Green Public Procurement for Advancing Sustainable Development in India

Policy Nudges for Promoting Sustainable Consumption and Production

SDG Charter

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Authors
Ishita Srivastava, Shailly Kedia

Advisor
RR Rashmi, Prodipto Ghosh

Contact
wsds@teri.res.in

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1. Introduction

The government is a major procurer of goods, services and works across the world, more so in the developing world. Global spending on public procurement is estimated to be about USD 9.5 trillion, comprising about 12% of the gross domestic product (GDP) of OECD (Organisation for Economic Co-operation and Development) countries, and about 30% of developing countries (World Bank, 2020; UNEP, 2024).

Sustainable public procurement (SPP) is integral to realizing the Sustainable Development Goals (SDGs). Target 12.7 of Goal 12 of SDGs seeks to promote public procurement practices that are sustainable, in accordance with national policies and priorities (United Nations, 2024). SPP seeks to use public procurement as a tool to advance social, economic and environmental goals. Green public procurement (GPP) is a sub-component of SPP and can be defined as a process that allows deliberate and systematic integration of environmental goals in the procurement process of goods, services and works by public agencies. This integration includes use of technical specifications, bid evaluation procedures, standards, certification and labelling. Over time, SPP and GPP have transitioned from a 'do less harm' approach to a more farsighted long-term approach that considers environmental criteria (European Commission, 2008; OECD, 2020; UNEP, 2021; World Bank, 2021). GPP holds the potential of advancing environmental policy goals of governments such as decreasing pollution, enhancing resource efficiency, encouraging sustainable production and consumption, reducing biodiversity loss, and decreasing GHG emissions.

Estimates suggest that public procurement-related activities (direct or indirect) contribute towards 15% of greenhouse gas emissions globally (World Economic Forum, 2022). Mitigating these emissions can bring about a USD 4 trillion boost to the green economy, generate 3 million new jobs, and decrease social cost of carbon (World Economic Forum, 2022). Most of these emissions attributable to public procurement involve six sectors: defence and security, transport, waste management, construction, industrial goods, and services.

Examining public procurement through the SDG lens enables consideration of social, economic, and environmental impacts to be addressed, including the aims of reducing unemployment; boosting markets for micro, small, and medium enterprises; ensuring greater value for money; and increasing environmental sustainability.

2. International Experiences

Green public procurement has transitioned from being an alternative procurement method to becoming a significant part of the present-day procurement models around the world.

The European Union (EU) has a specific voluntary GPP policy framework in place. EU's member states have the discretion to determine the extent of GPP policy application. GPP has been acknowledged in some of the EU's legislative documents as an essential tool to ensure

resource efficiency (Nilsson et al., 2023). Voluntary standardized GPP criteria have been developed for 21 product groups to promote the localization of criteria for national usage (World Bank, 2021). These criteria include selection criteria, technical specifications, award criteria, and contract performance criteria. The European Commission (EC) after bringing its 2020 Circular Economy Action Plan, has intended to develop a minimum mandatory GPP criteria, sector-specific targets, and mandatory monitoring of its adherence (European Commission, 2020). Timelines for this are yet to be formulated (Nilsson et al., 2023). Countries such as the Netherlands and Sweden are acknowledged for developing user-friendly national environmental criteria. Further, some countries are also in the process of creating mandatory GPP criteria for some priority product groups. Since 2003, the EC has also widely promoted the development of National Action Plans (NAPs) by its member states incorporating GPP concerns (European Commission, 2024). In furtherance to this, about 23 member states out of a total of 27 have brought forth their national GPP action plans up to April 2021 (World Bank, 2021).

Germany's GPP policy requires undertaking life cycle costing of goods and services to factor in their energy efficiency (European Commission, 2024). Germany's Federal Climate Change Act of 2019 lays down the goal of making its federal administration climate-neutral by 2030 (Federal Government of Germany, 2019). It further states that procurement preference should be given to climate-friendly goods and services. There is a German Suitability Strategy focusing on making public administration climate neutral by 2030. Updated in 2016, this strategy lays down energy efficiency requirements for public procurement; however, it does not state specific goals for undertaking GPP. Additionally, it emphasizes the need for training courses on sustainable development to implement sustainable procurement (Nilsson et al., 2023).

France developed a National Plan for Sustainable Purchases in 2022 with the goal of advancing sustainable public procurement, and more so GPP (Nilsson et al., 2023). While a non-binding norm, this plan sets a voluntary target of 100% public procurements to involve environmental criteria by 2025. Despite the voluntary nature of this plan, France further recognized significance of GPP in its Climate and Resilience law brought in 2021 (Nilsson et al., 2023).

The Canadian Policy on Green Procurement 2006 urges that along with the principle of 'best value for money', life-cycle environmental impact of goods and services be analysed before procurement (Government of Canada, 2006). Canadian GPP policy framework is backed by the Canadian EcoLogo Program and ENERGY STAR Certification. EcoLogo Program is an eco-labelling method used to ensure the credibility of environmental claims and are based on ISO standard 14024 (Government of Canada, 2018). ENERGY STAR Certification creates energy-performance standards adherence norms for commercial and institutional buildings (Hasanbeigi et al., 2019).

