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Dated Lahore, the 29th April, 2026

CIRCULAR

No. Admin(PPRA)/2022-23 Govt. of Punjab is endeavoring to adopt Green Procurement (GPP) in Punjab, as a transformative approach to aligning sustainable goals with efficient public procurement drawing from global best practices. Punjab encounters unique environmental and economic challenges in reducing negative emissions for promoting green skills and industries which is imperative for securing international funding.

2. The GPP policy includes life cycle costing, supplier's engagement and carving measurable targets for addressing issues including resource scarcity. A phased implementation strategy is outlined, emphasizing stake holders' collaboration, capacity building and digital integration within Punjab's Public Procurement frame work.

3. A detailed strategy document is attached herewith for guidance and compliance with special focus on chapter 3.4 (conceptual frame work).

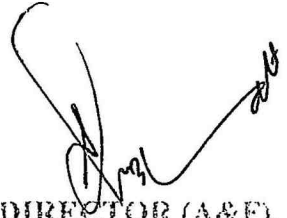
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Sahibzadi Wasimah Umer (PAS)
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No. & Date even

A copy is forwarded for information and necessary action to:-

1. The Senior Member, Board of Revenue, Punjab.
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3. The Inspector General of Police, Punjab.
4. The Accountant General, Punjab.
5. All the Administrative Secretaries, Govt. of the Punjab.
6. All the Divisional Commissioners in Punjab.
7. All the Heads of Attached Departments, Punjab.
8. All the Heads of Autonomous Bodies, Punjab.
9. The Director General Anti-Corruption, Punjab.
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DIRECTOR (A&F),
PPRA S&GAD

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1. PSO to the Chairman PPRA/Chief Secretary, Punjab.
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3. Web Developer / Data Administrator, PPRA with the direction to immediately upload the same on the website of the PPRA.
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Green Public Procurement in Punjab Advancing Towards Sustainable Development Milestone-14-A

Implementation Support to PPRA for E-Procurement System

Under PRIDE Program | World Bank Credit No. 9170-PK

*Punjab Procurement Regulatory Authority (PPRA)
Punjab Resource Improvement and Digital Effectiveness (PRIDE)*



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Abstract

This strategy document explores the adoption of Green Public Procurement (GPP) in Punjab, Pakistan, as a transformative approach to align public purchasing with environmental sustainability and economic development. Drawing on global best practices and Punjab's unique environmental and economic challenges, this document defines GPP's role in reducing ecological footprints, fostering green industries, and securing international funding from bodies like the Green Climate Fund and World Bank. It proposes a tailored GPP policy for the Government of Punjab, incorporating life-cycle costing, supplier engagement, and measurable targets to address issues like air pollution and resource scarcity. A phased implementation strategy is outlined, emphasizing stakeholder collaboration, capacity building, and digital integration within Punjab's procurement framework. Supported by international best practices, this deliverable provides actionable recommendations to advance sustainable procurement under the PRIDE Project for Punjab Procurement Regulatory Authority, positioning Punjab as a leader in green governance.



1. Introduction

Green Procurement, also known as sustainable or environmentally preferable purchasing, is the process of acquiring goods, services, and works that minimize negative environmental impacts throughout their entire life cycle, from production to disposal. This includes considering factors such as resource efficiency, reduced pollution, lower greenhouse gas emissions, and the use of recyclable, refurbished or renewable materials, while also aiming to achieve value for money and support broader social and economic benefits (OECD, 2024). Generally, it encourages organizations to evaluate suppliers based on environmental criteria, such as energy efficiency, waste reduction, and non-toxic materials, leading to long-term cost savings through durable, low-maintenance products and improved operational efficiency.

With respect to public procurement, Green Public Procurement (GPP) refers specifically to government or public authorities integrating environmental considerations into their purchasing decisions to procure goods, services, and works with reduced ecological footprints. This involves embedding criteria like life-cycle costing, energy efficiency, and low-carbon alternatives into tender processes, contracts, and supplier evaluations (European Commission, n.d.) (Rattia, 2022). Public entities—often accounting for a significant share of national expenditure (in many developing countries, public procurement represents approximately 15–22% of GDP)—can leverage Green Public Procurement (GPP) to stimulate demand for sustainable products, encourage innovation in green technologies, and support national environmental objectives such as climate change mitigation and resource conservation (World Bank, 2020). Unlike general green procurement, which applies to any organization, GPP leverages public funds to set examples, enforce regulations, and influence supply chains on a larger scale, often through mandatory policies or incentives.

As global pressures from climate change, resource depletion, and rapid urbanization intensify, governments are leveraging their substantial public procurement budgets—amounting to around 12% of GDP in OECD countries and up to 30% in many developing nations—to promote sustainable purchasing practices that drive innovation, support environmental objectives, and advance sustainable development (UNEP, n.d.). This document, developed under PPRA's PRIDE Project, proposes a tailored GPP policy and strategy to integrate sustainability into Punjab's procurement framework, drawing on global best practices and aligning with national climate commitments and provincial development plans.

1.1 Background on Green Public Procurement (GPP)

Green Public Procurement (GPP) refers to the process by which public authorities acquire goods, services, and works that have a reduced environmental impact throughout their life cycle—from production to disposal. Unlike traditional procurement, which primarily focuses on cost and quality, GPP integrates environmental criteria such as energy efficiency, low-carbon materials, and recyclability, alongside economic and social factors. By leveraging the purchasing power of the public sector—representing approximately 15–20% of GDP in many countries—GPP can stimulate demand for sustainable products, foster innovation, and contribute to achieving global sustainability objectives, including the United Nations Sustainable Development Goals (United Nations, n.d.) (OECD, 2024).



1.1.1 Evolution of GPP: Historical Development from Environmental Awareness to Policy Integration

GPP emerged in the late 20th century as part of a broader global response to environmental degradation, climate change, and resource scarcity. In the 1970s and 1980s, environmental movements in Europe spurred early procurement measures in countries such as Sweden and Germany, focusing on waste reduction, recycling, and the use of environmentally friendly materials in public purchasing (United Nations Environment Programme (UNEP), 2017).

By the 1990s, the European Union (EU) began formalizing GPP through procurement directives encouraging the integration of environmental considerations into tender processes. The 2004 EU Public Procurement Directives marked a milestone by explicitly recognizing life-cycle costing (LCC) and environmental performance as legitimate award criteria (European Commission, 2016).

Today, supported by guidance from organizations such as UNEP and the OECD, GPP has evolved from a voluntary practice into a strategic policy instrument in many jurisdictions, delivering measurable benefits in reducing emissions, conserving resources, and driving sustainable innovation (OECD, 2024).

1.1.2 Relevance to Developing Economies: Focus on Challenges Like Climate Change and Resource Scarcity

GPP holds particular importance for developing economies, where growing environmental and socio-economic pressures demand sustainable responses. Pakistan is one of the countries most vulnerable to climate change; the World Bank's Country Climate and Development Report (CCDR) highlights that frequent droughts, floods, heatwaves, and risks to coastal cities could result in adverse economic impacts and significantly impair development outcomes (World Bank, 2022).

GPP offers a practical policy tool in this context—allowing governments to prioritize procurement of energy-efficient technologies, water-saving infrastructure, and climate-resilient agricultural inputs. Such procurement strategies can help reduce environmental degradation, build resilience, and enhance public welfare. Moreover, aligning public spending with sustainability criteria can strengthen eligibility for international climate finance programs—such as from the Green Climate Fund—which increasingly prioritize countries with sustainable policy frameworks.

1.2 Context in Punjab, Pakistan

Punjab, Pakistan's most populous and economically significant province, faces a convergence of environmental, economic, and social challenges that demand innovative approaches to public procurement. As the hub of the country's agricultural, industrial, and urban activity, Punjab grapples with severe air pollution, water scarcity, and resource depletion, all exacerbated by rapid urbanization and climate change (World Bank, 2022). Public procurement, overseen by the Punjab Procurement Regulatory Authority (PPRA), represents a substantial portion of provincial expenditure, making it a strategic lever to address these challenges through GPP. Integrating sustainability into procurement practices can reduce the province's



ecological footprint, stimulate local green industries, and align with both national and provincial development goals.

