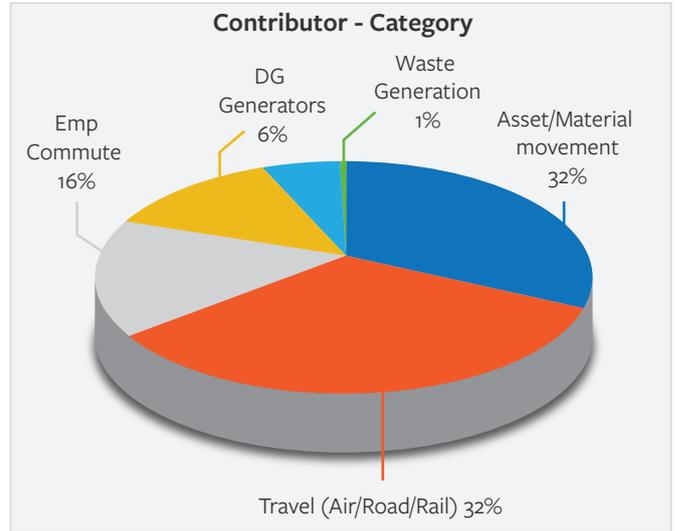
Energy Consumption & Carbon Footprint

Our energy needs were fulfilled by using 80% renewable energy (wind energy) for FY 22-23, which helped offset 1748 Tons of CO₂ in the environment.

Ever since the hybrid work model was initiated, the carbon footprint of Sasken has been reduced by 87% compared to the base year 2019.

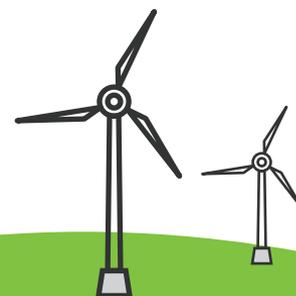
- The total emission from April 22 to March 23 could have been 2386
- Avoided emissions due to renewable energy usage and green projects: 1945.7 Tons

Net Emission - 440.30 tons.



Total Emissions down by
↓ 87%
 vs 2018-19.

	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23
Annual Carbon Emission (Tons)	3416	996	-52	297	440
Reduction in % compared to base year 18-19	0%	71%	102%	91%	87%



Reduce, Reuse, Recycle

A unique initiative of donating plastic waste generated from chip and biscuit packets, chocolate wrappers, etc. to Eco-khaari for upcycling into new products started. We donated 102 KG of such waste in FY 22-23.



Sasken has partnered with EcoKaari-Humanising Fashion, a social enterprise based in Pune (India), to help conserve the environment by UPCYCLING non-biodegradable and difficult-to-recycle plastic bags, grocery bags, multi-layered wrappers of cookies and chips, glittery gift wraps, and old audio/video cassette tapes into beautiful handcrafted daily utility items such as bags and accessories, home decor, and office products.

We will be donating to them the plastic waste generated from our cafeteria every month to contribute to diverting plastic waste from landfills.

