



Supported by:

Federal Ministry for Economic Affairs and Climate Action



on the basis of a decision by the German Bundestag

CAPACITY BUILDING MODULE SUSTAINABLE PUBLIC PROCUREMENT



CONTENTS

Fundamentals of SPP

•

Challenges and Solutions

Stages of SPP



Innovations and Best Practices



Case Studies

FUNDAMENTALS OF SPP

INTRODUCTION

Introduction to SPP



Sustainable public procurement (SPP) is a strategy that integrates environmental, social, and economic sustainability into government procurement processes.

By prioritizing value for money throughout a product's life cycle, SPP aims to meet procurement needs while maximizing benefits for the economy, society, and the environment.

(African Development Bank, 2020).

https://www.afdb.org/sites/default/files/2020/12/18/guidance_note_-_sustainable_public_procurement.pdf



Principles and criteria of SPP



CO2 reduction, Water management, Ecosystem protection, Circular economy, Energy efficiency, Climate resilience and adaptation



Human rights, Ethical supply chains, Gender equality, Fair labor practices, Food security, Social inclusion, Health and safety



Economic regeneration, SME development, Innovation, Poverty reduction, Cost-effectiveness, Emerging markets, Value for money

Business ethics, Governance, Technological integration, Capacity building, Equality, Community relations, Policies and targets

SPP benefits for LRGs



ECONOMIC	SOCIAL	ENVIRONMENTAL	GOVERNANCE
 Long-term savings on costs Stimulation of local economies Promotion of innovations and competitiveness 	 Promotion of social equity Improvement of public health Enhancement of community well-being 	 Reduction of environmental impacts Encouragement of sustainable practices Conservation of natural resources 	 Alignment with SDGs Transparency and accountability Risk management

CHALLENGES AND SOLUTIONS

PART 1

Challenges and solutions related to SPP



Challenge	Solution
Lack of awareness and understanding	 Capacity building for procurement officials.
Higher initial costs	 Use of life-cycle cost analysis (LCCA) to evaluate long-term benefits. Adjust procurement regulations to incorporate sustainability in "best value for money" assessments.
Limited availability of sustainable products	 Foster supplier engagement and market consultation. Offer incentives for suppliers to develop sustainable products.
Complexity of evaluating sustainability	 Develop standardized sustainability criteria and tools. Use third-party certifications to simplify evaluation processes.

Challenges and solutions related to SPP



Challenge	Solution
Resistance to change	 Engage stakeholders early in policy development. Communicate the long-term benefits of SPP.
Inadequate policy & regulatory framework	Establish clear SPP policies aligned with national and international sustainability goals.
Difficulty in measuring and reporting impact	 Implement monitoring frameworks with key performance indicators (KPIs). Use global models such as the EU's GPP Monitoring Guidelines for guidance.
Supply chain constraints	 Build relationships with suppliers to improve sustainability. Focus on local sourcing to ensure transparency and reduce environmental impacts.

Challenges and solutions related to SPP



Challenge	Solution
Monitoring & evaluation	 Strict verification processes (audits, certifications) to prevent greenwashing. Regular sustainability reporting from suppliers for transparency.
Navigating complex decision-making	Develop holistic procurement strategies that integrate sustainability as a core objective. Use weighted evaluation to balance cost, quality, and sustainability.

PART 2 STAGES OF SPP

Integrating sustainability into public procurement



Involves needs identification where the subject matter is clearly stated to clarify what is necessary to purchase to determine the necessity of market dialogue.

Establishing a framework

Identifying priorities

Involves capacity building, e-learning platforms, policy development, criteria formulation, mentorship and advisory services.

Stakeholder engagement



Helps to understand what is on the market and to determine the most suitable procurement procedure.

Setting objectives

Set clear sustainability targets based on identified priorities using available criteria for priority products while analyzing best practices.

Environmental considerations



Be mindful of the product carbon footprint including GHG emissions and compliance with environmental standards and regulations.