1.2.1 Current Procurement Landscape: Overview of Punjab's Public Procurement System under PPRA

The PPRA, established under the Punjab Procurement Regulatory Authority Act, 2009, regulates public procurement to ensure transparency, efficiency, and accountability across the province. It operates under the Punjab Procurement Rules, 2014, which have been periodically amended to enhance compliance and modernization. As of August 2024, PPRA has advanced its digital transformation via the electronic procurement portal, an integrated e-procurement platform. This enables online bidding, real-time tracking, and increased transparency.

Punjab's procurement framework manages a large volume of transactions annually, including the acquisition of goods, works, and services across sectors such as infrastructure, health, and education. While the system prioritizes cost-effectiveness and procedural compliance, environmental sustainability considerations are not yet mandated in procurement criteria. This gap limits its capacity to directly tackle pressing environmental challenges such as smog, water scarcity, and industrial pollution, which are significant issues in urban centres like Lahore (PIDE, 2023).

The PRIDE Project, under which this study is being conducted, aims to integrate Green Public Procurement (GPP) into Punjab's existing procurement systems. The recent amendments to the Punjab Procurement Rules—effective 19 August 2024—strengthen provisions on e-procurement and provide an enabling foundation for embedding sustainability criteria in tendering and evaluation processes.

1.2.2 Link to National and Provincial Goals: Alignment with Pakistan's Climate Commitments and Punjab's Development Plans

Punjab's adoption of Green Public Procurement (GPP) aligns with Pakistan's Nationally Determined Contributions (NDCs) under the Paris Agreement, which commit to reducing projected greenhouse gas emissions by 50% by 2030 compared to a business-as-usual scenario—15% through domestic efforts and 35% conditional on international finance and technology transfer (Government of Pakistan, 2021).

At the provincial level, the Punjab Green Financing Strategy (2023) prioritizes sustainable economic growth and environmental protection, targeting smog reduction, water efficiency, and industrial emissions control. GPP can support these objectives by enabling the procurement of electric or hybrid vehicles, water-efficient technologies, and eco-friendly infrastructure (Finance Department, Government of Punjab, 2023).

The World Bank's Country Climate and Development Report (CCDR) for Pakistan emphasizes the need for climate-resilient and low-carbon investments to address the country's vulnerability to floods, droughts, and heatwaves—areas where GPP can channel public spending towards sustainable solutions (World Bank, 2022).



1.3 Objectives of the Study

The purpose of this study is to advance the adoption of Green Public Procurement (GPP) in Punjab, Pakistan, as a strategic tool to align public purchasing with environmental sustainability and economic development under the Punjab Procurement Regulatory Authority's (PPRA) PRIDE Project. The specific objectives are:

1. **Explore GPP adoption** – Assess the feasibility and potential of integrating GPP into Punjab's public procurement system, drawing on global best practices and local contextual factors such as environmental challenges (e.g., air pollution, water scarcity) and the province's existing e-procurement system.
2. **Propose a tailored GPP policy** – Develop a comprehensive policy framework for the Government of Punjab, incorporating environmental criteria (e.g., life-cycle costing, energy efficiency), measurable targets, and supplier engagement mechanisms to address provincial priorities and align with Pakistan's climate commitments (Government of Pakistan, 2021).
3. **Outline a phased implementation strategy** – Design a practical, phased strategy for GPP implementation over three to five years, emphasizing stakeholder collaboration, capacity building, and integration with digital procurement platforms to ensure scalability and sustainability.
4. **Provide actionable recommendations** – Offer evidence-based recommendations for PPRA and the PRIDE Project, focusing on policy adoption, strategy execution, capacity building, and leveraging international funding opportunities from organizations such as the Green Climate Fund (GCF) and the World Bank to support GPP initiatives (World Bank, 2022).

These objectives aim to deliver a robust framework for transforming Punjab's procurement practices, positioning the province as a leader in sustainable governance.

1.4 Scope and Limitations

This study focuses on the adoption of Green Public Procurement (GPP) within Punjab's public sector, targeting procurement processes managed by the Punjab Procurement Regulatory Authority (PPRA) across provincial departments. It includes the development of a GPP policy and strategy tailored to Punjab's environmental and economic challenges—such as smog, water scarcity, and industrial emissions—while aligning with the PRIDE Project's modernization goals (World Bank, 2022).

Scope includes:

- Drawing on global best practices (e.g., EU, Canada).
- Integrating insights from national climate policy and the Punjab Green Financing Strategy (2023) (Finance Department, Government of Punjab, 2023).
- Addressing agriculture, infrastructure, and urban sectors where GPP has high impact potential.
- Exploring international funding linkages with institutions such as the Green Climate Fund (GCF) and the World Bank to support implementation (Green Climate Fund, n.d.).

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Limitations include:

- **Data availability:** Lack of transparent, comprehensive data on procurement processes and environmental impacts.
- **Stakeholder resistance:** Potential pushback from suppliers or departments due to perceived costs or unfamiliarity with GPP principles.
- **Budgetary constraints:** Initial green product premiums and training needs may strain budgets without immediate external funding.
- **Timeframe limiting long-term adaptability:** The three-to-five-year implementation horizon may not capture future sustainability standards or shifts.

Despite these limitations, the study leverages available information, stakeholder input, and international best practices to propose a feasible GPP framework that can move Punjab toward sustainable and resilient procurement systems.



2 Methodology

The methodology for developing the Green Public Procurement (GPP) framework for Punjab under PRIDE Task-14 is built on two complementary pillars: evidence sourcing and synthesis and international and local insights combined with scenario modelling. Together, these ensure that the proposed GPP policy and strategy are anchored in authoritative sources, informed by practical experiences, and adapted to Punjab's institutional and environmental realities.

2.1 Evidence Sourcing and Synthesis

The first step involved systematically compiling and organizing relevant evidence from global, national, and provincial levels. Key sources included:

- **Regulatory and institutional frameworks:** Punjab Procurement Regulatory Authority Act (2009), Punjab Procurement Rules (2014 and amendments), and the design of the e-procurement system.
- **Provincial strategies:** Punjab Green Financing Strategy (2023), sectoral development policies, and provincial climate commitments.
- **National commitments:** Pakistan's National Climate Change Policy (2021) and the country's Nationally Determined Contributions (NDCs) under the Paris Agreement.
- **International benchmarks:** Toolkits and guidance from OECD, EU, UNEP, and the World Bank to align Punjab's approach with globally recognized principles of green procurement.

Each source was assessed for relevance, feasibility, and transferability to Punjab's procurement context. This synthesis enabled identification of gaps—such as the absence of mandatory environmental criteria in procurement rules—and informed the conceptual framework, strategic objectives, and actionable recommendations.

2.2 International and Local Insights and Scenario Modelling

The second step integrated comparative case insights with forward-looking scenario modelling to test the feasibility and potential impact of GPP in Punjab.

2.2.1 International Insights

Global experiences offered practical lessons in regulation, phasing, and supplier engagement:

- The European Union's life cycle costing approach demonstrated how environmental and cost considerations can be integrated into tender evaluations.
- Canada's phased implementation showed the value of piloting high-impact categories such as vehicles and infrastructure before scaling system-wide.
- South Korea's legislative mandate for eco-labelled products illustrated how strong regulatory backing can transform markets.
- Experiences from India and South Africa highlighted the importance of eco-labelling, renewable energy procurement, and supplier readiness in developing country contexts.



2.2.2 Local Insights

Punjab's own initiatives provided tangible evidence of the feasibility of embedding sustainability in procurement:

- The **electric bus deployment in Lahore (2025)** demonstrated how public transport investments can cut emissions and modernize services.
- The **energy-efficient ceiling fan labelling program**—with more than 80,000 certified fans installed, largely in government facilities—showed how procurement can accelerate market uptake of efficient technologies.
- The **Suthra Punjab Waste Management Program (2024)** highlighted how large-scale procurement of sanitation equipment, coupled with GPS-enabled monitoring, can simultaneously deliver environmental, social, and governance benefits.

2.2.3 Scenario Modelling

Building on these insights, scenario modelling was conducted to estimate potential impacts of scaling GPP in Punjab. Priority sectors included:

- **Transport:** Phased procurement of electric and hybrid vehicles for public fleets, reducing urban air pollution and cutting fuel-related emissions.
- **Agriculture:** Adoption of water-efficient irrigation systems and resource-saving technologies, helping address groundwater depletion in drought-prone areas.
- **Infrastructure:** Integration of sustainable materials with recycled content in public buildings and road projects, reducing lifecycle costs and construction emissions.

Scenarios incorporated sensitivity testing for fuel prices, water availability, and supplier capacity. Results indicated significant potential for emission reductions, water savings, lifecycle cost efficiencies, and job creation in green sectors.



