



Global Compact Network Pakistan

NET ZERO RESEARCH CHALLENGE 2023

Case Studies on four leading business enterprises from Pakistan to inspire Net Zero Transition

ROSHAN PACKAGES LIMITED





Project Brief

July 2023 was the hottest month in recorded modern history! As noted by the Secretary General of the United Nations, climate change has attained crisis proportions as a global existential threat. UN member states that had, in 2015 Paris Agreement, committed to combat global warming by reducing the planet's temperature to 1.5 degrees Celsius, the Net Zero target for 2050, must ensure achieving this commitment! Globally, 2050 is the target year by which we should extract the same amount of Greenhouse Gases (GHG) as we emit in our processes, thus neutralizing their impact to zero. Pakistan is the eighth most vulnerable country to Climate Change. The floods of 2022 are taken as the first indicators of this climate catastrophe.

The Global Compact Network Pakistan has been instrumental in supporting the private sector as a whole, and its members in particular, to incorporate sustainability in their strategic visions. As we move forward in this decade of action (2020 - 2030), awareness among stakeholders has forced business organizations to revamp their operations and create transition plans to reduce their carbon footprint. If, by 2025, businesses do not align their strategies with sustainability practices they will become irrelevant because climate change is now an existential crisis.

In Pakistan, business organizations have not been able to make commitments to the Net Zero target year despite having sustainability-focused policies in place. Only 26 business organizations have committed under the Net Zero Pakistan initiative by the Pakistan Environmental Trust. Of these, 25 organizations are from the Textile and Apparel sector. This is mainly due to the prerequisites of carbon footprints in their supply chains set by the textile and apparel products buyers in Europe and North America. Given the urgency of the situation, the agenda for a global requirement to lower the carbon footprint is pushed forward, and similar actions will be expected by stakeholders in almost every business sector. In its mandate to advocate for Climate Action, GCNP initiated the Net Zero Research Challenge 2023 as an academia-business research project to develop Case Studies on companies in Pakistan on their Net Zero Journey. The core objective of this project was to develop four Case Studies to be used as learning tools in universities for business students to understand the global transition. These case studies are also intended to, be used as guidelines for SMEs to develop their sustainability policies. GCNP partnered with four prominent large-scale organizations; Artistic Milliners (Private) Limited, Roshan Packages Limited, Pak Arab Refinery Limited, and AGI Denim (Private) Limited.

One main objective of the project was to promote experiential learning. This was achieved by engaging Research Teams from Institute of Business Administration (IBA) or NED University. Each corporate partner was deputed a Research Team to conduct in-depth desk reviews, and field visits, and to engage with the leadership to not only incorporate the initiatives already taken by these companies but also to construct a strategic roadmap for companies as a proposal for 2030 and beyond. The Research Teams, led by a faculty member, built their research on how regional business entities have adopted sustainable practices, particularly how operational transitions have helped organizations to reduce their carbon footprint either directly from their operations (Scope 1), or indirectly (Scope 2). The priority area was to structure solutions that could bring optimum efficiency regarding carbon emissions. Furthermore, integrating through the value chain and tracking carbon emissions (Scope 3) was considered and incorporated as a significant policy-backed action for companies.

The Net Zero Research Challenge was launched on 09 June 2023 with a Briefing Session for Corporate and Academic partners. In two months, Research Teams under the guidance of a Project Consultant were able to draft Case Studies on their respective companies. The Case Studies highlight key initiatives taken by companies regarding Sustainable Development Goals, Sustainability, and Carbon Emission projects, particularly the proposed roadmap to achieve Net Zero by 2050. In this Publication, four Case Studies will contextualize important solutions for reducing carbon emissions starting from the plantation of trees and mangroves, awareness raising of stakeholders, transport and operational efficiency, to carbon capture and storage. It also emphasized how interventions and collective reforms can create a substantial difference and contribute to setting up Carbon Credit and Carbon offsetting projects in Pakistan. The Concluding Event was held in Karachi on 17 August 2023 at Movenpick Hotel in which all four Research Teams presented their respective Case Studies.

