

Decarbonising Pakistan's Textile Sector

Policy Interventions for Decarbonisation and Market Leadership

Executive Summary

Pakistan's textile exports drive economic growth and employment, but rising climate resilience, sustainability expectations in global markets mean that traditional cost advantages are no longer sufficient. Protecting market access while strengthening long-term competitiveness requires a rapid scale-up of clean technologies, transparency, and investment readiness across the sector. The following priority actions chart a practical course to secure Pakistan's position in global value chains.

Key Policy Actions for 2025–2028

Pakistan can protect and strengthen its textile export competitiveness through six priority measures, each fully aligned with the Textile Decarbonisation Roadmap and tailored to global climate and sustainability standards.

Priority Action	Lead Institution(s)	Why it matters
1. Require factory-level decarbonisation roadmaps + annual climate transparency reporting	MoC (market access) Mol&P (industry compliance) TDAP (buyer engagement)	Underpins EU due-diligence and buyer data requests
2. Accelerate deployment of energy efficiency and renewable heat/power solutions	MoE, NEPRA, provincial energy departments	Delivers major cost and emissions reductions
3. Mobilise transition finance — sustainability-linked lending and concessional financing	SBP, SECP, MoF	Enables SME and mid-tier adoption
4. Upgrade water, chemical management, and material efficiency to global buyer standards	MoWR, provincial EPAs, industry bodies	Addresses highest compliance risk stages
5. Green industrial estates with shared energy & effluent infrastructure	Mol&P, industrial zone authorities	Supports SMEs in clusters to comply
6. Establish a cross-ministry implementation platform with annual progress dashboard	MoPDSI	Builds credibility, coordination, and pace

These actions safeguard Pakistan's EU market position as sustainability criteria tighten between 2025–2030.

Source: Textile Decarbonisation Roadmap – Pakistan (2024), NewClimate Institute / GIZ

Introduction

Pakistan's textile industry is the backbone of its economy — contributing nearly two-thirds of national export earnings and employing around 15 million people. Yet this economic engine is at risk. The sector is highly energy-intensive and dependent on fossil fuels, making it the second-largest contributor to greenhouse gas (GHG) emissions within the country's industrial sector. Combined with rising energy costs, this is already weakening Pakistan's traditional cost advantage relative to regional competitors.

As global buyers raise sustainability requirements through new regulations and standards, Pakistan's exposure to climate-related trade risks is rapidly increasing. Nine of Pakistan's top ten EU export products are textiles, making progress on emissions reduction, water stewardship, responsible materials, and transparent reporting decisive for continued market access.

Regional competitors are advancing on different fronts: Bangladesh continues to scale through low-cost production, while Sri Lanka differentiates based on compliance and sustainability leadership. Pakistan sits between these models — strong on policy intent, including sustainable cotton and wastewater treatment — but lagging in widespread uptake of clean technologies and robust reporting systems at factory level.

The Textile Decarbonisation Roadmap identifies practical opportunities to cut emissions, strengthen resilience to rising energy and water constraints, and protect export competitiveness. Improving energy efficiency, renewable heat and power, water and chemical management, and sustainable materials can significantly reduce emissions while enhancing productivity and market resilience.

Decarbonisation is now a competitiveness strategy — not a cost.

The companies that move first will secure market access, investment, and long-term growth.

Trade Risks Are Rising as Sustainability Standards Tighten

Pakistan's textile exports are highly exposed to tightening sustainability requirements in major markets. 90% of Pakistan's top ten export products to the EU are textile goods, meaning even marginal shifts in buyer requirements can have disproportionate impacts on export revenue and employment.