3. Conceptual Framework

Green Public Procurement (GPP) has gained global recognition as a strategic tool for governments to promote environmental sustainability, leveraging public sector purchasing power to drive market transformation and support sustainable development goals. The literature on GPP provides a robust foundation for understanding its principles, frameworks, and applications, offering valuable lessons for Punjab, Pakistan, where environmental challenges like air pollution and water scarcity demand innovative procurement solutions. This chapter synthesizes global and local evidence to inform the development of a tailored GPP framework for Punjab under the Punjab Procurement Regulatory Authority's (PPRA) PRIDE Project. It reviews international definitions and frameworks, best practices from developed and developing economies, Pakistan's GPP landscape, and proposes a conceptual model integrating environmental, economic, and social pillars to guide policy and strategy development.

3.1 Global Definitions and Frameworks for GPP

GPP is widely acknowledged as a mechanism to integrate environmental considerations into public procurement, balancing sustainability with economic and social objectives. Leading international organizations have developed definitions and frameworks that highlight GPP's role in reducing ecological impacts and fostering green markets, providing a blueprint for Punjab to adapt to its context of resource constraints and environmental priorities.

3.1.1 Key Definitions: From Organizations like OECD, EU, and World Bank

OECD (2024) defines Green Public Procurement (GPP) as “a process whereby public authorities procure goods, services, and works with reduced environmental impact throughout their life cycle, compared to alternatives with the same function.” This emphasizes life-cycle assessment as a cornerstone, encouraging procurement of energy-efficient, low-carbon, and recyclable goods to support climate objectives (OECD, 2025).

European Commission (n.d.) describes GPP as “a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to alternatives with the same function.” Enshrined in the EU's 2014 Public Procurement Directives, this framework incorporates environmental and social objectives via sector-specific criteria—such as low-emission vehicles and recycled building materials—resulting in measurable outcomes like significant reductions in public fleet emissions (European Commission, n.d.).

World Bank (2024) positions GPP as a strategic policy tool that enables public procurement to “reorient economies towards greener, more energy-efficient and circular economic models.” Their diagnostic toolkit emphasizes that governments, through procurement, can catalyse structural shifts toward sustainability, achieve resilience, and reinforce low-carbon development (World Bank, 2024).

3.1.2 Differences Between General Green Procurement and Public Procurement

General green procurement refers to environmentally preferable purchasing by any organization, including private firms, driven by voluntary commitments to sustainability or cost savings. In contrast, GPP operates



within the public sector, leveraging government spending—often 15–22% of GDP—to drive systemic change (World Bank, 2020). GPP is governed by strict regulations, such as the Punjab Procurement Rules 2014 in Punjab (PPRA, 2024).

3.2 Best Practices from International Case Studies

International case studies demonstrate effective GPP strategies that Punjab can adapt to address its environmental and economic challenges. The EU's mandatory criteria, Canada's phased implementation, and sustainable procurement initiatives in developing countries like India and South Africa offer practical lessons for policy design, stakeholder engagement, and monitoring under the PRIDE Project.

3.2.1 European Union: Mandatory GPP Criteria and Life-Cycle Costing

The European Union's GPP framework, anchored in the 2014 Public Procurement Directives (Directives 2014/24/EU and 2014/25/EU), enables contracting authorities to include environmental and life-cycle costing (LCC) criteria in public tenders. The Directives allow environmental dimensions—like energy efficiency and emissions—to be part of both technical specifications and award criteria, provided that calculation methods and data requirements are transparent in procurement documents (European Commission, n.d.).

These provisions encourage “win-win” outcomes where greener procurement often results in long-term cost savings. For example, life-cycle costing tools have helped EU governments compare acquisition, use, and disposal costs when procuring energy-efficient products, showing that environmentally preferable choices frequently reduce overall expenditure (European Commission, n.d.). However, it is important to note that the Directives permit but do not mandate sector-specific targets (e.g., electric vehicle quotas); measurable reductions in emissions or costs depend on how Member States apply the framework (Lewis, Kaaret, Morales, Piirsalu, & Axelsson, 2023).

The EU supports adoption through practical toolkits, training, and LCC calculators, along with Good Practice Databases that track implementation across Member States. These resources strengthen capacity building, compliance, and continuous improvement in procurement systems (EPA (Ireland), 2024).

Lessons for Punjab: Punjab's procurement framework could benefit from integrating LCC approaches—accounting for total cost of ownership and environmental impact in evaluation—and by developing capacity-building tools similar to the EU's GPP toolkit. This would help PPRA officials apply and monitor green criteria consistently.

3.2.2 Canada: Policy on Green Procurement with Phased Implementation

Canada's Policy on Green Procurement embeds environmental considerations—including energy efficiency, lifecycle impacts, and sustainable materials—within the federal procurement process to achieve value for money and environmental stewardship. It requires procurement officials to assess the total cost of ownership across planning, acquisition, use, and disposal stages. (Treasury Board of Canada Secretariat, 2022)

The policy's rollout follows a phased implementation strategy, initially targeting high-impact categories like light-duty vehicles, furniture, and professional services. Under the Low Carbon Procurement Project, science-



based carbon footprint calculators were introduced to measure and reduce embedded emissions in these categories. These tools support greener procurement decisions across the government. (Treasury Board of Canada Secretariat, 2022)

Additionally, the government tracks its progress through annual supplementary reports, including data on departmental efforts to incorporate environmental criteria into procurement. As of 2023, some departments reported integrating green rating criteria into up to three pilot procurements, reflecting early-stage uptake. (Departmental Results Report – Justice Canada, 2022)

Lessons for Punjab: Canada's phased rollout provides a practical model for Punjab's GPP. Punjab can pilot green procurement in key sectors (like agriculture and transport), develop tools for environmental impact assessment, and use phased reporting and training to ensure accountability and build institutional capacity.

3.2.3 Developing Countries: India and South Africa's Sustainable Procurement Initiatives

India: While India does not yet have a unified national Green Public Procurement (GPP) policy, it has taken concrete steps toward integrating sustainability into procurement. Notably, sustainability criteria have been included in procurement practices featured through governmental platforms such as the Government e-Marketplace, and efforts like eco-labelling and green product promotion have been piloted across various sectors. Moreover, public procurement constitutes approximately 20% of India's GDP, making it a powerful lever for sustainable market transformation (RMI, 2024).

South Africa: The country is leveraging its procurement system—a sector representing around 15% of GDP—to advance green objectives, particularly through the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP). This initiative has added over 6,200 MW of renewable capacity, reducing CO₂ emissions by 22.5 million tonnes and water use by 26.6 million kilolitres. Additionally, strategic recommendations include enhancing GPP monitoring, capacity building for procurement officials, and embedding sustainability into budget norms (IISD, 2025).

Lessons for Punjab:

- India's integration of sustainability considerations into digital procurement systems (e.g., GeM) and its actionable use of eco-labels and inclusion thresholds provide a template for designing standards-based procurement criteria in Punjab.
- South Africa's renewable procurement model and its emphasis on robust monitoring systems, capacity-building, and green performance tracking offer actionable insights for institutionalizing GPP in Punjab's procurement processes.

3.3 GPP in Pakistan: National Policies, Existing Guidelines, and Gaps in Punjab

Pakistan's GPP landscape is nascent but evolving, with national policies providing a foundation that Punjab can build upon. Identifying gaps in Punjab's procurement practices is critical to designing a tailored GPP framework under the PRIDE Project.



3.3.1 Federal Level Insights: Pakistan's Environmental Policies and Procurement Rules

The National Climate Change Policy (NCCP) 2021 outlines a comprehensive vision for climate-resilient, low-carbon development across critical sectors such as energy, transport, forestry, and agriculture, and introduces flagship programs like the Ten Billion Tree Tsunami and the Clean Green Pakistan Movement. However, the policy does not explicitly incorporate Green Public Procurement (GPP) as a strategic mechanism to achieve these goals (Government of Pakistan, 2021).

The Public Procurement Rules of 2004, which form the backbone of the federal procurement framework, emphasize transparency and value for money. They do not currently mandate environmental or sustainability criteria, making the inclusion of such factors voluntary and not uniformly enforced (Hussein & Najib, 2021).

Compounding this, a recent review highlights a significant gap between policy formulation and implementation in Pakistan's broader climate governance. Challenges include inconsistent execution across provinces, weak inter-agency coordination, and limited capacity to translate policy into action—thereby undermining effective procurement-driven sustainability (Khan, 2025).