The United States of America's federal government supports green procurement through ecolabels and environmental certifications (UNEP, 2016). Ecolabels are used as environmental impact reporting standards. List of recommendations of specifications, standards and ecolabels

have been developed by the US Environmental Protection Agency to aid governments recognize and purchase eco-friendly goods and services (World Bank, 2021). Life-cycle based standards and ecolabels are preferred in this list. For bringing consumer awareness to best eco-friendly products, guidelines have been brought in place to analyse the quality of goods and services rendered. Additionally, the US state of Maryland has tools that aid in examining environmental impacts of green procurement in terms of GHG emissions, energy usage, wood consumption, air pollution, and waste creation (World Bank, 2021).
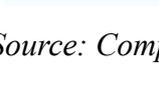
Japan's GPP policy framework is comparatively robust as annual review of the policies is undertaken for identifying recent trends, legislations, and standards. As a result of this constant reviewing, the list of prioritized goods and services to be evaluated has expanded from 101 products in 14 categories in 2001 to 270 products in 21 categories in 2016 (World Bank, 2021). Environmental impacts of GPP are measured in terms of greenhouse gas (GHG) emissions reductions for 19 categories. Based on minimum green criteria, a proxy green product is defined for each category (SWITCH-Asia & UNEP, 2020). GHG emissions are calculated for products impacting energy consumption on the basis of consumption in use phase, whereas for products not consuming energy it is identified through other methodologies based on existing data for converting environmental impacts to GHG emissions (SWITCH-Asia & UNEP, 2020). Through its Green Procurement Act, 2000, Japan requires all government agencies and public institutions to develop yearly eco-product procurement targets, report accomplishment to the Ministry of Environment, and develop GPP policies. Although GPP is voluntary in nature, it is widely promoted at sub-national and private sector levels (Government of Japan, 2016). Local authorities are also urged to report on GPP implementation by means of submitting responses to annual questionnaires on voluntary basis (Hasanbeigi et al., 2019).

The Republic of Korea's policy measures to promote include Promotion of Purchase of Green Products Act of 2005. Korea mandates its state agencies to procure goods and services meeting Korea Ecolabel standards (Government of the Republic of Korea, 2005). Fiscal incentives are provided in the form of enhanced budget in case of high performance by local governments and performance bonus to public institutions (Hasanbeigi & Shi, 2021). Annual performance bonus, a fiscal instrument, is used as a tool for advancing GPP practice amongst public institutions and local governments (UNEP and KEITI, 2019). Values reported to the central body are used for estimating rewards to be granted (Hasanbeigi & Shi, 2021). For monitoring GPP implementation in purchasing entities a dedicated system known as Green Procurement Information System (now GPIS-II) to share green procurement-related information and good practices undertaken by public institutions has been developed (Choi et al., 2022). The government maintains a central emissions database which calculates impact of the country's GPP since 2005 (World Economic Forum, 2022). South Korea's Ministry of Environment along with KEITI publish GPP impact results annually. While estimating the sustainability impact of GPP, criteria such as economic benefits of reducing environmental impacts, CO_2 reduction, and employment creation are considered (UNEP and KEITI, 2019). Reduction of CO_2 emissions in 2017 was calculated to be 665,000 tonnes or about 0.1% of the country's total CO_2 emissions of that year (Erizaputri et al., 2024). There is also an online shopping mall functioning since 2009, known as the "Green Market", that allows public agencies to procure

low-volume green products without going through the hassle of tenders (World Bank, 2021). It supports the GPP monitoring mechanism by reducing the reporting burden on these purchasers.

Table 1 provides a summary of the policy tools used in the analysed G20 countries to promote GPP therein.

Table 1: GPP integration in procurement systems of some countries

	The European Union	• Voluntary standardized GPP criteria • 2020 Circular Economy Action Plan • Promoted development of NAPs
	Germany	• Federal Climate Change Act, 2019 • German Suitability Strategy • Life-cycle costing factored in
	France	• National Plan for Sustainable Purchases, 2022 • Climate and Resilience Law, 2021
	Canada	• Canadian Policy on Green Procurement, 2006 • EcoLogo Program • ENERGY STAR Certification
	The United States of America	• Ecolabels and environmental certifications
	Japan	• Green Procurement Act, 2000
	Republic of Korea	• Promotion of Purchase of Green Products Act, 2005 • Green Procurement Information System (GPIS-II) • Green Market

Source: Compiled from multiple sources

Analysing these developments regarding GPP in selected G20 countries, we note that capacities can be developed, and measures adopted by the Indian government to promote GPP.

3. Indian Public Procurement Landscape

In India, public procurement amounts to 20% to 22% of its GDP which equals about USD 500 billion annually (Ministry of Finance, 2019). This number could be substantially higher if one considers the award of contract (AOC) values. The break-up of AOC for states and union territories (UTs) in India is depicted in Table 2. It is seen that the greatest number of bids in FY 2023–24 was undertaken by the government of West Bengal, followed by Maharashtra, Kerala, and Uttar Pradesh (Table 2). In terms of value of AOCs, the highest was Uttar Pradesh followed by Maharashtra, Odisha, and Haryana.

Table 2: Award of Contract for FY 2023–24 for States/UTs in India

States/UTs	Award of Contract (AOC) Volume (Nos.)	Award of Contract (AOC) Value (INR Crores)
Uttar Pradesh	60,371	6,10,32,700
Maharashtra	1,02,706	5,01,48,623
Odisha	32,505	22,61,852
Haryana	47,690	20,07,697
West Bengal	1,99,538	97,928
Madhya Pradesh	32,533	73,480
Tamil Nadu	40,017	55,693
Kerala	95,037	49,290
Assam	6,014	21,658
Jharkhand	4,379	15,511
Punjab	15,493	13,195
Rajasthan	2,944	96,57
Uttarakhand	2,962	9,254
Goa	2,458	4,957
Himachal Pradesh	7,639	4,335
Tripura	7,221	4,158
Dadra and Nagar Haveli	107	1,522
Sikkim	8	1,289
Chandigarh	4,444	1,204
Puducherry	1,702	702
Meghalaya	19	610
Arunachal Pradesh	32	550
NCT of Delhi	673	271
Jammu and Kashmir	553	230
Ladakh	764	221
Manipur	7	91
Mizoram	13	89
Nagaland	31	68
Andaman and Nicobar	300	41
Daman and Diu	11	5
Lakshadweep	5	3
Grand total	6,68,176	11,58,16,883

Source: MOF (2024)

There is no specific law governing public procurement in India. In the Constitution of India, Article 282 gives financial autonomy to central and state governments for public spending to contract goods and services. The General Financial Rules, 2017 state provisions for procurement of goods and services in its Chapter 6 (Ministry of Finance, 2017). The General Financial Rules, 2005 on being replaced by the General Financial Rules, 2017, now provide provisions for e-procurement, Government e-Marketplace (GeM); exhaustive definitions for goods, services (consulting and non-consulting), among others.