Khalid Junejo
Executive Director


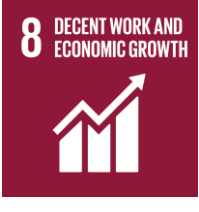









**GLOBAL COMPACT NETWORK PAKISTAN'S
ENLIGHTENED CORPORATE PARTNERS:**



Roshan Packages Limited (RPL) is a publicly listed packaging company based in Lahore, Pakistan. The company currently has 519 employees across its operations and locations at head office, two factories in Lahore, a sales office in Karachi, and the online platform Roshpack.com. One of the factories specializes in corrugated cartons, while the other focuses on flexible PE films. RPL offers ready to pick and customizable packaging options. Its customer base includes several national and multinational clients, along with farmers, home businesses and even restaurants. RPL states its mission to be using an innovative approach to packaging manufacturing that “upholds the principles of corporate governance and creates superior value for stakeholders.” As a leading packaging company in Pakistan, they aim to not only streamline their own processes but also steer the packaging industry to the forefront of the green economy in Pakistan. As a company, RPL has cultivated an open and conscious working environment. Every employee is an active contributor in the process of making an impact.

Vision to Contribute towards Sustainable Development Goals for 2030

 <p>1 NO POVERTY</p>	<p>Pays all employees above the minimum wage and provides them with loans. Have introduced easy loans for employees to combat unprecedented inflation.</p>	 <p>2 ZERO HUNGER</p>	<p>Designs high-quality boxes for fruits and vegetables that can cut food losses by 30%. Provided daily iftar and sehri for over 500 factory workers.</p>
 <p>3 GOOD HEALTH AND WELL-BEING</p>	<p>Regularly organizes worker health & safety sessions; held a drive during the pandemic, which vaccinated over 200 workers.</p>	 <p>4 QUALITY EDUCATION</p>	<p>Provides admission assistance for institutions nationwide, offers flexible timing for those pursuing their degrees and allowances for yearly training.</p>
 <p>5 GENDER EQUALITY</p>	<p>Eased workload for women in the face of increased home responsibilities during the pandemic; offers equal wages and maternity/medical leaves.</p>	 <p>6 CLEAN WATER AND SANITATION</p>	<p>Installs well-maintained water treatment plants at factories, uses purified water, and has proper pipelines for sewage disposal.</p>

	<p>Is exploring options for renewable energy; replaced a boiler economizer for heat recovery and switched from a turbine pump to a submersible.</p>		<p>Made it through the pandemic with zero layoffs; embarked on recruitment drives, partnering up with institutions. Added 400 jobs to the national economy.</p>
	<p>Using international standard machinery in corrugation and flexible as well as adhering to international standards and audits (e.g. SEDEX, ISO, Halal) . Has R&D labs in both facilities.</p>		<p>Equal opportunity regarding gender, race, religion, sex, etc., Recently began using affirmative hiring strategies. Provides loans to women for transport.</p>
	<p>Ensures all sites are located away from local communities and in designated industrial areas.</p>		<p>Recycles a majority of paper waste and uses recycled raw material in manufacturing. Looking to introduce circular manufacturing through paper recycling in Sun Tao Paper Mill.</p>
	<p>Looking to plant 600 indigenous tree species at Sun Tao Paper Mill's boundary.</p>		<p>Looking to install a European-standard water treatment plant at the Sun Tao Paper Mill.</p>
	<p>Focuses on corrugated & flexible manufacturing in a way that does not contribute to deforestation and damage to the ecosystem.</p>		<p>Has a workers' council and a company-wide women's council that reports to the CEO; established a whistleblowing policy to combat corruption and harassment.</p>
	<p>Organized the “Circular Economy: Towards a Roshan Pakistan” conference to showcase innovations for sustainable packaging, including MNC's, startups and NGOs.</p>		

Creating a Pathway to Sustainability

In response to the global call for responsible and eco-friendly business practices, RPL has demonstrated an unwavering commitment to reducing its carbon footprint. In recent years, RPL has launched several projects to support this cause.

“Roshan Ehad” was one of RPL’s flagship projects dedicated to improving the company’s ecological impact. It was implemented at their corrugation plant. By reducing machine downtime, optimizing production processes, and curbing the wastage of water and electricity, RPL was able to streamline its operations and conserve its resources. This forward-thinking approach yielded substantial savings, and 10% of the resulting revenue was given as an incentive to the employees who participated in this initiative.