3.3.2 Provincial Gaps: Limited Integration in Punjab's Procurement Practices

The Punjab Procurement Rules, 2014 govern thousands of annual tender processes (exceeding 129,000) but currently do not include mandatory environmental sustainability criteria, limiting the province's ability to use procurement as a tool for green transformation (PPRA, 2024).

The Punjab Green Financing Strategy (2023) highlights sustainable transport, energy efficiency, and resource conservation as priority areas and encourages green procurement, including pilots like electric bus deployments to reduce urban air pollution (Finance Department, Government of Punjab, 2023).

However, challenges persist:

- Limited supplier capacity and insufficient training programs hinder widespread adoption of green procurement practices.
- Lack of data on procurement-related environmental impacts makes it difficult to set performance targets or measure outcomes.
- While the e-procurement system provides a digital platform capable of integrating sustainability criteria, actual awareness and initiative to embed these metrics remain low within procurement institutions.

3.4 Conceptual Framework: Model for GPP in Punjab

The Green Public Procurement (GPP) framework for Punjab is structured around three interconnected pillars—Environmental, Economic, and Social—supported by digital monitoring and international climate finance mechanisms.

1. **Environmental Pillar:** Prioritizes low-impact procurement (e.g., water-efficient technologies, clean vehicles) to combat environmental challenges such as smog and resource scarcity. This aligns

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with Pakistan's National Climate Change Policy 2021, which outlines priorities for low-carbon, climate-resilient development—though it notably lacks explicit guidance on GPP (Government of Pakistan, 2021).

2. **Economic Pillar:** Emphasizes Life-Cycle Costing (LCC) to assess total ownership costs, not just initial purchase price. The EU's experience shows that LCC-based procurement often delivers long-term cost savings and supports sustainability goals (European Commission, n.d.).
3. **Social Pillar:** Focuses on public health and equity by reducing environmental pollutants through procurement—especially crucial in Punjab's urban centres, where studies show safety-grade pollution levels contribute to high rates of respiratory and cardiovascular diseases (Iram, Shabbir, Pomee, Schmidt, & Hertig, 2025).

Enabling Mechanisms

- **Digital Monitoring:** Leveraging Punjab's e-procurement platform to embed and enforce sustainability criteria.
- **International Climate Finance:** GPP strengthens eligibility for global funding instruments like the World Bank, which recognizes it as a strategic tool for green, resilient economies (World Bank, 2024).



4. Significance of Green Public Procurement for Punjab

Building upon the preceding sections, it is evident that Green Public Procurement (GPP) holds transformative significance for Punjab. Far beyond a procurement reform, GPP represents a strategic instrument to integrate sustainability into governance, stimulate economic innovation, and strengthen social resilience. In a province challenged by environmental degradation, rising fiscal pressures, and social disparities, GPP can convert public purchasing power into a lever for systemic change. The following subsections highlight its significance across environmental, economic, social, and institutional dimensions, with specific relevance to Punjab's current context and long-term aspirations.

4.1 Environmental Significance: Protecting Natural Resources and Public Health

Punjab faces acute ecological stress in the form of smog, water scarcity, and waste mismanagement. By embedding environmental criteria in procurement, GPP enables the government to directly address these challenges:

- **Air Quality and Emissions Reduction:** Prioritizing energy-efficient transport, clean technologies, and low-carbon materials directly contributes to smog reduction in urban centres such as Lahore and Faisalabad.
- **Water Conservation:** Procurement of water-efficient technologies—such as drip irrigation systems and low-consumption public infrastructure—helps conserve scarce resources in Punjab's agriculture-dominated economy.
- **Waste Minimization and Circularity:** Mandating recycled, reusable, refurbished, and biodegradable materials promotes circular economy practices, lowering the ecological footprint of public projects.

By institutionalizing these criteria, GPP allows Punjab to align its development trajectory with climate resilience and intergenerational equity.

4.2 Economic Significance: Enabling Fiscal Savings and Green Market Development

Economic sustainability is at the core of GPP. It allows Punjab to secure financial benefits that extend far beyond immediate procurement cycles:

- **Life-Cycle Costing and Long-Term Savings:** Rather than focusing solely on upfront costs, GPP encourages evaluating total expenses—including maintenance, energy consumption, and disposal. This shifts public investment towards durable, efficient assets that reduce fiscal burdens over time.
- **Stimulation of Local Green Industries:** Punjab's large SME base can benefit from preferential demand for locally produced sustainable goods and services. By setting green standards in tenders, the province can reduce dependence on imports while fostering innovation in renewable energy, recycling, and sustainable construction sectors.
- **Employment Generation:** The growth of green markets brings new employment opportunities, particularly in renewable energy, eco-friendly manufacturing, and sustainable agriculture. This directly contributes to economic resilience and livelihood diversification.



Thus, GPP transforms public expenditure into a driver of industrial competitiveness and inclusive economic growth.

4.2.1 Circular Economy through Refurbished Procurement

A critical dimension of Green Public Procurement is the integration of refurbished goods into public purchasing. Globally, refurbished procurement is recognized as a credible component of sustainable procurement, offering substantial fiscal savings while reducing electronic and material waste. By extending product lifecycles—particularly in high-turnover categories such as ICT equipment and furniture—refurbished procurement advances Punjab's transition to a circular economy. With appropriate safeguards such as warranties, certifications, and life-cycle costing, refurbished items ensure quality, accountability, and value for money.

4.3 Social Significance: Advancing Equity and Community Well-Being

Public procurement decisions directly affect the quality of life of citizens. By embedding sustainability, GPP generates wide-ranging social benefits:

- **Improved Public Health:** Cleaner transport systems, low-emission energy solutions, and safer construction materials reduce health risks linked to pollution and environmental degradation.
- **Equity in Access:** GPP ensures that disadvantaged communities benefit from sustainable infrastructure—such as clean water supply systems, energy-efficient public housing, and resilient healthcare facilities.
- **Strengthening Community Resilience:** Procurement of climate-resilient infrastructure, including flood-resistant and energy-secure buildings, equips communities to better withstand climate shocks, particularly in vulnerable regions of Punjab.

This social dimension ensures that procurement reforms are not merely technical but also human-centred, with visible benefits for citizens.

4.4 Institutional and Strategic Significance: Strengthening Governance and Global Linkages

Beyond environmental and socio-economic gains, GPP holds profound institutional significance:

- **Enhancing Transparency and Accountability:** Embedding sustainability criteria into procurement frameworks strengthens PPRA's ability to enforce higher standards of governance and reduce opportunities for non-compliance.
- **Alignment with National and Global Commitments:** GPP operationalizes Punjab's obligations under Pakistan's climate goals, while positioning the province as a model for other federating units.
- **Unlocking International Financing:** By aligning with international green standards, Punjab enhances its eligibility for global climate funds, development assistance, and technical cooperation. This strategic positioning enables access to resources that can accelerate the province's sustainability agenda.



4.5 Critical Insight for Punjab

Taken together, these dimensions illustrate that GPP is not simply a reform in procurement practice but a strategic enabler of sustainable development. By linking fiscal prudence with environmental stewardship and social welfare, it positions Punjab to simultaneously manage short-term pressures and pursue long-term resilience. The introduction of GPP under the PRIDE framework thus represents a decisive opportunity to transform procurement from a transactional activity into a vehicle for systemic change.



5. International and Local Insights

This chapter consolidates influential experiences from both international and local contexts that demonstrate the transformative role of Green Public Procurement (GPP). Each example illustrates a significant initiative, showing how procurement strategies can be leveraged to achieve environmental sustainability, economic resilience, and social co-benefits.

5.1 International Insights

5.1.1 European Union – Copenhagen’s Organic Food Procurement

Copenhagen transformed its municipal food services by securing a two-year contract in 2014 for organic, seasonal, and varied produce across over 900 public canteens—including schools, hospitals, and community centers. This framework mandated whole fruits, vegetables, and herbs, with a strong emphasis on quality, supplier engagement, and compliance with EU organic certification standards (ICLEI Europe, 2017). The city introduced “seasonal wheels” to ensure supplier responsiveness throughout the year, held pre-tender market dialogues, and simplified specifications to enable SME participation. As a result, organic content in public meals rose to 88%, boosting local supplier capacity and reducing greenhouse gas emissions—Copenhagen’s scale and methodology exemplify how front-line sustainability can be mainstreamed in public procurement (PROCURA+, 2017).