There is a Public Procurement (Preference to Make in India) Order, 2017, now revised in 2020 which states the purchase preference for goods, services and works having a minimum threshold of domestic/local content in public procurement (MOCI, 2020). GeM portal shall also reflect the items meeting the minimum local content requirements with specific marks when these items get registered for display. It mentions percentage of local content explicitly in the product details listing of a particular product on GeM. For example, in the case of utility vehicles listed on GeM, local content can sometimes be about 70% (GeM, 2024). It is also seen

that many times, no information was declared while listing products. For paper, the requirement for local content is 75% (UNEP-TERI-CII, 2019). In addition to employment and income, environmental benefits of local content can be examined.

In 2011, the Committee on Public Procurement (CoPP) was formulated by a group of ministers to discuss ideas on the issues of transparency, efficiency, and economy, and thereby enhance public procurement practices (PRS Legislative Research, 2013). In 2017, maximum amendments were made in the public procurement arena, in terms of introduction of GeM; General Financial Rules, 2017 and Public Procurement (Preference to Make in India), Order 2017. The 2017 order aims at promoting 'Make in India' thereby encouraging the manufacture and production of goods and services in India to improve income and employment (Ministry of Commerce and Industry, 2017).

Other laws promoting transparency in the public procurement process are the Prevention of Corruption Act, 1988 and the Prevention of Money Laundering Act, 2002 that penalize bribery and money laundering, respectively. Further, the Competition Act, 2002 by penalizing anti-competitive activities (including bid-rigging, collusive bidding, cartelization, and abuse of dominance) advances accountability and efficiency in the procurement process. The Right to Information Act, 2005 encourages transparency in the government's procurement dealings by allowing Indian citizens to avail information through the mechanism of "right to information" applications.

Figure 1 provides a comprehensive timeline of the legal framework supporting India's public procurement system.

Figure 1: Timeline showcasing the Indian legal framework for public procurement

Source: Compiled from multiple sources

A major reform brought forth by the Indian government in 2017, is the Government e-Marketplace (GeM), a digital public procurement portal allowing procurement of common-use

goods and services for all central government and state government ministries, departments, Public Sector Undertakings (PSUs) and affiliated bodies (Government e-Marketplace, 2024). It facilitates procurement in a "*completely paperless, cashless, system driven e-market with minimal human interface. These platforms help in not only making public procurement efficient and accountable but also enhances resource efficiency*" (Ministry of Finance, 2019). In FY 2023–2024, procurement through GeM crossed INR 3 trillion (PIB, 2024). The Central Public Procurement Portal (CPPP) also aids in public procurement related monitoring. The CPPP is designed, hosted and maintained by the National Informatics Centre (NIC), in association with Procurement Policy Division, Dept. of Expenditure, Ministry of Finance.

4. Environmental Considerations in India's Public Procurement Policy Ecosystem

Through its updated Nationally Determined Contribution (NDC), India has stated its commitment to decreasing "emission intensity" of the GDP by 2030, by 45% from 2005 levels [Ministry of Environment, Forest and Climate Change (MoEFCC), 2022]. GPP has the potential to contribute to India's updated NDC and SDG targets, while also advancing its Long-Term Low-Carbon Development Strategy. Encouraging procurement of green products such as electric vehicles can contribute to India's long-term low-carbon growth strategy in terms of bringing fuel efficiency and phased adoption of cleaner fuels. Further, there is a need to enhance and align GPP with SDG Vision 2030 documents (Kedia et al., 2021).

As observed in the previous sections, there are no specific laws mandating green public procurement in India. However, there are green elements present in the public procurement legal ecosystem which can be reformed to promote GPP.

In 1991, the Government of India launched ECO Mark Scheme, administered by the Bureau of Indian Standards for labelling of environment-friendly products. It follows a life cycle cost approach and is still voluntary in nature. ECO Mark Certification Rules, 2023 have been brought to provide labelling to products meeting the approved environmental criteria (Ecomark Certification Rules, 2023). For furthering resource efficiency and a circular economy, these rules aim to promote the demand for products resulting in reduced negative impact on the environment.

Under the National Environment Policy, 2006 the government explicitly promotes purchase preference for goods and services that meet environmental standards in public procurement (MoEFCC, 2006). A draft public procurement bill was introduced in 2012 to control and bring transparency in the procurement process. Clause 21 of the draft bill while laying down the criteria for evaluation for procurement, stated that "*evaluation criteria shall relate to the subject matter of procurement and may include (a) the price; (b) the cost of operating, maintaining and repairing goods or works…, the characteristics of the subject matter of procurement, such as the functional characteristics of goods or works and the environmental characteristics of the subject matter...*" (Government of India, 2012). The bill was brought in the Lok Sabha in May 2012, but lapsed (PRS Legislative Research, 2012).

Further, the Ministry of Finance in January 2013 through an office memorandum issued for mandatory public procurement of four energy efficient appliances by Ministries/Departments (Ministry of Finance, 2013). In 2014, the Planning Commission proposed introducing Sustainable Public Procurement as the way forward for advancing India as a low-carbon economy.