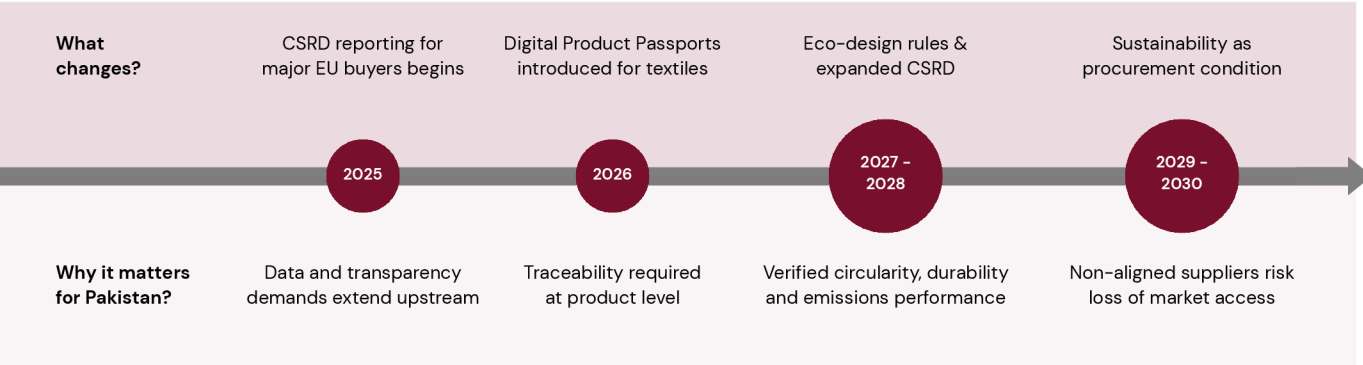
The European Union is simultaneously accelerating implementation of sustainability-driven regulations — including responsibility for emissions and material impacts along supply chains. Buyers are increasingly shifting procurement toward suppliers able to demonstrate climate performance, transparent reporting, and water-efficient processes.

The next three to five years are decisive. Strategic investment in decarbonisation and transparency can protect Pakistan's role in global supply chains — while delay would make recovery far more costly.

High Export Dependence + High Emissions = High Trade Risk

- **60%+** of exports are textiles
- **9 of 10** top export products to EU are textiles
- **8.1 MtCO₂e** annually — **2nd-largest** industrial emitter
- Rising energy costs eroding competitiveness
- Decisive window for technology adoption and finance mobilisation

EU Sustainability Requirements Tighten — Implications 2025–2030



Pakistan’s market position will be determined by progress made between 2025–2028 — while the window remains open.

Where Pakistan Stands: Strong Foundations, Implementation Gap

Pakistan has made notable policy progress in areas directly relevant to buyer expectations. The Roadmap benchmarking shows Pakistan ahead of regional competitors on sustainable cotton and wastewater management regulations, signalling strong intent and alignment with environmental priorities.

Yet the sector remains highly dependent on fossil fuels, particularly for thermal energy in processing stages, and renewable heat solutions are largely absent at scale. This limits the ability of factories to reduce emissions and operational costs simultaneously. Pakistan also performs below peers on energy efficiency, reflecting under-investment in proven technologies.

Adoption of sustainability practices is uneven, with large exporters outperforming, while SMEs face significant barriers to financing, data collection and technical support. Systems for emissions and resource reporting are still in early development, although investor and buyer expectations increasingly require verified disclosures.

Competition is intensifying: Bangladesh is capturing gains from rapid efficiency deployment and Sri Lanka retains a compliance-based reputation advantage. Pakistan risks falling into the middle — with neither the lowest production costs nor the strongest sustainability credentials — unless technology uptake and transparency improve rapidly.

Category	Policy Measure	Pakistan	Bangladesh	Sri Lanka
Materials & circularity	Promoting sustainable farming practices	3	1	2
	Encouraging shift away from synthetic fibres	2	2	1
	Supporting innovation and R&D for next generation sustainable fibres	2	3	0
	Promoting circular production practices	2	3	1
Industrial processes	Promoting renewable electricity uptake	2	2	2
	Facilitating transition from fossil fuels to renewables for heat	0	0	0
	Promoting energy efficient technology uptake	1	1	1
	Promoting efficient water consumption and water recycling	2	0	2
	Promoting pollution control and adequate wastewater treatment	3	3	2
Compliance	Promoting robust, standardised data collection and transparent disclosure across the value chain	0	1	0
	Promoting capacity building for compliance among industrial actors	3	2	1
Overall average performance score (out of 3)		1.8	1.6	1.1
Total performance score (out of 33 points)		20	18	12