5.1.2 Republic of Korea – Legislated Green Certification Requirements

South Korea’s Act on the Promotion of Purchase of Green Products (2005) requires public agencies to systematically purchase eco-labelled goods and report progress annually. The Korea Environmental Industry & Technology Institute (KEITI) supports this transition by maintaining ecolabel databases and green product registries. Between 2006 and 2017, green procurement increased from KRW 861.4 billion to KRW 3.3 trillion, signaling substantial market transformation driven by legislation and institutional infrastructure (One Planet Network, 2018).

5.1.3 Canada – Federal Green Procurement with Transparency

Canada’s Policy on Green Procurement and the Greening Government Strategy mandate environmental criteria across federal procurement categories—ranging from vehicles to office infrastructure. Each department is required to report annually on green performance, including energy efficiency gains and fleet electrification status, ensuring transparency and accountability (Government of Canada, 2025). This model demonstrates how institutional transparency can reinforce sustainable procurement goals.

5.2 Local Insights (Pakistan/ Punjab)

5.2.1 Electric Bus Deployment (Lahore)

In February 2025, Punjab launched a pilot electric-bus service in Lahore with 27 e-buses, with officials projecting benefits for roughly 17,000 commuters per day on initial routes. The pilot is intended to cut



tailpipe emissions and modernize urban public transport, with plans discussed to scale the service across the province (The Express Tribune, 2025).

5.2.2 Energy-Efficient Ceiling Fan Labelling (Punjab)

Punjab, working with the provincial energy agency and international partners, introduced Pakistan's first energy-efficiency standards and labelling effort for ceiling fans. A program update documents 23 certified models and the installation of about 83,000 labelled fans—mostly in government buildings—demonstrating how procurement can accelerate market uptake of efficient appliances (World Bank Group, 2017).

5.2.3 Suthra Punjab Waste Management Program

The Suthra Punjab program, launched in December 2024, represented a large-scale public procurement intervention in sanitation: over 21,000 cleaning machines and waste vehicles were deployed across Punjab. GPS devices and digital dashboards enabled real-time performance monitoring, doubling as accountability tools. This initiative modernized public sanitation services while creating employment and institutional transparency (Government of Punjab, 2025).

5.3 Lessons Learned

The review of international and local experiences provides clear evidence that Green Public Procurement (GPP) can act as a catalyst for systemic change when designed with both ambition and practicality. Several cross-cutting lessons emerge:

5.3.1 Strong Legal and Policy Frameworks Drive Market Transformation

Experiences from the Republic of Korea and Canada illustrate that legislated requirements and transparent reporting mechanisms are essential to sustain progress. Korea's legal mandate for eco-labelled product purchases created demand certainty, while Canada's annual departmental reporting ensured accountability. Punjab's own initiatives—such as the fan energy labelling program—demonstrate that even in emerging markets, regulatory clarity combined with institutional oversight can establish new market norms.

5.3.2 Market Engagement and Supplier Readiness are Critical

The Copenhagen case highlights the value of proactive supplier dialogue, simplified tender specifications, and phased implementation to encourage SME participation. Punjab's appliance efficiency program similarly showed that local industries can adapt when procurement frameworks reduce entry barriers and provide visibility of demand. For Punjab, this underscores the importance of balancing ambition with supplier readiness to avoid supply-side bottlenecks.

5.3.3 Transparency and Monitoring Reinforce Credibility

Canada's transparent reporting and Punjab's Suthra Punjab program, which incorporated GPS-enabled monitoring and digital dashboards, highlight the importance of visibility in procurement outcomes. These



mechanisms not only ensure accountability but also build public trust and provide real-time data for decision-makers.

5.3.4 High-Impact Sectors Deliver Rapid Co-Benefits

International insights show that sectors like transport, food procurement, and infrastructure provide measurable and visible sustainability benefits. Locally, Punjab's electric bus deployment and energy-efficient fan program demonstrate that focusing on high-consumption, high-emission sectors can deliver quick wins in air quality, energy savings, and citizen wellbeing.

5.3.5 Institutional Capacity and Funding Mechanisms Remain Key Barriers

Despite successes, challenges remain. International cases emphasize the need for dedicated funding streams and technical capacity within procuring agencies. Similarly, Punjab's initiatives have faced hurdles around scaling pilots into province-wide adoption. Addressing institutional readiness through training, resource allocation, and technical support will be vital for long-term GPP success.

5.3.6 Integration of Technology Enhances Impact

From digital dashboards in Punjab's sanitation procurement to lifecycle costing tools in EU procurement, the integration of technology emerges as a common success factor. Such innovations enable better monitoring, reduce leakage, and improve efficiency—making GPP a lever for both modernization and sustainability.



6 Green Procurement Strategy

This chapter consolidates the regulatory framework, institutional mechanisms, sustainability objectives, stakeholder engagement, digital integration, and international funding strategies for adopting Green Public Procurement (GPP) in Punjab, Pakistan, under the Punjab Procurement Regulatory Authority (PPRA) and PRIDE Project. It aligns public purchasing with environmental sustainability to address Punjab's pressing challenges, such as air pollution in Lahore/Faisalabad and water scarcity in Cholistan, while fostering green industries and securing financial support from international bodies. By leveraging Punjab's 129,682 annual tenders ("PPRA Rules.pdf"), this strategy positions the province as a leader in green governance, drawing on global best practices from the EU, South Africa, and Korea ("EU - buying green!.pdf," "IISD - Advancing Green Public Procurement in South Africa.pdf," "green public procurement in the republic of Korea - a decade of progress and lessons learned.pdf").

6.1 Regulatory and Legal Integration

This section outlines the regulatory and legal amendments necessary to embed Green Public Procurement (GPP) into Punjab's procurement framework, ensuring alignment with national and international climate goals while fostering sustainable public purchasing. By updating existing regulations and integrating cost-effective methodologies, Punjab can leverage its 129,682 annual tenders, valued at approximately PKR 500 billion, to address environmental challenges like air pollution in Lahore/Faisalabad and water scarcity in Cholistan, while securing financial support from international donor agencies.

6.1.1 Amend Punjab Procurement Rules 2014

6.1.1.1 Green Criteria Mandate

The Punjab Procurement Rules 2014 must be amended within six months to mandate sustainability criteria across all public tenders. These criteria will require at least 20% recycled content in construction materials, such as cement and steel used in public infrastructure projects, and the procurement of energy-efficient appliances, such as fans and lighting systems that meet high energy performance standards. This mandate ensures that Punjab's procurement processes prioritize environmentally friendly products, reducing the ecological footprint of public spending. By embedding these criteria, the Punjab Procurement Regulatory Authority (PPRA) can align its framework with sustainable development objectives, ensuring that all tenders incorporate green specifications to drive demand for eco-friendly goods and services.

In addition to recycled content and energy-efficient appliances, the Punjab Procurement Rules should explicitly recognize refurbished goods as a legitimate procurement option. High-turnover categories such as ICT equipment and furniture can be procured in refurbished form, provided they meet mandatory safeguards including minimum warranties, supplier certifications, and life-cycle costing assessments. This approach reduces e-waste, extends product lifespans, and delivers fiscal savings while ensuring accountability and performance standards comparable to new products.



6.1.1.2 Contract Compliance Mechanisms

To enforce green criteria, contractual clauses must be introduced to ensure supplier adherence to sustainability standards. These clauses will require suppliers to provide evidence of compliance, such as eco-labels or energy performance certifications, during the tendering process. Non-compliance will result in penalties or disqualification from future tenders, ensuring accountability. These mechanisms will establish a robust compliance framework, enabling PPRA to monitor and enforce green standards effectively, while fostering a culture of sustainability among suppliers competing for Punjab's substantial procurement contracts. For refurbished goods, suppliers must additionally demonstrate compliance with defined refurbishment standards, including certification from authorized refurbishers and provision of warranties equal to or greater than those offered for new products.

6.1.2 Embed Life-Cycle Costing (LCC)

6.1.2.1 LCC in Tender Evaluations

Life-Cycle Costing (LCC) must be mandated in all tender evaluations to prioritize long-term savings over initial costs, targeting annual savings of PKR 500 million through energy-efficient solutions. LCC evaluates the total cost of a product or service over its entire life cycle, including acquisition, operation, maintenance, and disposal. For example, procuring energy-efficient fans or HVAC systems for public buildings reduces energy consumption and maintenance costs, delivering fiscal benefits alongside environmental gains. By integrating LCC, PPRA can ensure that procurement decisions balance sustainability with economic efficiency, maximizing value for Punjab's public funds.