The General Financial Rules, 2017 (last updated as on 10.07.2024) has certain environmental provisions such as Rule 136 (works to commence only after sanctioning a properly detailed design wherein principles of life cycle cost may be considered); Rule 173 (for maintaining transparency, competition and fairness in procurement, environmental characteristics need to be considered as a criteria during bid evaluation; ensuring star rating prescribed by the Bureau of Energy Efficiency (BEE) while procuring energy efficient electrical appliances); Rule 217 (sale of hazardous waste/scrap batteries/electronic waste to consider guidelines of MoEFCC); and Rule 218 (modes of disposal of surplus or obsolete or unserviceable goods which are hazardous or unfit for human consumption) (General Financial Rules, 2017).

According to the General Financial Rules, 2017, model tender documents and manuals for procurement of goods, services and works, local content and non-price variables including environmental characteristics may be considered while undertaking procurement. However, there are no mandatory or specific directions which list and identify non-price variables for promoting environmental characteristics in public procurement of goods, services, and works.

Another step taken by the Indian government is the formulation of a Task Force on Sustainable Public Procurement in March 2018. It was constituted by the Department of Expenditure to review international best practices for SPP; enlist the current status of SPP in India; prepare a draft Sustainable Procurement Action Plan and suggest an initial set of product/service categories having potential for SPP implementation (Ministry of Finance, 2020). In 2019, a draft National Resource Efficiency Policy was introduced by the Ministry of Environment, Forest and Climate Change (MoEFCC, 2019), however it was not adopted. Recognizing the role of government in implementing green public procurement, it suggested advancing preferential green procurement of products by public or private organizations by aggregating demand (MoEFCC, 2019).

Several green goods and services are sold on the GeM portal. Green goods sold include tree guard, watering can for gardening, ultra-light flexible solar panel-based battery charger, solar inverter, solar street lighting and renewable energy street lighting, solar torch light, solar water heating system, solar lamp (solar study lamp), e-rickshaw passenger, e-tourist vehicle. Services including leasing and hiring of electric vehicles; operation and management of electric buses; waste management services, medical waste decomposition systems and climate services are some examples of green services available on the GeM portal.

Table 3 highlights the instruments that have been brought to advance environmental considerations in India's public procurement policy ecosystem.

Table 3: Instruments advancing environmental considerations in India's public procurement policy ecosystem

Year	Instrument	Particulars
1991	ECO Mark Scheme	Involves: Labelling of environment-friendly products; life cycle cost approach; still voluntary in nature
2006	National Environment Policy	Explicitly promotes purchase preference for goods and services meeting environmental standards while undertaking public procurement
2012	Draft Public Procurement Bill	Clause 21 of the draft bill laying down the criteria for evaluation for procurement, considers environmental characteristics. The bill was brought in Lok Sabha in May 2012, but it lapsed
2013	Office Memorandum: Procurement of Energy Efficient Electrical Appliances	Ministry of Finance in January 2013 issued an office memorandum for mandatory public procurement of four energy efficient appliances by Ministries/ Departments
2014	Planning Commission	Suggested: public procurement officers should be empowered to buy on a life-cycle cost basis
2017	General Financial Rules	Provides certain environmental provisions: maintain transparency, competition, and fairness in procurement, environmental characteristics need to be considered as criteria during bid evaluation; ensure star rating prescribed by the Bureau of Energy Efficiency (BEE) while procuring energy efficient electrical appliances; sale of hazardous waste/scrap batteries/electronic waste to consider guidelines of MoEFCC
2018	Task Force on Sustainable Public Procurement	Constituted by the Ministry of Finance to review international best practices for SPP; enlist the current status of SPP in India; prepare a draft Sustainable Procurement Action Plan and suggest an initial set of product/service categories having potential of SPP implementation
2019	Draft National Resource Efficiency Policy	Recognizing the role of government in implementing green public procurement, the policy suggested advancing preferential green procurement of products by public or private organizations to aggregate demand
2021	Green Room Air Conditioners	Ministry of Commerce and Industry launched a new product category known as 'Green Room Air Conditioners' on the GeM portal on a pilot basis to promote environment-friendly ACs
2022	Manual for Procurement of Works	Provides guidelines for public procurement of works
	Manual for Procurement of Goods	Provides guidelines for public procurement of goods
	Manual for Procurement of Consultancy & Other Services	Provides guidelines for public procurement of consultancy and other services
2023	ECO Mark Certification Rules	Aimed at promoting the demand for products resulting in a lesser negative impact to the environment. These rules shall provide labelling to products that meet approved environmental criteria

Source: Compiled from multiple sources

The Government of India aiming at incorporating policy instruments has brought forth certain tools which can be used to advance India's GPP ecosystem. BEE Standards & Labelling

Programme and MSME sector reforms are two examples which will be analysed in the following subsections.

5. Lessons from BEE Standards and Labeling Programme

Identifying the need for transitioning from 'energy conservation' to 'energy efficiency', the Government of India enacted the Energy Conservation (EC) Act, 2001 under which it created the Bureau of Energy Efficiency (BEE), a statutory body (Bureau of Energy Efficiency, 2024). In May 2006, BEE introduced a Standard and Labeling (S&L) programme to aid consumers in taking informed decisions on the procurement of goods considering their energy performance (Bureau of Energy Efficiency, 2024). The programme advances technological developments, competitiveness amongst consumers, cost savings, and enhanced product quality amongst other benefits. It aims at the twin goal of decreasing energy consumption whilst retaining the quantum and quality of services provided to consumers. The scheme covers 38 appliances out of which 16 have been notified as mandatory appliance standards, while 22 are voluntary in nature (Bureau of Energy Efficiency, 2024).