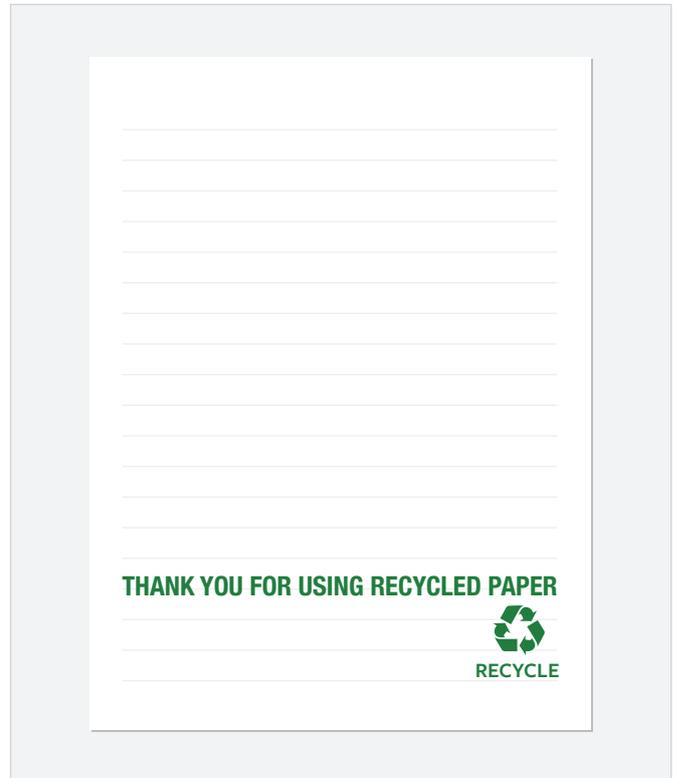


We urge Sasians working from the office to segregate plastic waste and put it in "Plastic-Waste-Bins" kept in the cafeteria and various floors.



Reuse - Recycle

Sasken donated 1.8 Tons of paper waste collected from hand wash areas (tissue paper), cardboard box waste, printer paper waste, etc. to a paper recycler called "Khadi-GramaUdyog" in Bangalore. In return, we collected 400 notepads made of recycled paper!




Donated refurbished desktops (156) and laptops (63) which have extended the life of the asset by at least 3 more years and, in turn, have helped more than 20 underprivileged schools in the interior part of Karnataka.



The donation of 93 light fittings and 17 furniture items under our reuse theme has also helped remote schools.



Water Conservation

Sasken Bangalore campus has a fully functional wastewater (sewage) treatment plant, which helps recycle the wastewater and save fresh water.

Our Rainwater Harvesting System helps recharge the groundwater every monsoon.

When we stop using plastic water bottles, we are also halting the need for production, packaging, and transportation for delivery, all of which take great amounts of energy and resources. Call it a ripple effect! On the surface, it may seem like a small effort, but enough of these types of initiatives can create meaningful change.



Water Recycled

Total water recycled during FY 22-23
3416 KL
Our corporate campus is a zero-liquid discharge facility.



Water Recharged

Total water recharged during FY 22-23
6000 KL.



Upcycling Of Tetra Pak Wastes

Billions of Tons of post-consumer Tetra Pak cartons are discarded annually as land and ocean waste, creating significant environmental problems and resource losses. While there is increased awareness in terms of the need for recycling such materials, we at Sasken always believe in conserving natural resources and minimizing the use of virgin materials, thus helping the environment in various ways.



Tetra Pak Recycled

We upcycled 550 KG of tetra pack waste to make 11 benches for the reception lobby in the corporate office.

That's almost 6,000 tetra paks per bench.



Sustainable Printing

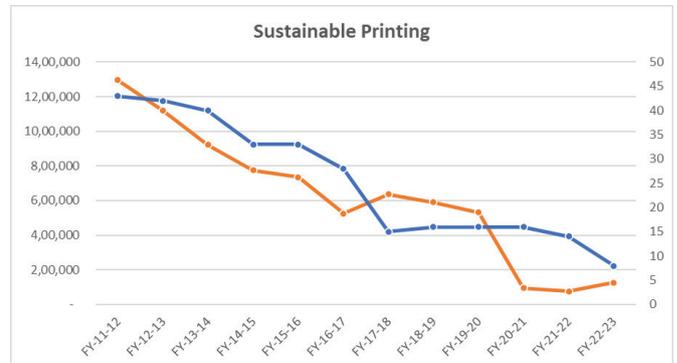
Printers consume paper, toner chemicals, and power. Reduce printing, and we can directly reduce the impact of all three on your environmental footprint.

Over the years, we have built efficient processes to reduce paper waste. We do this through smart printing features, nudges that change user behavior, and flexible print policies to drive compliance.

While going paperless is a dream today, the reality is that we have simple and proven ways to make printing more efficient, sustainable, and cost effective.

Printing in Sassen: Year on Year

- Dual-sided printing.
- View before printing.
- Expire if not printed.
- Energy-efficient printers.



