



BUYING BETTER for THE PLANET

A Green Public Procurement Guidebook for Assam



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Buying Better for the Planet

A Green Public Procurement Guidebook for Assam

This guidebook summarises how Green Public Procurement can be used as a Public Finance Management tool to strengthen climate action and promote environmental sustainability.

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CivicDataLab thanks the Finance Department, Government of Assam, for their vital inputs and guidance in creating the Green Public Procurement (GPP) guidebook. Their expertise has been crucial in formulating a guidebook for Assam. We hope this guidebook will help create an effective Green Public Procurement Policy in the state, ensuring environmental sustainability is at the forefront of public procurement processes in the state. This collaboration marks a significant step towards leading the way on GPP in India.

Executive Summary

‘Buying Better for the Planet’ is a guidebook, which provides a comprehensive framework for implementing Green Public Procurement (GPP) in Assam. Green Public Procurement is an initiative that harmonises the procurement of goods, services and works with environmental and climate objectives.

The document provides a comprehensive outline of the principles, strategies and steps necessary for implementing GPP. It aims to guide stakeholders involved in the public procurement processes to transition towards environmentally sustainable procurement.

This guidebook serves as a resource for Government Line Departments, Public Sector Undertakings (PSUs), Government agencies and Special Purpose Vehicles (SPVs) as well as potential suppliers and bidders involved in green public procurement so that they can better understand, implement or support ‘buying better for the planet’. It aims to

provide these entities with the knowledge and tools necessary to incorporate green practices into their procurement decisions.

The adoption of GPP is a critical contribution towards reducing carbon emissions and fostering environmental sustainability by aligning procurement with global, national, and sub-national Sustainable Development Goals targets and commitments.

We, at CivicDataLab, emphasise a data-driven approach to ensure informed and impactful procurement choices, and have been working towards strengthening Assam’s overall climate and green initiatives. This guidebook is a collaborative effort to incorporate a data-driven approach to drive successful implementation of GPP in Assam. The adoption of GPP has the potential to set a precedent and serve as a model that can be replicated in other states and sectors.



Introduction

Green Public Procurement (GPP) or ‘buying better for the planet’, is a public finance management (PFM) tool, which aims to address climate and environmental challenges from the public contracting lens. Public contracting is the process through which governments and implementing agencies acquire goods, works and services.

Globally, US\$13 trillion is spent on public contracts every year. This is responsible for 15% of all greenhouse gas emissions¹. In India, estimates put expenditure on public procurement at 20-22% of the total national GDP (gross domestic product)². This presents a compelling opportunity for leveraging public procurement to deliver better outcomes

for our planet. An effective method of reducing the carbon footprint and ensuring sustainability, is by institutionalising Green Public Finance Management (GPFM).

GPFM addresses how government expenditure – from planning & budgeting to procurement & delivery of services can be greened. Green Budget and GPP together form GPFM. Through GPFM, governments can strengthen existing initiatives and find fiscal space for sustainable interventions. GPFM can also help incorporate the global, national as well as sub-national Sustainable Development Goals’ (SDGs) targets and commitments, especially in the realm of public expenditure.

Green Public Finance Management benefits, in a nutshell

- **Greater transparency** on how public money is spent on climate and environmental action
- **Effective monitoring** on progress towards climate and environmental goals including SDGs
- Informs better understanding and decisions on the flow of climate funds and identifying areas for **targeted interventions**
- **Better coordination** across departments, sectors and relevant actors to strengthen and streamline initiatives

At present, public expenditure on climate action is fragmented across various government agencies, initiatives and activities. Green budgeting and GPP can provide the principles and practices to bring this together

and maximise impact.

GPP deployment enhances the efficient allocation and spending of government funds for a sustainable future.