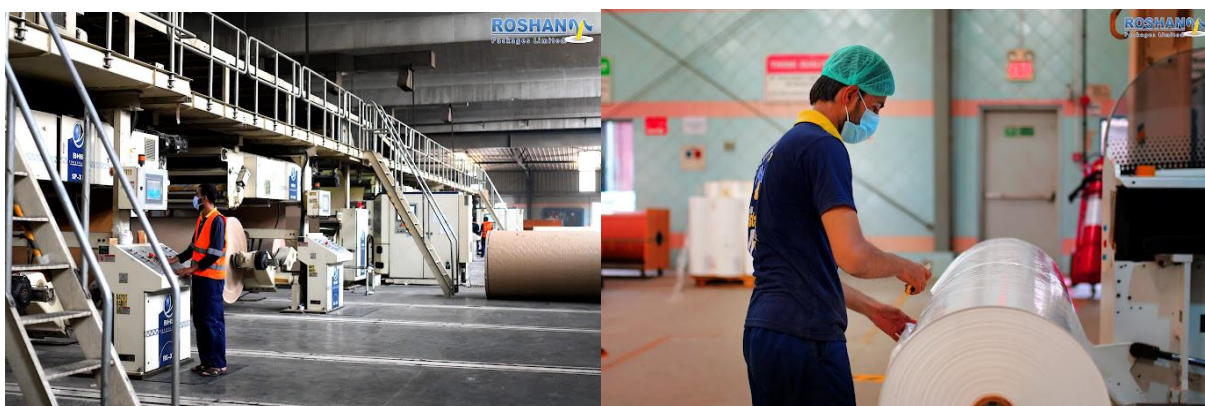


To offer sustainable and eco-friendly packaging solutions, RPL launched a ground-breaking upcycling initiative at its corrugation plant. The goal is not simply recycling but upcycling, which involves making new products from waste. For example, the company used leftover paper from different jobs to create shopping bags for businesses. Besides providing sustainable custom-packaging options for SMEs, RPL released various corrugated paper products made from 100% recycled corrugated sheets that aim to replace plastic from everyday use; these include paper bags, laptop stands, desk organizers, and household items like clothing hangers. This is a step towards establishing a circular economy, where production is based on recycling materials for as long as possible. RPL currently uses 50,000 tons of recycled paper annually at its corrugation plant as well as facilitating its recycling. RPL also recycle 5,000 tons (100%) of the waste produced from its manufacturing process, showing progressive commitment to the initiative. Plastic waste trimmings from all jobs at the flexible plant are also recycled by EPA approved vendors. The flexible plant also took the initiative to switch forklifts from diesel to battery operated. With one battery operated forklifted in use, the company was able to reduce the plant’s lifter carbon emissions by 32%. The effort shows RPL’s willingness to switch to more sustainable options for addressing their fuel needs.



Products Pictured: Ergonomic Laptop Stand, Desk Organizer, Recycled Paper Bag, Fruit & Vegetable Box

In its journey towards sustainability, RPL has managed to foster a culture of environmental consciousness within its organization. Company's workforce demonstrates an understanding of the importance of sustainability that extends beyond individual roles. An example of this is the corrugation plant's HR department's recent initiative to curtail air-conditioning usage at its facility in order to conserve resources. By adjusting the seating plan of the offices, the plant was able to reduce its overall electricity consumption. The initiative has saved 25% of the monthly electricity bill. RPL also offers transportation to employees who would otherwise use their own cars, mitigating extra emissions as a result.



Pictured: RPL's German BHS Corrugator that converts paper to corrugated sheets

Setting targets for 2030 and beyond

Roshan Packages Limited seeks to further reduce its carbon footprint and lay down a strategic roadmap, which will allow them to commit to the 2050 target for achieving Net Zero. The following initiatives provide a path for them to reduce the carbon footprint by over 30% by 2030 and beyond.

Optimizing Transport: By implementing a transition to battery-operated vehicles, RPL has the potential to achieve a substantial reduction of over 60% in the emissions generated by its shuttle transport service. Furthermore, RPL can significantly decrease its carbon footprint caused by the transportation of raw materials for the corrugation unit by over 85%. This can be done by centralizing its raw material procurement to its own paper mill, Sun Tao Paper Mill which would be fully functional in a few years, instead of relying on paper mills located in different areas of Punjab. This presents a strategic approach that harmonizes the company's operational efficiency with its environmental responsibility.