Category	Industry Measure	Pakistan	Bangladesh	Sri Lanka
Target setting and reporting	Commit to a GHG emissions reduction target	1.2	0.0	1.6
	Report Scope 1-3 emissions to best standards of measurement and transparency	1.2	0.0	1.6
Industrial processes	Increase the use of renewable electricity	1.9	0.5	2.1
	Invest in energy efficient improvements (including having certified green buildings)	2.1	0.6	1.6
	Maximise material efficiency to reduce waste	1.6	0.8	1.2
	Maximise process efficiency to reduce energy needs	2.2	0.8	0.5
	Transition from coal to renewable heat electrification	0.7	0.0	0.8
	Clean and recycle wastewater	2.3	0.8	1.8
Materials & circularity	Increase the use of recycled and organic materials	2.0	1.3	1.9
	Support suppliers to implement sustainable farming practices	1.3	0.0	1.1
	Invest in innovative next generation low-carbon materials development	0.8	0.3	1.6
	Set reduced overproduction and waste reduction targets	0.0	0.0	0.9
Others	Showcase sustainability leadership beyond core measures	1.2	0.8	2.1
Overall average performance score (out of 3)		1.4	0.4	1.4
Total performance score (out of 33 points)		18.6	5.6	18.6

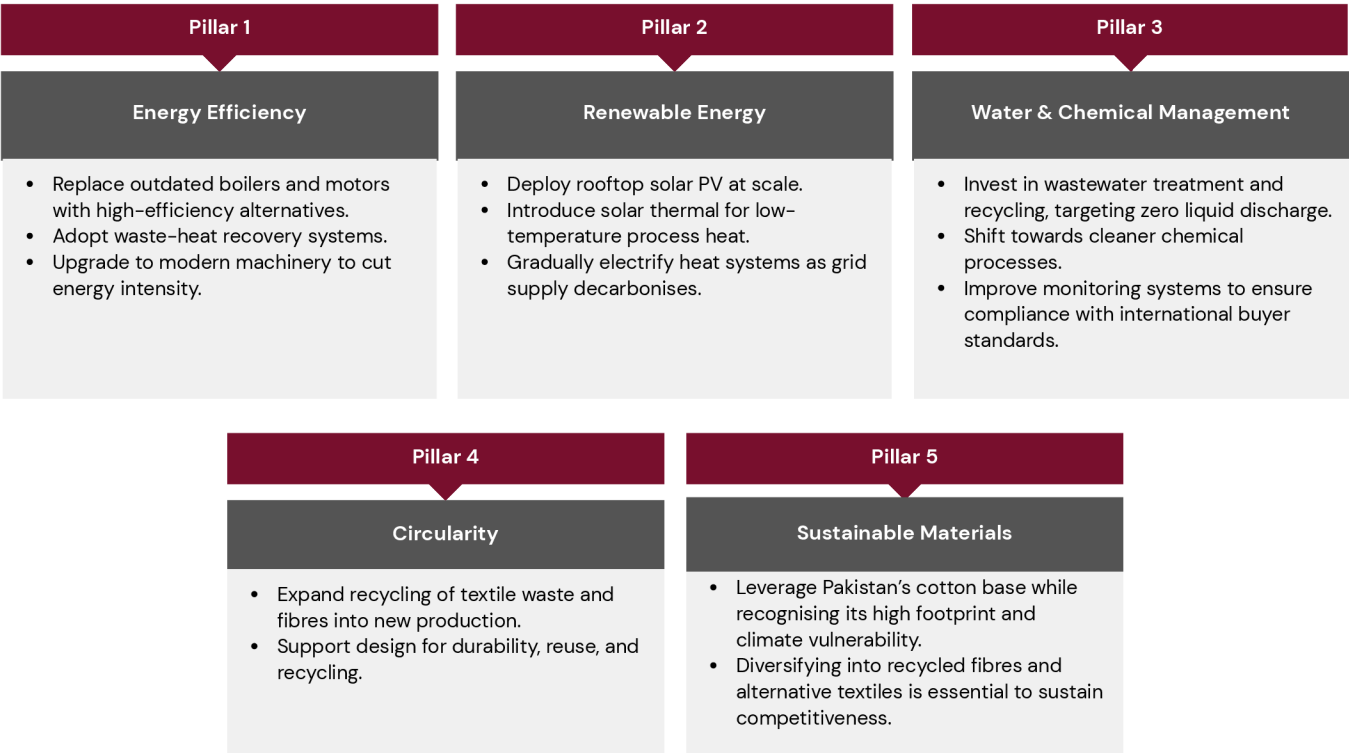
N.B. Green indicates strong alignment, yellow indicates partial progress, red indicates critical gaps, grey indicates no information found on the topic in sources.