For promoting environmental benefits through public procurement, the Ministry of Finance in January 2013 through an office memorandum mandated that only energy efficient appliances may be procured by Ministries/Departments in respect of split air conditioners, frost free refrigerators, ceiling fans, and water heaters (Ministry of Finance, 2013). It needs to be highlighted that since 2013, there has been no addition in this list of appliances.

The General Financial Rules, 2017 through Rule 173 states that "*Ministries/Departments while procuring electrical appliances notified by Department of Expenditure shall ensure that they carry the notified threshold or higher Star Rating of Bureau of Energy Efficiency (BEE)*" (General Financial Rules, 2017).

Analysing the coverage of BEE Standard and Labelling (S&L) programme, 16 appliances are notified to be mandatorily star-labelled. However, out of these 16 mandatory star-labelled appliances, only 4 appliances are listed by the government for mandatory public procurement. This list can be expanded to cover more appliances having mandatory star labelling. It reflects an opportunity for the government to undertake a 'mandate with flexibility' approach wherein the list can be expanded in a flexible manner and a mandatory rule to advance its procurement can be brought.

Further, interlinkages can be drawn between BEE S&L programme and ECO Mark scheme to advance the procurement of energy-efficient products holistically. This will further transparency and reduce the reporting burden on the procurers. It will allow schemes such as ECO Mark to widen their reach and drift away from a voluntary nature. Moreover, a mechanism to monitor procurement can also be established by the government to bring transparency to the process. GeM portal should be better employed as a tool to promote procurement and enlisting of energy efficient electrical appliances.

Moreover, green initiatives such as Unnat Jyoti by Affordable LEDs for All (UJALA) and sale of Green Room Air Conditioners on GeM portal are also leading examples focusing on greening the public procurement ecosystem. UJALA, launched on May 1, 2015, being the world's largest zero-subsidy domestic LED bulb programme involving bulk public procurement, has advanced market creation for products including LED bulbs, LED tubelights and energy efficient fans. The programme by creating an innovative business model allows to distribute energy efficient LED lamps at one-third its market price (Energy Efficiency Services Limited, 2023). On June 5, 2021, the Ministry of Commerce and Industry launched a new product category known as 'Green Room Air Conditioners' on the GeM portal on a pilot basis to promote environment-friendly ACs. Sales of green air conditioners on GeM portal in the FY 2020–2021 amount to 44,000 costing about INR 1.7 billion. This provides encouragement to market transition to sustainable cooling. Green room AC procurement, however, is still voluntary in nature (MoCI, 2021).

Table 4 highlights the instruments that aim at promoting public procurement of energy efficient electrical appliances in India.

Table 4: Instruments focusing on promoting procurement of energy efficient appliances

Year	Policy Instrument	Particulars
2001	Energy Conservation (EC) Act	Created the Bureau of Energy Efficiency (BEE), a statutory body
2006	BEE Standard and Labeling (S&L) programme	To aid consumers in taking informed decisions on procurement of goods considering their energy performance. Covers 38 appliances (16 mandatory, 22 voluntary)
2013	Ministry of Finance Office Memorandum	Mandatory public procurement of four energy efficient appliances by Ministries/ Departments (Split Air Conditioners, Frost Free Refrigerators, Ceiling Fans, and Water Heaters)
2015	Unnat Jyoti by Affordable LEDs for All (UJALA)	World's largest zero-subsidy domestic LED bulb programme involving bulk public procurement, has advanced market creation for products including LED bulbs, LED tubelights and energy efficient fans
2017	General Financial Rules	Rule 173 Ministries/ Departments procuring electrical appliances to ensure that they carry the notified threshold or higher Star Rating of the BEE
2021	Green Room Air Conditioners	The Ministry of Commerce and Industry launched a new product category known as 'Green Room Air Conditioners' on the GeM portal on a pilot basis to promote environment friendly ACs

Source: Compiled from multiple sources

6. Lessons from Micro and Small Enterprises Policy

The Indian government has advanced achievement of its social goals by mandating public procurement of goods and services manufactured/provided by medium and small enterprises.

The Micro and Small Enterprises (MSE) policy framework has developed an enabling public procurement ecosystem which is a good example to follow.

The Micro, Small and Medium Enterprises Development Act enacted in 2006 states that a procurement preference policy may be formulated by central or state governments for promoting and establishing micro and small enterprises (Ministry of Law and Justice, 2006). In furtherance to this, a public procurement policy was brought for promoting procurement from micro and small enterprises in 2012. This policy envisaged a phased procurement approach with annual target of procurement of minimum 20% from MSEs in the following 3 years (Ministry of Micro, Small and Medium Enterprises, 2012).

The General Financial Rules, 2017 also supports the MSE public procurement ecosystem by promoting exclusive purchase of hand spun and hand-woven textiles from Khadi Village Industries commission (KVIC), thereby reserving all these items for MSMEs. It also makes procurement of at least 20% of handloom origin items mandatory for Central government departments under its Rule 153 (General Financial Rules, 2017).

To bring further transparency in the MSE-related public procurement ecosystem, MSME Sambandh, a public procurement policy monitoring portal was launched on December 8, 2017 (Ministry of Micro, Small & Medium Enterprises, 2024). As per the portal, during FY 2023–2024, out of the total procurement of INR 172,842 crore reported by 125 Central Public Sector Enterprises (CPSEs) and 1 Department, total procurement from MSEs is INR 59,099.9 crore (34.19% of total procurement), thereby benefiting 1,97,393 MSEs (MSME Sambandh, 2024).

Table 5 highlights the instruments that aim at promoting public procurement preference from MSEs in India.