Similarly, procuring refurbished ICT equipment (e.g., laptops or desktops) with certified warranties can lower acquisition costs by up to 40% while maintaining performance standards, thereby achieving both fiscal prudence and environmental benefits.

6.1.2.2 Guidelines for LCC Application

Comprehensive guidelines and training materials must be developed for procurement officers to apply LCC effectively. These guidelines will outline methodologies for calculating life-cycle costs, including energy consumption, maintenance expenses, and end-of-life disposal costs. Training programs will equip officers with the skills to evaluate tenders based on LCC, ensuring that green products with higher upfront costs but lower long-term expenses are prioritized. This approach will enhance the cost-effectiveness of Punjab's procurement processes, supporting sustainable purchasing decisions across government departments.

6.1.3 Climate Change and Long-Term Sustainability Objectives

This section outlines the strategic objectives for scaling Green Public Procurement (GPP) in Punjab, positioning it as a core instrument for addressing climate change while fostering sustainable development. By explicitly linking procurement decisions to climate mitigation and adaptation, Punjab can transform its 129,682 annual tenders, valued at approximately PKR 500 billion, into a lever for reducing greenhouse gas emissions, conserving natural resources, and building resilience against climate risks such as floods,



droughts, and heatwaves. These objectives are fully aligned with Pakistan's Nationally Determined Contributions (NDCs), the National Climate Change Policy (2021), and the Punjab Green Financing Strategy (2023), ensuring that provincial procurement directly contributes to national and global climate goals.

6.1.3.1 Green Contract Expansion

Punjab's procurement strategy must progressively increase the share of green contracts that explicitly support climate objectives. For example, tenders for construction materials should prioritize low-carbon and recycled options, while procurement of energy-efficient appliances and renewable energy technologies should be scaled across public institutions. Such actions not only reduce emissions but also generate fiscal savings by lowering lifecycle costs of government assets. Incentive structures—such as preferential scoring or tax benefits—can further encourage suppliers to adopt climate-friendly practices, strengthening the local green economy.

6.1.3.2 Sectoral Transformation

Targeted sectoral interventions are central to addressing climate change through GPP:

- **Transport:** Procurement of electric and hybrid buses, low-emission vehicles, and sustainable fuels will directly mitigate vehicular emissions—currently a major contributor to urban smog and CO₂ levels in Lahore and Faisalabad.
- **Agriculture:** Adoption of water-efficient irrigation technologies and climate-smart inputs will reduce vulnerability to erratic rainfall and groundwater depletion, safeguarding Punjab's food security in a warming climate.
- **Infrastructure:** Public works must prioritize climate-resilient and low-carbon materials, such as green cement and recycled asphalt, reducing emissions while enhancing durability under extreme weather conditions.

6.1.3.3 Climate Resilience

Beyond mitigation, procurement must strengthen Punjab's adaptive capacity to climate shocks. By embedding risk-based criteria into tenders—such as flood-resistant construction materials, drought-tolerant seeds, and energy-secure public facilities—GPP can protect infrastructure and communities from escalating climate impacts. This approach ensures that public investments deliver long-term value even under worsening climate scenarios, reducing recovery costs from disasters like the 2022 floods that damaged over 178,000 acres of farmland.

6.1.3.4 International Donor Alignment

Framing GPP as a climate action tool enhances Punjab's eligibility for international climate finance and technical assistance. By aligning procurement with the Paris Agreement and the UN Sustainable Development Goals (particularly SDG 12 and SDG 13), Punjab can leverage donor support from the Green Climate Fund (GCF), the World Bank, and UNEP. These resources can subsidize the costs of green technologies, fund capacity-building initiatives, and accelerate the province's transition to climate-resilient procurement systems.



6.2 Institutional and Governance Mechanisms

This section outlines the institutional structures and governance mechanisms required to operationalize Green Public Procurement (GPP) in Punjab, ensuring effective coordination, compliance, and accountability across the procurement ecosystem. By establishing dedicated bodies, fostering inter-departmental collaboration, and setting robust supplier standards and monitoring systems, Punjab can integrate GPP into its 129,682 annual tenders, valued at approximately PKR 500 billion, to address environmental challenges like air pollution in Lahore/Faisalabad and water scarcity in Cholistan. These mechanisms also position Punjab to leverage international donor support for capacity building and policy development, enhancing the sustainability of its procurement framework.

6.2.1 Establish GPP Task Force

6.2.1.1 Task Force Mandate

A PPRA-led GPP Task Force must be established to spearhead the development of green tender templates, guidelines, and compliance frameworks. The task force will define standardized green procurement processes, ensuring consistency across Punjab's diverse procurement activities, from infrastructure projects to office supplies. By setting clear objectives, such as integrating sustainability criteria into all tender categories, the task force will provide strategic direction to align PPRA's operations with Punjab's environmental goals, fostering a cohesive approach to green governance.

6.2.1.2 Cross-Sector Representation

The task force must include representatives from Punjab's Environment Protection Department, Energy Department, and Agriculture Department to ensure GPP aligns with sectoral priorities. For instance, the Environment Protection Department can guide air quality-focused procurement, such as low-emission vehicles, while the Agriculture Department can advocate for water-efficient technologies like drip irrigation. This cross-sectoral composition ensures that GPP addresses Punjab-specific challenges holistically, integrating expertise from key government entities to enhance policy effectiveness.

6.2.2 Inter-Departmental Coordination

6.2.2.1 Collaborative Platforms

Dedicated coordination platforms must be created to facilitate collaboration between PPRA and Punjab's Environment Protection, Energy, and Agriculture Departments. These platforms will integrate GPP into sectoral policies, such as promoting low-emission transport in urban centres or sustainable irrigation in rural areas. Regular inter-departmental meetings and joint policy reviews will ensure that GPP aligns with Punjab's broader environmental and economic objectives, creating a unified approach to sustainable procurement across government functions.



6.2.2.2 Policy Harmonization

GPP must be streamlined with PPRA's existing oversight mechanisms to avoid bureaucratic overlaps and ensure efficient integration. By aligning green procurement policies with current PPRA regulations, such as those governing tender evaluation and supplier selection, Punjab can embed sustainability without disrupting established processes. This harmonization will leverage PPRA's authority over the province's substantial procurement budget, ensuring that green principles are seamlessly incorporated into routine operations.

6.2.3 Supplier Qualification Standards

6.2.3.1 Environmental Certifications

Suppliers must meet environmental certifications, such as ISO 14001 or eco-labels, to participate in green tenders. These certifications ensure that suppliers adhere to sustainability standards, such as producing recycled materials or energy-efficient products, aligning with Punjab's environmental goals. By setting clear certification requirements, PPRA can create a reliable pool of green suppliers, driving demand for sustainable goods and services within Punjab's procurement market.

6.2.3.2 SME Compliance Support

To encourage participation by small and medium enterprises (SMEs), subsidies and simplified certification processes must be provided to reduce compliance costs. For instance, financial support for obtaining eco-labels or technical assistance for adopting sustainable practices will enable SMEs to compete in green tenders. This support targets Punjab's large SME base, which employs millions and can drive innovation in green products, ensuring inclusivity in the GPP framework.

6.2.4 Monitoring and Reporting

6.2.4.1 Develop GPP KPIs

Key performance indicators (KPIs) must be established to monitor GPP policy adherence, such as the percentage of tenders incorporating green criteria or the volume of sustainable products procured. These KPIs will provide measurable benchmarks to assess the integration of sustainability into Punjab's procurement processes, ensuring accountability and guiding policy refinements. The focus will be on metrics that reflect Punjab's environmental priorities, such as reducing air pollution or conserving water resources.

6.2.4.2 Annual Reporting System

PPRA must mandate annual GPP progress reports to document adoption rates, compliance levels, and challenges faced by suppliers. These reports will enhance transparency, allowing stakeholders to track the effectiveness of green procurement initiatives. By publishing detailed insights into GPP's progress, PPRA can build trust among government departments, suppliers, and international donors, demonstrating Punjab's commitment to sustainable governance.