Source: New Climate Institute (2024), Benchmarking of South Asian textile decarbonisation policies and industry practices.

Closing the implementation gap is now central to safeguarding Pakistan’s competitiveness and export resilience.

Roadmap: Five Pillars for Competitiveness

Pakistan’s Textile Decarbonisation Roadmap identifies five mutually reinforcing pillars that enable the sector to reduce emissions while strengthening productivity and market access. Early action on energy, water and materials upgrades delivers rapid cost savings and positions suppliers to meet rising transparency and compliance expectations from global buyers.



Financing the Transition

Decarbonising Pakistan’s textile sector requires targeted investment in technologies that deliver immediate cost savings and strengthen export competitiveness. Energy efficiency and renewable heat offer high-return upgrades, while sustainable water and chemical management is increasingly essential to meet global buyer requirements. However, uptake—especially among SMEs—remains constrained by the availability and affordability of suitable finance instruments.

Sustainability-linked lending, concessional financing, and blended finance structures can close this gap by reducing upfront capital barriers and rewarding climate performance improvements over time. The State Bank of Pakistan’s green banking initiatives and the Green Taxonomy provide the enabling framework to shift capital toward low-carbon and resource-efficient solutions in the sector.

Coordinated action from public and private finance actors is therefore key: expanding green credit lines, deploying risk-sharing mechanisms, and strengthening disclosure practices will support the sector to accelerate technology adoption and maintain compliance with evolving market requirements. By mobilising investment at scale, Pakistan can reinforce the textiles industry as a resilient driver of export earnings and industrial employment.

Financing is the bridge between policy ambition and factory-level action — unlocking competitiveness gains across the value chain.

What is Transition Finance?

- Supports phased decarbonisation in high-emitting sectors
- Tied to credible milestones and transparent reporting
- Rewards performance with improved financing terms

Economic Payoff, Green Jobs & Green Industrialisation

Modernising the textile industry delivers benefits that extend well beyond compliance. Cleaner and more efficient production reduces energy and water spending, improves productivity, and enhances resilience to resource volatility — strengthening the foundations of Pakistan’s industrial growth. Green upgrades are also highly labour-absorptive, generating new employment in installation, equipment servicing, data systems, and circular production processes.

This transition therefore acts as a catalyst for green industrialisation: elevating product quality, improving traceability, and positioning Pakistan as a reliable supplier to buyers seeking low-carbon textiles.

Momentum in green skills development — including factory-level energy managers, wastewater technicians, and sustainability reporting professionals — will determine whether SMEs can meet rising transparency expectations and maintain access to high-value markets.

Decarbonisation is thus a competitiveness strategy: mobilising finance, upgrading technology, and growing a climate-skilled workforce secures market access, industrial employment, and long-term economic opportunity.

Conclusion

Pakistan’s textiles sector can protect market access today while securing competitiveness and industrial growth for tomorrow. By accelerating investment, technology adoption and green skills, the sector will remain a resilient driver of export earnings and employment. With coordinated public–private action, Pakistan is ready to lead on sustainable, high-value textile production in the region.

The time to act is now — while the window remains open.

About PGCEP

The Pak–German Climate & Energy Partnership (PGCEP) was established in 2021 to support Pakistan in reaching its commitments under the Paris Agreement and Agenda 2030. The Partnership represents German Development Cooperation’s bilateral portfolio in Pakistan, which is being implemented by GIZ, and KfW on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). The Partnership leverages the breadth of the bilateral portfolio to drive action that leads to sustainable, climate resilient development in Pakistan, in close collaboration with Government, private sector, civil society and think tanks.

This advocacy brief is an output of the ‘**Decarbonizing Pakistan’s Textile Industry: Navigating EU Policies and Building Competitive Advantage**’ dialogue organised by the Pak–German Climate & Energy Partnership in collaboration with the Sustainable Development Policy Institute (SDPI).

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		Text	Juliette de Grandpre, New Climate Institute, Chetna H Kumar, New Climate Institute, Nabila Salsabila, New Climate Institute Sourajit Aiyer, Sustainability and AI Business Action Centre Zainab Naeem, SDPI
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Responsible	Sobiah Becker, Advisor PGCEP		