Table 5: Instruments focusing on promoting procurement preference from MSEs

Year	Policy Instrument	Particulars
2006	Micro, Small and Medium Enterprises Development Act	Formulation of procurement preference policy to promote and establish micro and small enterprises
2012	Public procurement policy for Micro and Small Enterprises Order	Phased procurement approach with annual target of procurement of minimum 20% from MSEs in the next 3 years
2017	General Financial Rules	Provides for purchase preference to MSEs
	MSME Sambandh Portal	Bring transparency by launching a public procurement policy monitoring portal
2018	Public Procurement Policy for Micro and Small Enterprises (MSEs) Amendment Order	Percentage of procurement was increased from 20% to 25%
2021	Public Procurement Policy for Micro and Small Enterprises (MSEs) Amendment Order	Made the 25% annual public procurement mandatory; allowed public procurement of goods or services sold or provided by MSEs on the GeM portal

Source: Compiled from multiple sources

In 2018, the percentage of procurement from MSMEs was increased from 20% to 25% (Ministry of Micro, Small and Medium Enterprises, 2018). Further, in 2021, while making the 25% annual public procurement mandatory, MSE 2012 policy was amended to allow public procurement of goods or services sold or provided by MSEs, on the GeM portal (Ministry of Micro, Small and Medium Enterprises, 2021). Thus, it is seen that a phased target-driven approach was adopted in case of MSEs, as targets were initially set for 3 years in 2012 and thereafter annually from 2021.

Analysing the MSEs policy ecosystem it is apparent that a policy thrust in the form of regulatory instruments and information instruments are essential to realize sustainability goals. Adopting regulatory instruments supported by mandates in the form of guidelines on green labelling and financing green products are essential for promoting GPP in India. Hence, a similar portal to MSME Sambandh portal can be developed for GPP in which a dashboard providing a list of green products being sold, government agencies procuring green products, and different types of green products being procured can be tracked. This will enhance transparency in the GPP sector.

Additionally, a phased target-driven approach similar to that of MSE policy framework may be developed which will enhance the reach of GPP over time. A monitoring mechanism may also be developed to advance GPP. MSEs may be incentivized by the government to adhere to green certifications and standards.

MSE-related policy developments thus reflect the potential of leveraging public procurement as a tool to achieve social, economic, and environmental goals of the government by formulating efficient policy frameworks aimed at holistic sustainable development.
To understand the GPP scenario in an expanding sector, we next take up a case study of scope for public procurement of electric vehicles in India.

7. Framework for Advancing Green Public Procurement in India

To examine the ways to enhance GPP in India, it is necessary to undertake a lifecycle approach along with various types of policy instruments including, economic instruments (fiscal and market), regulatory instruments, information instruments and enabling measures. Annexure 1 provides more details on the various types of policy instruments.

Economic instruments categorized into fiscal and market-based, looked at through the GPP lens include the following policy tools: In fiscal instruments there are environmental taxes that have a positive environmental, and possibly revenue raising effect. It includes taxes paid directly on emissions and pollution (emissions tax); payments on harmful contents present in products (product tax), and taxes (rents) on use of natural resources (natural resource tax).

Next under fiscal are the category of environmental fees and user charges which include, fees for utilizing a resource (user fees); fees for discharging pollutants in water or soil (effluent

discharge fees); fees for regulating activities (regulatory fees); penalties/fines on polluters (non-compliance fees); and products whose production is harmful for the environment (product charges). Next is the category of loans and priority sector lending, followed by subsidies in the form of direct financial grants or indirect subsidies such as differentiated tax or pricing. Market instruments include tradable permit schemes involving buying and selling of permits for extraction/usage of resource or emission of a pollutant (examples such as carbon credit and emission trading); and deposit-refund schemes wherein recycling is promoted by enabling the user of a product to return the product at the end of its life for a monetary refund.

Regulatory instruments involve norms and standards, environmental control and enforcement measures, and environmental liability. The category of norms and standards include mandatory technical requirements (technology standards); specifications as to monitoring behaviours and take-back schemes (management and process standards); specifications of ambient quality standards for air, water, soil; emissions standards; and product standards were looked at.

Under environmental control and enforcement measures, are life cycle of a product in terms of permits granted by authorities including Environmental Impact Assessments; compliance measures such as licensing, inspection, ESG reporting including Business Responsibility and Sustainability Report (BRSR); restrictions and prohibitions; tariff reductions on environmental goods and services agreements; and extended producer responsibility. In addition, the environmental liability tool, which can be further categorized into negligence-based liability where the polluter is found liable when damage due to negligence can be shown, and strict liability where environmental damages occur, and the polluter is liable to pay damages despite no fault in its behaviour.

Next, information-based instruments include ecolabels, certifications and standards. Standards such as the International Standards Organization certifications including ISO 14000 (environmental management) and ISO 20400 (sustainable procurement) can be looked at from both organization and product perspectives and encouraged at both levels.

In enabling measures, the tools identified included capacity building; voluntary agreements by corporates (unilateral commitments), agreements between industry and public authorities, voluntary agreement schemes set up by public authorities; sustainability reporting in the form of information submitted by corporates, and environmental monitoring; and information campaigns and websites operated by the government. A context and location-specific approach to adoption of these policy instruments is needed for mainstreaming green public procurement in the Indian public procurement ecosystem.

Figure 2 depicts a framework for advancing GPP through the dimensions of lifecycle approaches, policy instruments and alignment with strategic priorities.