Work from Home: The work-from-home approach has the potential to transform RPL's offices since it has already been implemented at their offices in Multan and Islamabad. A full transition

to remote work at their sales office in Karachi can result in a 100% reduction of the carbon emissions currently produced there. Careful consideration of co-working space impacts and a clear transition timeline will assist the shift. According to the utility bills, RPL's head office presently generates 33,260 kgCO₂e annually. Applying the work-from-home strategy at RPL's head office, with a four-day office work week, is projected to reduce emissions by a significant degree.

Extending Ongoing Sustainability Projects: Extending pre-existing sustainability initiatives is one of the easiest ways for RPL to reduce its carbon footprint. The initiative to switch from the use of diesel forklifts to electric forklifts began in the flexible plant but this project can extend to the corrugation plant as well. The corrugation plant currently uses eight diesel-driven forklifts. If six of these forklifts are converted to batteries, and the flexible plant converts another diesel forklift to the battery, RPL can reduce the carbon emissions caused by these machines by 90%. The Roshan Ehad project, which was very successful at the corrugation plant, can also be carried over to the flexible plant. This step will result in considerable savings and the conservation of resources.

Shifting to Renewable Energy Sources: The first of the long-term plans RPL can keep in mind is a substantial shift to renewable energy. With the head office, both factories and the upcoming Sun Tao paper mill, RPL is expected to generate 5,101,700 kgCO₂e carbon emissions from electricity annually. The inclusion of solar energy will make a dramatic impact on their numbers. RPL's head office contains no heavy machinery and will be the easiest to convert, which makes it the natural starting point for this shift. The head office building's rooftop covers an area of 3000 square feet, requiring a 30-panel setup that generates 1,185 kWh per month. Assuming the solar panels will emit 0.05 kgCO₂e per kWh generated, this alone would reduce the total annual emissions by 5,740 kgCO₂e. This would pave the way for the production units to follow. With a 500-kW solar panel plant setup for the corrugation, flexible, and Sun Tao Paper Mill facilities each, even more substantial impacts will be made. The three plants will reduce their emissions by a significant amount. Along with the head office, their shift will culminate in an over 45% reduction in electricity emissions.

Reducing Boiler Emissions: To address the carbon emissions caused by the boiler plant at Roshan Packages' corrugation unit and achieve a substantial reduction in carbon numbers, they can switch from natural gas to biofuels. Biofuels are known to contribute significantly fewer carbon emissions, approximately 80% less than natural gas. By implementing this, RPL can expect a substantial reduction in its carbon footprint. Furthermore, biofuels can run the planned biomass power generator Sun Tao Paper Mill as well. This measure will have a significant impact on RPL's overall carbon emissions.

Incorporating Green Buildings: Buildings consume a great amount of energy and must be kept in check so they do not adversely impact the environment. If RPL renovates its sites to be more ecologically friendly, the steps to achieve it will not only transform the buildings into clean, sustainable sites but also make it more cost-efficient. Meeting standards for green buildings will require rigorous monitoring. This is where all the choices regarding energy sources, water, waste disposal, transportation, and good worker experience will converge, shown in practice by the design of its factories and offices. The culmination of every possible initiative listed in this case study, along with additional green renovations on RPL's part, can transform the sites into clear pictures of the company's sustainability values.

Emerging as Industry Leaders: Sustainability in Packaging

Roshan Packages Limited places a strong emphasis on not only keeping its environmental impact in check but also aiding other businesses in achieving their sustainability targets. The company's dedication is evident through various ongoing initiatives, reflecting their willingness to uphold global responsibilities independently. By focusing on solutions that actively reduce their carbon footprint, RPL has the potential to make even greater strides forward. Their journey towards sustainability positions them as a prospective leader in Pakistan's packaging sector, with notable progress already made. However, realizing this goal calls for a collaborative effort involving industry peers, governmental bodies, and civil society. The path to sustainability for RPL relies on a collective approach and the rightful acknowledgement of the packaging industry's significance on a national scale. Through this joint commitment, RPL can effectively navigate its sustainability journey.



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GLOBAL COMPACT NETWORK PAKISTAN'S ENLIGHTENED ACADEMIC PARTNERS:



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The era of global warming has ended; the era of **global boiling** has arrived.”

António Guterres
Secretary-General of the United Nations