Prints consumed

Prints consumed in 2008-09: 35 Lakhs.

Prints consumed in 2022-23: 1.22 Lakhs. ↓

**Save Paper.
Save Trees.
Save the World.**

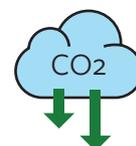
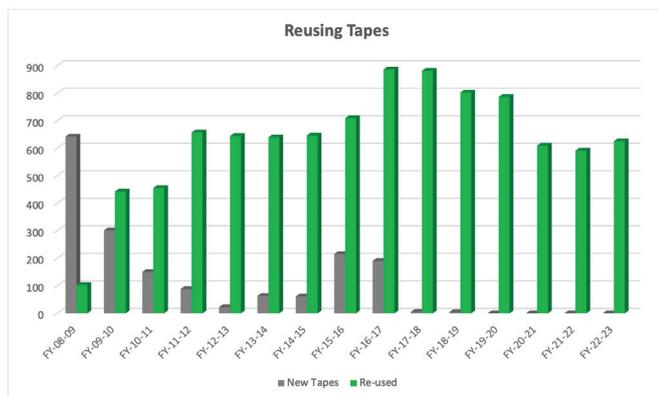
Reducing Carbon Emissions Through The Data Tape Ecosystem

Data centers are significant consumers of energy, accounting for as much as 2% of global demand and rising to 8% according to some estimates. Data centers can do their part to reduce energy consumption in many ways by becoming more energy efficient, including simply migrating the vast amounts of still valuable but rarely accessed “cold data”.

This means moving cold data from energy-intensive tiers of storage like constantly spinning HDDs to energy-efficient tape systems that consume zero energy unless actively writing or reading data tapes.

Because data tape is inherently removable and portable, it can be easily exported from its automated library environment to a secure offsite location for long-term retention and protection against any disaster or unauthorized network intrusion by hackers.

While we tape out “Cold Data,” we apply the reuse policy to every usage. While the data has multiplied 10 times compared to 2008, our tape procurement has been zero since 2017.



Data Centre | Optimizing Energy Consumption

At Sasken, we have a rigorous program of removing obsolete servers at the end of their lifecycle. This ensures that we don't have any comatose equipment inside the data center consuming unnecessary power or creating a heat load.

9 servers and 5 network devices were decommissioned and replaced with 2 servers and 2 network devices during FY 22-23, enabling a reduction in the overall power consumption of the data center by 11974.6 kWh per annum.

We constantly:

- Clean up workloads and eliminate everything that is not necessary.
- Consolidate virtual machines.
- Virtualize more workloads.
- Continue to eliminate those servers that are powered but doing nothing useful.
- Replacing old servers with newer and more energy-efficient ones.



Minimizing Computer’s Impact On The Environment

We are in the process of converting all the desktops to laptops in the organisation. While portability comes first, laptops indirectly help us save sufficient power and thereby reduce emissions compared to a desktop.

Though the reliability is slightly less than that of a desktop, a laptop helps us reduce the overall carbon emission due to various reasons like (a) a smaller ecological footprint (b) being produced with up to 65 percent reusable or recycled components (c) reduced toxic packaging, which further decreases

the need for virgin materials (d) significantly less energy consumption due to fewer components and built-in monitors. For example, with moderate usage, desktops consume 60 to 194 watts of energy, and the laptop, on the other hand, consumes 19 to 60 watts of energy, which is 90 percent less.

All the compute devices we procured in 2022 are EPEAT Silver certified. The reduction in environmental impact due to that is shown in the below table.