6.2.5 Third-Party Oversight

6.2.5.1 Independent Audits

Third-party auditors must be engaged to verify supplier compliance with green criteria, ensuring credibility and adherence to sustainability standards. These audits will assess whether suppliers meet certification requirements and deliver products that align with GPP objectives, such as energy-efficient appliances or recycled construction materials. Independent oversight will strengthen the integrity of Punjab's green procurement framework, fostering confidence among stakeholders.

6.2.5.2 Feedback Mechanisms

Channels must be established for suppliers to report compliance challenges, such as difficulties in obtaining certifications or meeting green criteria. These feedback mechanisms will enable PPRA to refine GPP policies, ensuring they are practical and inclusive. By incorporating supplier input, Punjab can address barriers faced by SMEs and other stakeholders, enhancing the effectiveness of the GPP framework.

6.2.6 International Donor Support for Governance

6.2.6.1 6.2.6.1 Capacity Building Funding

Punjab must pursue funding from international donor agencies, such as the World Bank and the United Nations Environment Programme (UNEP), to support capacity building for GPP governance. These funds will finance training programs for the GPP Task Force and procurement officers, ensuring they are equipped to implement and monitor green procurement policies. This support leverages Punjab's alignment with global sustainability goals to enhance institutional capabilities.

6.2.6.2 Technical Assistance from International Bodies

Collaboration with international bodies like the OECD and UNEP will provide technical assistance for developing robust governance mechanisms. These organizations can offer expertise in designing KPIs, reporting systems, and audit frameworks tailored to Punjab's needs. By tapping into global knowledge networks, PPRA can strengthen its governance structures, ensuring GPP's long-term sustainability and attracting further donor support.

6.3 Long-Term Sustainability Objectives

This section outlines the strategic objectives for scaling Green Public Procurement (GPP) in Punjab, aiming to transform public purchasing into a driver of environmental sustainability and economic development. By prioritizing green contracts, sectoral transformation, and climate resilience, Punjab can leverage its 129,682 annual tenders, valued at approximately PKR 500 billion, to address critical environmental challenges, such as air pollution in Lahore/Faisalabad and water scarcity in Cholistan. These objectives align with global sustainability goals, positioning Punjab to attract international donor support for sustainable procurement initiatives, fostering a green economy while enhancing resilience against climate risks.



6.3.1 Green Contract Expansion

6.3.1.1 Scale Green Tenders

The strategic vision for GPP is to significantly increase the proportion of green contracts within Punjab's 129,682 annual tenders, prioritizing sustainability across all procurement categories. This objective focuses on embedding environmental considerations into tenders for goods, services, and infrastructure, such as procuring recycled materials for public buildings or energy-efficient equipment for government offices. By scaling green tenders, Punjab can drive market demand for sustainable products, fostering innovation and reducing the environmental footprint of its substantial procurement activities.

6.3.1.2 Incentive Structures

To encourage supplier participation in green tenders, Punjab must introduce financial incentives, such as tax breaks or preferential scoring systems, for suppliers adopting sustainable practices. For example, suppliers offering recycled construction materials or renewable energy solutions could receive higher evaluation scores or reduced tax liabilities. These incentives will stimulate the development of a green supply chain, enabling Punjab to leverage its procurement power to support environmentally responsible businesses and create a competitive market for sustainable goods and services.

6.3.2 Sectoral Transformation

6.3.2.1 Transport Sector

GPP must prioritize the procurement of low-emission vehicles, such as electric buses or hybrid vehicles, for public transport systems in urban centres like Lahore and Faisalabad, where vehicular emissions significantly contribute to air pollution. By focusing on sustainable transport solutions, Punjab can address urban air quality challenges, reducing the health and economic burdens associated with smog. This objective aligns procurement with the province's environmental priorities, promoting cleaner and more efficient transport infrastructure.

6.3.2.2 Agriculture and Infrastructure

The strategy emphasizes sustainable procurement in agriculture and infrastructure to address Punjab's environmental challenges. In agriculture, GPP will prioritize water-efficient technologies, such as drip irrigation systems for arid regions like Cholistan, to mitigate water scarcity affecting crop production. In infrastructure, the focus will be on procuring low-carbon materials, such as green cement or sustainable asphalt, for public works projects like roads and schools. These priorities ensure that procurement drives sectoral sustainability, supporting Punjab's economic and environmental goals.



6.3.3 Climate Resilience

6.3.3.1 Adaptation Focus

GPP must be designed to enhance Punjab's resilience against climate risks, such as droughts and floods, which have caused significant agricultural and infrastructural damage in recent years. By prioritizing the procurement of climate-resilient products, such as drought-resistant seeds or flood-resistant building materials, Punjab can strengthen its adaptive capacity. This objective aligns procurement with the province's need to protect communities and infrastructure from escalating climate challenges, ensuring long-term sustainability.

6.3.3.2 Risk-Based Procurement

Procurement criteria must be developed to prioritize climate-resilient materials and technologies, such as water-saving irrigation systems or durable construction materials suited for extreme weather conditions. By embedding risk-based criteria into tenders, Punjab can ensure that public investments withstand climate-related disruptions, such as the 2022 floods that damaged 178,000 acres of farmland. This approach positions GPP as a proactive tool for building a climate-resilient future, aligning with global sustainability objectives.

6.3.4 International Donor Alignment

6.3.4.1 Leveraging Global Sustainability Goals

Punjab's GPP strategy must align with global sustainability frameworks, such as the UN Sustainable Development Goals (SDGs, particularly SDG 12 on sustainable consumption and production) and the Paris Agreement, to attract funding from international donor agencies. By positioning GPP as a tool to meet these goals, Punjab can secure financial support from entities like the Green Climate Fund (GCF), which has allocated USD 20 million for sustainable projects in the province, to subsidize green procurement initiatives.

6.3.4.2 Donor-Funded Sustainability Projects

Engaging with donor agencies, such as the World Bank and the United Nations Environment Programme (UNEP), will provide financial and technical assistance for scaling green contracts and sectoral transformation. These agencies can fund projects like sustainable agriculture initiatives or low-emission transport systems, reducing the fiscal burden on Punjab's budget. By aligning GPP objectives with donor priorities, Punjab can access grants and technical expertise to support its long-term sustainability vision.

6.4 Digital and Technological Integration

This section outlines the digital tools and technological advancements necessary to scale Green Public Procurement (GPP) in Punjab, enhancing efficiency, transparency, and innovation in sustainable procurement practices. By upgrading the E-Procurement System and prioritizing green technologies, Punjab can leverage its 129,682 annual tenders, valued at approximately PKR 500 billion, to address environmental challenges like air pollution in Lahore/Faisalabad and water scarcity in Cholistan. These efforts align with





global sustainability goals, positioning Punjab to attract technical and financial support from international donor agencies to bolster digital and technological integration.

6.4.1 Enhance E-Procurement System

6.4.1.1 Green Tender Portal

The E-Procurement System must be upgraded to include a dedicated Green Tender Portal, designed to streamline the submission, evaluation, and management of green tenders. This portal will centralize all GPP-related activities, enabling procurement officers to access templates with predefined sustainability criteria, such as requirements for recycled materials or energy-efficient products. By integrating green tendering into the E-Procurement System, Punjab can ensure that its substantial procurement volume prioritizes sustainability, enhancing accessibility for suppliers and improving administrative efficiency.

6.4.1.2 Real-Time Monitoring Tools

The E-Procurement System must incorporate real-time monitoring tools to track green procurement metrics, such as the percentage of tenders meeting sustainability criteria or the adoption rate of eco-friendly products. These tools will provide procurement officers with dashboards to monitor compliance, ensuring transparency and accountability in GPP processes. By leveraging digital monitoring, Punjab can maintain a clear record of its green procurement progress, supporting data-driven decision-making and stakeholder trust.

6.4.2 Green Technology Adoption

6.4.2.1 Procurement of Innovative Solutions

GPP must prioritize the procurement of cutting-edge green technologies, such as solar panels for public buildings, low-emission vehicles for government fleets, and water-saving irrigation systems for agricultural projects. These technologies address Punjab's environmental priorities, including reducing vehicular emissions in urban centres and mitigating water scarcity in arid regions like Cholistan. By focusing on innovative solutions, Punjab can lead in sustainable technology adoption, setting a model for other provinces.

6.4.2.2 Technology Standards

Procurement standards must be developed to ensure that green technologies meet Punjab's environmental and operational needs. These standards will specify requirements for energy efficiency, durability, and environmental impact, such as mandating solar panels with a minimum 25-year lifespan or vehicles with emissions below a specified threshold. By establishing clear technology standards, PPRA can ensure that procured technologies deliver long-term sustainability benefits, aligning with Punjab's green governance objectives.