Figure 2: Framework for green public procurement

Extraction
Production
Use
Disposal
Life cycle stage

Policy instruments
Economic (fiscal and market)
Regulatory
Information
Enabling measures

**Alignment with
strategic priorities**
Local content
Socio-economic benefits
Alignment with environmental initiatives
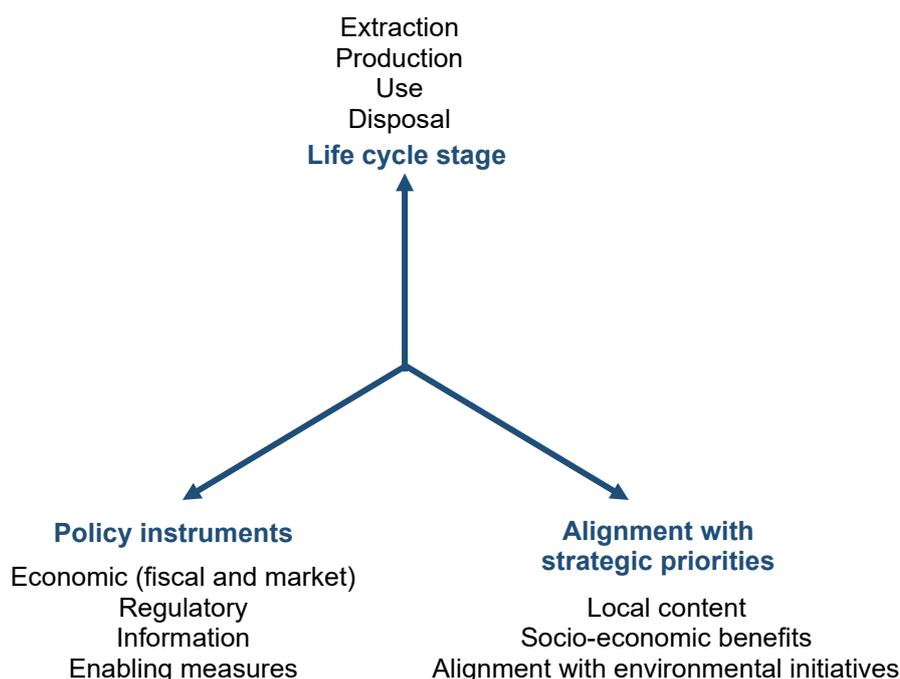
8. Policy Recommendations

Environment and development goals should not be seen in isolation. SDG target 12.7 focuses on sustainable consumption and production, built on three pillars: green, social, and economic. GPP is a subset of sustainable public procurement, the latter being broad and considers all the three pillars of sustainable development. These pillars must not be seen in isolation. Definition of 'sustainability' and 'green' are context-specific and need to also consider the social and economic goals of the country. Developing countries are wary of trade measures being used for green protectionism.

Global frameworks should be more holistic and need to consider local content. It is key that 'local content' be a part of SPP global frameworks. Sustainability must be according to India's requirements. Ensuring sustainability from India's perspective is vital. Local content can contribute to all the three pillars of sustainable development. From a Global South perspective, to ensure political and economic feasibility, provisions need to be made for unemployment and other major concerns of the country. In this regard, inclusion of local content is key in GPP/SPP frameworks. Global indicator frameworks on SDG 12 need to be strengthened further to include indicators around ecolabels and local content.

Environmental provisions under GFR need to be further defined and environmental criteria need to be identified. Building on the provisions of GFRs, the Indian government has been actively working on all the three pillars of social, economic, and green provisions under target 12.7. States in India have a crucial role to play on GPP. Punjab issued an advisory note of GPP and Assam is in the process of formulating a GPP strategy. According to SDG target 12.7, every country is required to have an action plan in place. However, this need not be a separate action plan. Developed countries like the United States do not have separate action plans for GPP or

SPP. Current provisions under the GFR and the procurement manuals issued by the Ministry of Finance can qualify as action plans for Target 12.7, according to the UNEP questionnaire. GFR provisions can be made more explicit where technical specifications and criteria can be listed. Initiatives like GPP involve subjectivity, which government officials may fear as it may cause unwanted scrutiny. Thus, green criteria for policies should be specified to eliminate the issue of subjectivity and unnecessary scrutiny.

Target-based approaches and roadmap can be formulated along with introduction and expansion of mandates with flexibility. Drawing on the experience of public procurement of energy efficient appliances and public procurement from MSMEs, mandates for GPP in India should be introduced and expanded around BEE Standards & Labeling Programme, ECO Mark scheme, UJALA and green room air conditioners. A comprehensive target-based GPP framework using mandates with flexibility, following the approach of the 2013 office memorandum should be formulated. GPP implementation can be taken up in a phased manner with an initial focus on specific sectors followed by a wider range reach of GPP.

A phased approach along with policy coherence is key. GPP can follow a phased approach wherein a few categories with significant impacts can be taken up. Starting with low-hanging fruits and prioritizing at the framework level is recommended. Pilots can be taken up. Both strategic and operational levels are important, along with policy coherence, which translates green provisions of various policies to procurement. There needs to be coherence and integration of policy and various concerned departments. GPP should be seen as an enabler supporting sustainability efforts. Policy integration and coherence with GPP are necessary. A comprehensive implementable framework for GPP, including a specific action plan, stakeholder identification, and measurable timeframes, is needed. There is also the need to find ways to bring resources to the table so that more and more green mechanisms, including GPP, can be implemented.

Information instruments and standards need to be adopted at product and organizational levels. Eco-labelling needs to be further championed in India. Buyers must be knowledgeable about all procurement provisions. Standards such as ISO 20400 can be key to building awareness. More standards and certifications in accordance with Indian requirements need to be formulated. Life-cycle based approaches and benchmarking are important. Some examples could include benchmarking to reduce toxic and hazardous content from procured products, along with the use of construction and demolition waste and the use of local compost in urban areas.