Reduction in Environmental Impacts and costs Resulting from Purchasing EPEAT											
600 + EPEAT silver rated laptop purchase	Energy Saving in megajoules (MJ)	Energy Saving in kilowatt hour equivalents (kWh eq)	Greenhouse Gas Emission reduction, expressed as global warming potential (kg CO2 eq)	Non-Hazardous Solid waste reduction (kg)	Acidification potential savings (kg SO2 eq)	Smog formation potential savings (kg O3 eq)	Eutrophication potential savings (kg N eq)	Toxic substances avoided in the product (kg)	Material conservation (kg)	Cost savings for non-hazardous solid waste disposal (US\$)	Cost saving for energy use (Dollars)
	3,13,813.68	87,170.47	22,593.60	4,322.71	128.54	1,191.69	7.64	53.15	80.87	241.06	3,260.28



Electrifying Our Fleet

The company's shuttle services are provided by completely electric vehicles. In addition to this, we encourage our employees to use electric vehicles and are committed to providing free charging for everyone who drives electric vehicles to the office.



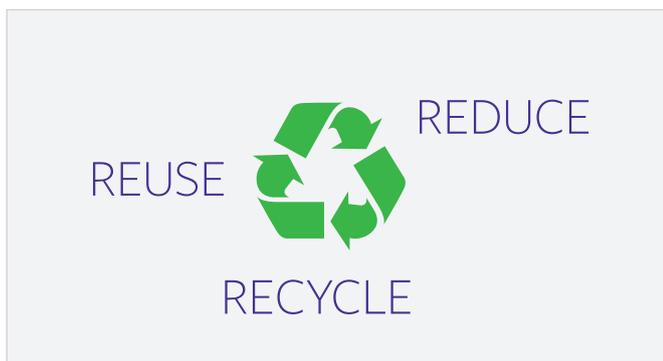
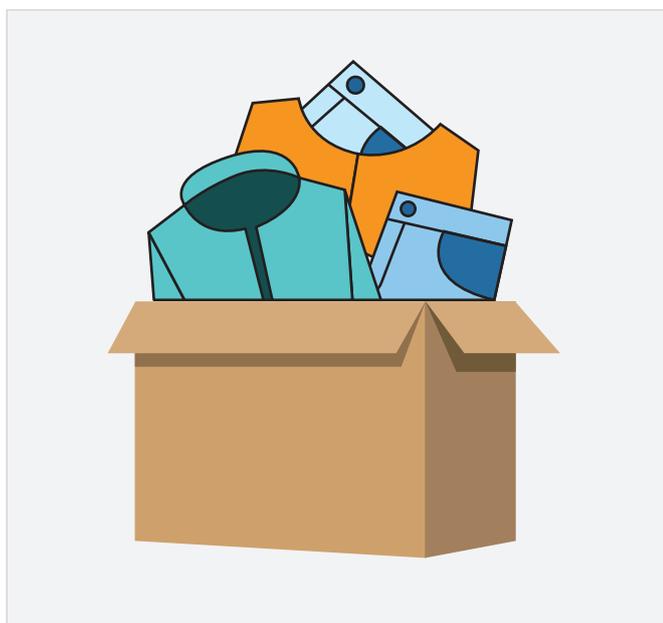
CO₂ Emission Reduced

18,414 Kg of CO₂ reduction by using e-vehicles for employee shuttles.



Donation KenYard

Donation Ken Yard is another initiative started in FY 22-23 to enable employees to donate reusable waste to the office wasteyard anytime of the year. This will prevent material that can be reused or put to secondary use from going to landfills. We plan to donate collected material to NGOs, needy schools, etc. or dispose of it in an environmentally safe manner.



	
CLOTHES	STATIONERY
	
NEWS PAPER/MAGAZINES/ BOOKS	FOOTWEAR
	
ELECTRONIC ITEMS/ HOME APPLIANCES	ELECTRIC WASTE (Fused bulbs/ Tube lights etc.)
	
TOYS	



Carbon offsetting in CSR projects - Organic Waste Composting Unit

A unique community composting project under CSR was set up in the Domlur area. This 1.2 Ton OWC machine was set up in 2018 and has run successfully till today.

Summary for FY 22-23



Waste Treated

Around 40 Tons of waste (dry leaves & food waste) were diverted from landfills, & 15 Tons of compost were generated.



Utilization

Approximately 50% is distributed to the community, and 50% is used for Sassen garden.