Stages of the SPP process



	ROADMAP
Pre-Procurement	Needs assessment, Stakeholder engagement, Market research & analysis, Securing funding, Type of procedure, Drafting specifications, Risk assessment & lifecycle costing
Procurement	Tender preparation & publication, Supplier evaluation, Bid evaluation & selection, Contract award & negotiation
Contractual	Project Planning, Risk Mitigation, Environmental considerations
Post-Procurement	Contract management, Performance evaluation & reporting, Continuous improvement, Procurement KPI

The tendering process RENEWABLE **CITIES & REGIONS** ROADMAP Announcement and call Pre-tender planning submission of bids for bids Post-awarding **Bid evaluation** monitoring and Awarding contracts compliance

INNOVATIONS AND BEST PRACTICES

PART 3

Innovations, best practices and future trends



Circular economy approaches	 Case study: Netherlands' Rijkswaterstraat Circular Procurement Focuses on incorporating circular economy approaches in infrastructural projects such as road construction. Uses of recycled materials. Prioritization of design for disassembly and reuse. Impact: Reduced resource consumption and waste generation.
Community engagement and stakeholder involvement	 Case study: São Paulo Public Housing Project, Brazil Focuses on community-driven design and construction. Culturally-appropriate and environmentally-sustainable homes. Results: Adoption of local materials and energy-efficient designs. Impact: Fostering community pride and ownership.
Digital tools and platforms for SPP	 Case study: EU's Procura + Network Digital platform for sharing SPP best practices and resources. Promotes collaboration across Europe. Impact: Enhanced adoption of sustainable procurement practices.

Innovation, best practices and future trends



Green criteria in tendering process	 Case study: Denmark's GPP Strategy Mandating environmental criteria in all public tenders. Factor sectors: energy, transportation. Impact: Procurement of renewable energy solutions and low-emission vehicles. Goal: Denmark's carbon neutrality by 2050.
Collaboration and partnerships	 Case study: U.S. Green Procurement Compilation A federal database for sustainable products and services. Cross-sector collaboration to improve government sustainability. Impact: Easier access to environmentally friendly products.
Global sustainability agendas	 Case study: EU Green Deal Role of SPP in achieving climate neutrality by 2050. Promotes the integration of sustainable practices globally. Pertains alignment of procurement strategies with global goals. The agendas include SDGs and the Paris Agreement.

Innovation, best practices and future trends



Artificial Intelligence (AI) and blockchain	 AI: Analyzes data for sustainable procurement decisions. Blockchain: Tracks product sustainability credentials. Impact: Enhanced transparency and efficiency in procurement.
E-procurement platforms	 Case study: South Korea's PPS & Italy's CONSIP Systems Integrates sustainability criteria into tenders. Simplifies supplier evaluation and compliance tracking.
Life-cycle cost analysis (LCCA) tools	 Case study: Sweden's LCCA Approach ➢ Evaluates total cost of ownership, incorporating environmental and social costs. ➢ Example: Swedish transport administration's use of LCCA.
Blockchain for supply chain transparency	 Case study: UK's NHS Pilot Project Blockchain tracks sustainability and ethical sourcing in medical supplies. Ensures verification of supplier sustainability claims.

Innovation, best practices and future trends

Data analytics for supplier evaluation	 Case study: U.S. General Services Administration (GSA) Uses data analytics to measure environmental impact (e.g. energy use). Supports informed procurement decisions.
AI and machine learning	 Case study: Singapore's Al-driven Procurement Analyzes data to identify suppliers meeting sustainability criteria. Predicts trends in sustainable procurement.
Eco-labeling and certification databases	 Case study: Germany's Blue Angel Certification ➢ Digital platforms are used by procurement officials to verify supplier claims about sustainability. ➢ Automates the eco-label verification process in procurement.
Sustainable procurement dashboards	 Case study: New Zealand Government Procurement dashboards Real-time monitoring of sustainability performance. Consolidates data from various sources for comprehensive decision- making.

CASE STUDIES

PART 4





There exist various renewable energy (RE) projects in Argentina, Indonesia, and Kenya under the 100% Renewables Cities and Regions Roadmap project:

Argentina	Utility-scale ground-mount solar PV projects.
Indonesia	Off-grid rooftop solar PV with storage for remote communities.
Kenya	Integration of RE & EE measures in public healthcare centres.

Goal: Promote sustainable energy solutions to address local energy needs.