6.4.3 Data Analytics

6.4.3.1 Data-Driven Decision Making

Data analytics must be integrated into the E-Procurement System to optimize green tender allocations, ensuring efficient use of resources. Analytical tools will evaluate tender data to identify high-impact procurement opportunities, such as prioritizing energy-efficient appliances in high-consumption sectors like public offices. By leveraging data-driven insights, Punjab can maximize the environmental and economic benefits of GPP, ensuring that procurement decisions align with sustainability goals.

6.4.3.2 Supplier Performance Tracking

Data systems within the E-Procurement System must be developed to track supplier performance against green criteria, such as compliance with eco-labels or delivery of sustainable products. These systems will generate performance reports, enabling PPRA to identify reliable green suppliers and address compliance gaps. This tracking mechanism enhances accountability, ensuring that suppliers consistently meet Punjab's sustainability standards while fostering a competitive market for green products.

6.4.4 International Donor Support for Digital Integration

6.4.4.1 Funding for Digital Infrastructure

Punjab must pursue funding from international donor agencies, such as the World Bank and the United Nations Environment Programme (UNEP), to support the development of the Green Tender Portal and real-time monitoring tools. These funds will finance system upgrades, software development, and training for procurement officers, ensuring the E-Procurement System is equipped to handle GPP requirements. This support leverages Punjab's alignment with global sustainability goals to enhance digital capabilities.

6.4.4.2 Technical Assistance for Technology Adoption

Collaboration with international bodies like the OECD and UNEP will provide technical assistance for integrating advanced technologies into GPP. These organizations can offer expertise in developing data analytics systems and technology standards, tailored to Punjab's procurement needs. By accessing global knowledge networks, Punjab can ensure that its digital and technological integration aligns with best practices, attracting further donor support for sustainable procurement.

6.5 International Funding and Donor Engagement

This section outlines strategies to secure financial and technical support from international donor agencies and global bodies to sustain and scale Green Public Procurement (GPP) in Punjab. By aligning with global sustainability frameworks and leveraging donor resources, Punjab can subsidize green procurement initiatives, reduce fiscal burdens, and enhance capacity for its 129,682 annual tenders, valued at approximately PKR 500 billion. These efforts support Punjab's environmental goals, such as mitigating air pollution in Lahore/Faisalabad and water scarcity in Cholistan, while positioning the province as a leader in sustainable procurement with international backing.



6.5.1 Access to Global Financial Mechanisms

6.5.1.1 Green Climate Fund (GCF) Support

Punjab must pursue funding from the Green Climate Fund (GCF), which has allocated USD 20 million for sustainable projects in the province, to subsidize GPP initiatives. This funding can support procurement of energy-efficient infrastructure, such as solar-powered public buildings, or sustainable agriculture projects, like water-efficient irrigation systems in Cholistan. By aligning GPP with GCF's priorities, Punjab can access grants to offset the costs of green procurement, ensuring long-term financial sustainability.

6.5.1.2 World Bank Assistance

Engaging the World Bank will provide financial and technical support for GPP, focusing on capacity building and infrastructure investments. The World Bank's expertise in sustainable procurement can fund training programs for procurement officers and the development of green tender templates, enhancing Punjab's ability to implement GPP effectively. This assistance will reduce the fiscal impact on Punjab's budget while scaling sustainable procurement across sectors like transport and construction.

6.5.2 Subsidizing Green Procurement

6.5.2.1 Financial Incentives for Suppliers

To encourage supplier participation in green tenders, Punjab must offer subsidies for adopting sustainable practices, such as obtaining eco-certifications or transitioning to renewable energy production. These subsidies, funded through international grants, will lower compliance costs for suppliers, particularly small and medium enterprises (SMEs), enabling them to compete in Punjab's green procurement market. This approach fosters a robust supply chain for sustainable goods and services, aligning with Punjab's economic and environmental goals.

6.5.2.2 Technical Assistance Programs

Collaboration with international bodies like the United Nations Environment Programme (UNEP) will provide technical assistance for developing GPP guidelines and supplier training programs. UNEP's expertise can support the creation of standardized sustainability criteria and capacity-building initiatives, ensuring suppliers are equipped to meet green tender requirements. These programs will enhance Punjab's GPP framework, making it more accessible and effective for diverse stakeholders.

6.5.3 Alignment with Global Objectives

6.5.3.1 SDG and Paris Agreement Integration

Punjab's GPP strategy must align with the UN Sustainable Development Goals (SDGs), particularly SDG 12 on sustainable consumption and production, and the Paris Agreement to enhance eligibility for international funding. By positioning GPP as a tool to meet these global objectives, Punjab can attract grants from donors



prioritizing climate action, reinforcing its commitment to reducing air pollution and water scarcity while securing financial support for sustainable procurement.

6.5.3.2 Proposal Development for Donors

Punjab must develop targeted funding proposals for donor agencies, highlighting GPP's role in addressing environmental challenges like smog in Lahore/Faisalabad and water scarcity in Cholistan. These proposals will emphasize alignment with global climate goals, detailing how GPP supports sustainable transport, agriculture, and infrastructure. By presenting a clear case for donor investment, Punjab can secure sustained financial and technical assistance from organizations like the World Bank, GCF, and UNEP, ensuring the long-term viability of GPP.



7 Conclusion

The Green Procurement Strategy presented in this report offers a transformative framework to align Punjab's substantial public procurement—encompassing 129,682 annual tenders valued at approximately PKR 500 billion—with environmental sustainability, economic growth, and climate resilience. By embedding green principles into the province's procurement ecosystem, the strategy addresses critical environmental challenges, such as air pollution in Lahore/Faisalabad, which reduces life expectancy by up to 7.5 years, and water scarcity in Cholistan, which threatens agricultural productivity. The adoption of this strategy under the PRIDE Project will position Punjab as a leader in sustainable governance, delivering profound environmental, economic, and social benefits while leveraging international support to ensure long-term viability.

The strategy integrates a comprehensive set of policies and mechanisms to drive sustainable procurement. It proposes regulatory updates to mandate sustainability criteria, such as requiring 20% recycled content in construction materials and prioritizing energy-efficient products, ensuring that public tenders reflect environmental priorities. Governance structures, including a dedicated task force and inter-departmental coordination, will foster accountability and align procurement with Punjab's environmental goals. Strategic objectives focus on scaling green contracts in high-impact sectors like transport, agriculture, and infrastructure, promoting low-emission vehicles, water-efficient irrigation, and climate-resilient materials to mitigate risks like the 2022 floods that damaged 178,000 acres of farmland.

Engaging stakeholders, particularly small and medium enterprises (SMEs), through incentives and capacity-building programs will create a robust green supply chain, boosting local economies and fostering innovation. The enhancement of the E-Procurement System with a dedicated green tender portal and data analytics will streamline processes, ensuring transparency and efficiency in sustainable procurement. International donor engagement, leveraging funds like the Green Climate Fund's USD 20 million allocation and World Bank support, will subsidize green initiatives and provide technical assistance, reducing fiscal burdens and enhancing capacity.

Adopting this strategy will yield significant positive impacts. Environmentally, it will reduce greenhouse gas emissions, improve air quality, and conserve water resources, enhancing public health and agricultural productivity. Economically, it will stimulate green industries, create jobs through SME participation, and achieve savings of up to PKR 500 million annually through cost-effective procurement practices. Socially, it will build a resilient Punjab, protecting communities from climate risks like floods and droughts. By aligning with global sustainability goals, such as the UN Sustainable Development Goals and Paris Agreement, Punjab will attract international funding, ensuring financial sustainability.

Importantly, Punjab's Green Procurement Strategy will also extend beyond environmentally preferable new products to explicitly include the procurement of refurbished goods. By integrating refurbished items—particularly in high-turnover categories like ICT equipment and furniture—Punjab can reduce e-waste, extend product lifecycles, and achieve substantial fiscal savings. With safeguards such as warranties, supplier certifications, and life-cycle costing, refurbished procurement will reinforce transparency and accountability while advancing Punjab's transition toward a sustainable circular economy.

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The Punjab Procurement Regulatory Authority is urged to adopt this strategy, initiating regulatory amendments and governance structures to realize these impacts. In Sha Allah, this approach will transform Punjab's procurement into a model for sustainable development, delivering lasting benefits for its environment, economy, and people.



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