CO2 Offset

An estimated 45 Tons of CO2 offset took place in an entire year.



On every environment day – we create awareness among employees in a unique way!

 <p>80% of the power consumed at corporate office is from renewable sources</p>	 <p>Harvested 20,000 KL of rainwater for recharging groundwater in 2021</p>
 <p>110 Tons of CO2 emission reduced every month by using renewable energy</p>	 <p>10 Tons of CO2 emissions are reduced every month by switching to LED lighting</p>
 <p>500 KL of water recycled every month</p>	 <p>Average 1.10 Tons of CO2 emissions are reduced every month by using e-cars</p>
 <p>0.04 Tons of CO2 emission reduced every month by using inhouse RO plant</p>	 <p>From 648 backup tapes in 2008-09. From 648 backup tapes in 2008-09 to zero new tapes by 2021, while data backup has increased 10-fold from 2008</p>
 <p>Wet waste at office are used for biogas generation</p>	 <p>235 pieces of furniture donated to various schools</p>
 <p>All paper /tissues/packing waste is Donated to Khadi Gram Udyog for 100% recycling - 14 Tons of paper recycled so far</p>	 <p>Our compute devices are EPEAT certified</p>
 <p>Sasken has powered 350 Houses in Belgavadi village (Karnataka state) completely by Solar power</p>	 <p>We compost around 1000 KG of dry leaves per week in our organic waste composting</p>
 <p>Single use plastics have been banned in our office.</p>	 <p>Seed Balls distributed toward afforestation - 20,000</p>
 <p>1188 Light fittings donated to Various schools</p>	 <p>35 lakh pages printed in 2007-08 have been reduced to less than 1 lakh pages per year since 2021</p>
 <p>238 chairs donated to various schools</p>	

These are some of the initiatives in the past years.



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Green consumers or environmental friendly consumers are those who consider the impact of manufacturing process and consumption of environmental resources while making purchase. Green Consumer Day is observed globally on September 28th every year.

On this day an awareness is made to encourage purchasing only eco-friendly products which does not pollute the environment. This highlights the problems of consumerism and its impact on the environment. It also focuses raising awareness on the importance of recycling-reusing and reducing waste material.

Green Consumer Day
28 September 2022

Be Grateful For Bees!

20 May is recognized as World Bee Day to commemorate the birthday of Anton Janša, the pioneer of modern day beekeeping. The occasion promotes the wellbeing of bees and other pollinators such as butterflies, bats and hummingbirds as their existence is threatened by human intervention. We encourage everyone to learn about the significance of these species and work towards ensuring their protection.

Sasken has always promoted the preservation of bees by ensuring that beehives on campus remain undisturbed until the bees leave of their own accord.

World Bee Day
20 May 2022

SASKEN

AKSHAY URJA DIWAS
20 August, 2022

Akshay Urja Diwas is an awareness campaign, started by the Indian Ministry for New & Renewable Energy Sources, about the development of renewable energy in India. The day has been celebrated on August 20 every year since 2004.

The sources such as biogas, solar energy, wind energy, and hydroelectrical power are a few examples of renewable energy under the aegis of Akshay Urja. We must try to use renewable energy (Akshya Urja) to the extent possible, as it does not have harmful side effects on the environment.

Sasken always adopts environmentally conscious practises and uses wind energy, Akshya Urga, to fulfil the energy needs of our Bengaluru office campus.

To contribute, write to us on prakriti@sasken.com

We urge all Sasians to use renewable energy sources for their houses and apartments as much as possible to help save our planet from environmental pollution.





SASKEN



Prakriti stands for the primordial state of all creations in the planet. It signifies life itself!

'Pra' means the beginning, while 'Kriti' stands for creation or composition. As humans, we have the responsibility to ensure that life extends beyond us.

Prakriti is a Sasken initiative to bring together ardent advocates of environmental and ecological sustenance.

Interested to know how Prakriti works in Sasken?
Write to us: prakriti@sasken.com

Inputs By: Facilities & IT | Design By: Sharad Nagal
www.sasken.com