Avellaneda, Argentina



Argentina: Utility-scale ground-mount solar PV

Project Name:	Avellaneda Solar Project, Avellanda, Santa Fe Province.
Technology:	Interconnected photovoltaic modules to produce energy.
Investment:	USD 3,751,000
Financing and Partnerships:	RenovAr program, international investors, and multilateral funding agencies.
Financial Model:	A combination of debt and equity financing.
Business Model:	Selling energy to the local energy distributor.
Grid Connection:	The 4 MW (5.0 MWp) photovoltaic plant will generate electricity from solar energy and feed it into the Argentine Interconnection System (SADI).

Argentina – SPP application



Implementation of the Public Procurement Law (Ley 24.156). Emphasizes prioritizing environmentally friendly goods and consideration of life-cycle impacts of products.

Applied in the Buenos Aires Energy-efficient Lighting Project that replaced traditional lighting in public buildings.

Resulted in a 40% reduction in energy consumption. Served as a model for other municipalities in Argentina to adopt and implement.

Illustrates how effective SPP can lead to significant environmental and economic improvement. Can be adopted in other countries.

West Nusa Tenggara, Indonesia



Indonesia: Off-grid rooftop solar PV

Project Name:	Indonesia Off-grid rooftop solar PV, West Nusa Teggara.
Technology:	High-efficiency rooftop PV panels paired with energy storage.
Investment:	IDR 3,755 million (EUR 222,076)
Financing and Partnerships:	Microfinance or government-backed subsidies for low-income households and small businesses.
Financial Model:	Blended financing – grants cover majority of the CAPEX (93%) and the remaining CAPEX utilizes a Public Private Partnership (PPP) scheme.
Business Model:	Direct Purchase.
Grid Connection:	100% solar energy connected to the PLN grid optimized by energy storage solutions and smart grid technologies.



Implementation of the Government Regulation No 43/2020 on Public Procurement. Selecting goods and services that meet environmental standards.

Indonesia initiated collaboration with the Green Building Council for public infrastructure projects.

Ensured sustainable building materials, energy-efficient designs, and environmentally conscious construction practices in the Jakarta Building.

Significantly reduced carbon footprint for Indonesia contributing to their commitments under the Paris Agreement.

Kisumu County, Kenya



Kenya: Renewable energy and energy efficiency

Project Name:	Renewable energy and energy efficiency project, Kisumu County.
Technology:	Solar system + water heating design (solar-battery system & grid-tie system), 100% LED lighting.
Investment:	USD 1.9M CAPEX & USD 2.9M O&M
Financing and Partnerships:	Public-private partnerships (PPPs) and international finance organizations.
Financial Model:	50% grant funding.
Business Model:	Net-metering & Feed-in-tariff.
Grid Connection:	Connection to the national grid. Power supplied by Kenya Power and Lighting Company (KPLC).

Kenya – SPP application



Implementation of the Public Procurement and Asset Disposal Act (2015) and the Green Economy Strategy and Implementation Plan (GESIP).

Both frameworks promote the procurement of environmentally sustainable and socially acceptable goods and services.

Kenya collaborates with Energy 4 Impact to install solar energy solutions in clinics that struggle with unreliable power.

Facilities such as the Kichangachini and Mata clinics reported enhanced service provision, improved diagnostic capabilities & reliable refrigeration for vaccines.

This project not only addresses environmental sustainability by utilizing renewable energy but also enhances social equity by improving healthcare access.

CONCLUSION



- Evidently, SPP is a critical and strategic tool for achieving long-term sustainability goals in the public sector.
- SPP fosters sustainability in local communities and contributes to global environmental efforts.
- Engaging suppliers and stakeholders from the outset is key to successful SPP implementation.
- Structured training programs enhance the capabilities of procurement officials and suppliers, ensuring effective SPP practices.
- Government leadership in SPP not only strengthens public-sector sustainability but also sets a precedent for private-sector adoption.





Supported by:

Federal Ministry for Economic Affairs and Climate Action



on the basis of a decision by the German Bundestag

END OF MODULE

*

Module developed by: Bazaruto Renewables Contributors: Sastry Akella, Rohit Sen, Kanak Gokarn, Panramon Mahasuwan – ICLEI World Secretariat