Digital public infrastructure needs to be strengthened, including for monitoring. Government e Marketplace (GeM) can be leveraged for promoting GPP for more products and services. Emphasis of green services is key from the perspective of environmental impacts. For more public and private procurement, audit systems can be made more robust to avoid greenwashing. In sustainability reports, many corporates justify 'sustainable sourcing' based on declarations from suppliers across their supply chains. Even if suppliers have ISO 14001 certification, this does not necessarily translate to green products and

services. Monitoring mechanisms along with evaluation of environmental performance are key for effective GPP implementation. Systems need to be strengthened and e-procurement platforms should be available to ensure end-to-end visibility along with reduced paperwork. To improve transparency on GPP, a dashboard similar to MSME Sambandh can be developed.

GPP policies need to consider both supply and demand sides. Policies like GPP should focus on both the demand and supply sides. Ensuring adequate supply to meet government demand is crucial. Additionally, GPP should offer long-term cost advantages. Publicly available resources should be provided for both private and public entities undertaking green procurement. Role of the government extends beyond practicing GPP; it also involves influencing other players. Behavioural nudges significantly transform lifestyles. For instance, Mission LiFE is a commendable initiative, but it requires behavioural nudges for both markets and consumers. The government plays an essential role in this aspect.

More investment is needed for capacity building. Awareness at the ground level is essential. Reluctance often stems from a lack of training and capacity building. While large companies have the resources to opt for greener alternatives, the supply chain presents significant challenges, particularly for small sectors, such as the micro, small and medium enterprises (MSMEs) that lack the resources and capacity. Investment in research and development is necessary to reduce the cost of several potential product categories and include them under the ambit of GPP.

Long-term implications for the environment need to be considered. GPP needs to be incentivized. The government may adopt GPP extensively and ensure proper implementation. Thereafter, it can be incentivised for other sectors to adopt sustainable procurement methods. A key question is whether policy instruments need to be voluntary in nature or mandatory. Understanding lifecycle costing is essential to analyse the relevance of green products. The immediate higher cost of green alternative can be subdued by the long-term benefits like lower cost, high impact and environment-friendly results.

The elephant in the room involves limited resources and high costs. This is a complex issue and the accounting for long-term environment and health benefits can be promoted. For procurers, cost-benefit analysis should reveal cost-burdened transitions offering benefits or at least cost neutrality. This will incentivize and accelerate the transition. Over time, costs will decrease, making it easier for everyone to adopt green products, allowing the government to retract. Only paradigm shifts can enable GPP to move from a linear to non-linear approach.

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Annexure 1: Types of Policy Instruments to Promote GPP

Economic	Fiscal	**Environmental taxes** • Emission tax • Natural resources **Environmental fees and user charges** • User fees • Effluent discharge fees • Regulatory fees • Non-compliance fees **Subsidies** • Direct (financial grants or credits) • Indirect (differentiated tax and pricing)
	Market	**Loans & priority sector lending** **Tradable permit schemes** • Carbon credits • Emission trading **Deposit-refund schemes**

Regulatory		**Norms and standards**
		• Technology standards
		• Management and process standards
		• Environmental quality
		  - Ambient quality
		  - Emission standards
		Environmental control and enforcement
		• Permits – EIA
		• Compliance regime
		  - Licensing
		  - Inspection
		  - ESG reporting
		    (BRSR)
		  - Technical specifications
		• Restrictions and bans
		• Trade environmental goods and service agreements
		• Extended producer responsibility
		Environmental liability and polluter pays principle
		• Negligence based
		• Strict liability

Information-based		**Ecolabels** **Certification and standards** • Product-specific standards • Organization-specific standards • Technical specifications and green criteria
Enabling measures		**Capacity building** **Voluntary agreement** • Unilateral commitments • Agreements between industry and public authorities • Voluntary agreement schemes set up by public authorities **Sustainability reporting** • Control or checking of information submitted by the private sector • Environmental monitoring **Information campaigns and websites** • Approved technology/product lists • Carbon footprints related information

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World Sustainable Development Summit
The World Sustainable Development Summit (WSDS) is the annual flagship Track II initiative organized by The Energy and Resources Institute (TERI). Instituted in 2001, the Summit series has a legacy of over two decades for making 'sustainable development' a globally shared goal. The only independently convened international Summit on sustainable development and environment, based in the Global South, WSDS strives to provide long-term solutions for the benefit of global communities by assembling the world's most enlightened leaders and thinkers on a single platform. Over the years, the Summit series has witnessed the participation of 54 Heads of State and Government, 103 Ministers, 13 Nobel Laureates, 1888 Business Leaders, 2745 Speakers, and 38,280 Delegates.

Act4Earth
Act4Earth initiative was launched at the valedictory session of WSDS 2022. Building on the discussions of WSDS, this initiative seeks to continuously engage with stakeholders through research and dialogue. Act4Earth initiative has two components: **COP Compass** and **SDG Charter**. The COP Compass will seek to inspire and mobilize leadership at all levels, for inclusive transitions through ambitious and informed policies and measures, which will enable paradigm shifts towards meeting the UNFCCC and Paris goals through mitigation, adaptation, and means of implementation. The SDG Charter will seek to identify gaps and suggest ways for strengthening and mainstreaming sustainable development in policy agendas for enhanced environmental, social, and economic outcomes.

THE ENERGY AND RESOURCES INSTITUTE
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Green Public Procurement for Advancing Sustainable Development in India

Green Public Procurement (GPP), a sub-component of sustainable public procurement, seeks to achieve environmental sustainability by leveraging the government sector's purchasing power. GPP can be defined as the deliberate and systematic integration of environmental objectives into the procurement process of goods, services, and works by public agencies. This policy brief employs a case study-based approach to identify strategies for promoting GPP in India. To advance GPP within the Indian public procurement landscape, it is essential to expand existing mandates and introduce new mandates along with taking a phased and target-based approach. The policy brief suggests a framework of using the dimensions of lifecycle stages, policy instruments and alignment with development priorities. Local content as criteria for GPP can be explored for alignment with both development and environmental priorities.

Keywords

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