1 Implementing Open and Sustainable Public Procurement: a new toolkit - Open Contracting Partnership - <https://www.open-contracting.org/2022/06/14/implementing-open-and-sustainable-public-procurement-a-new-toolkit/>

2 FM Reviews Capital Expenditure & Payments of Maharatnas and Navratnas CPSEs - <https://pib.gov.in/PressReleasePage.aspx?PRID=1586546#:~:text=Public%20procurement%20as%20a%20percentage,of%20works%2C%20goods%20and%20services>

GPP can be deployed in 3 crucial government procurement processes

Goods



Services



Works



This document details how different kinds of public procurement can be greened with specific examples as well as available alternatives in the market.

It also addresses how various government departments, Public Sector Undertakings (PSUs) and other buyers from the government can implement principles of GPP in their procurement processes.

Who is this guidebook for?



- Government Line Departments
- Public Sector Undertakings (PSUs)
- Government Agencies and Special Purpose Vehicles (SPVs)
- Suppliers and Bidders



Principles Of Green Public Procurement

In order to introduce and implement GPP, there is a need for a holistic policy framework including guidelines, methodology and process reforms. This guidebook outlines a framework, which is informed by global and national

best practices. GPP best practices listed here, outline key principles for purchasing goods, works and services in a climate- and environmentally-friendly way.

Key Principles of Green Public Procurement (GPP) for works, products and services

1

Life Cycle Cost

- GPP evaluates costs associated with maintenance, operations and disposal
- Calculates more than just one-time acquisition costs
- Leads to informed procurement decisions
- Gives better value for money
- Assures long-term impact

2

Climate and Environmental Sustainability

- GPP prioritises the best value for climate and environmental impact
- Uses technical specifications to price in climate and environmental targets
- Ensures better outcomes such as reduced emissions, energy efficiency and protection of natural resources

3

Circular Economy

- GPP promotes innovation
- Sustainable design
- Durability, reuse, repair and recycling
- Emphasises closing the material loop
- Minimises waste generation
- Maximises resource efficiency

4

Waste Reduction

- GPP minimises waste throughout the procurement process
- Prioritises products and services with minimal packaging
- Promotes the use of reusable or recyclable materials
- Encourages suppliers to adopt other waste reduction practices
- Enables right to repair principles
- Ensures repair and repurposing

What is Life Cycle Costing (LCC)?

And why GPP prioritises LCC over cost of acquisition



LCC is based on

- 1 Purchasing costs** and all associated costs such as delivery, installation, commissioning and insurance
- 2 Operating costs**, including utility costs such as energy and water use and maintenance costs
- 3 End-of-life costs** such as removal, recycling or refurbishment and decommissioning
- 4 Longevity and warranty** timeframes of the assets



An example of LCC

A 2019 report³ by the UNEP, Confederation of Indian Industry (CII) and The Energy and Resources Institute (TERI), lists priority products for GPP are highlighted based on a preliminary market assessment. The report suggests that there are Life Cycle Costing (LCC) gains for room air conditioners, for which LCC has been calculated (please refer to the box).

Furthermore, the report provided a '**Sample comparison of the total cost of ownership (TCO) for room air conditioners based on Bureau of Energy Efficiency (BEE) Star Ratings**' under specific conditions and assumptions, including an appliance lifespan of 10 years, with a tariff rate of INR 10 per unit of electricity cost.

Sample Comparison of the Total Cost of Ownership (TCO)					
Room Air Conditioner	Acquisition Price (INR)	Annual Electricity Consumption (kWh/year)	Annual Electricity Cost (INR)	Total Cost of Ownership (10 years, INR)	Payback Period of Incremental Cost on 3-Star
3-Star (3.5 SEER)	34,600	1,125	11,250	147,100	-
5-Star (4.5 SEER)	41,200	880	8,800	129,200	2.7 years
Super-Efficient AC (5.2 ISEER)	50,000	780	7,800	128,000	4 years

Source: Sustainable Public Procurement in India: Selection of priority products and Preliminary Market Assessment (2019)

³ Sustainable Public Procurement in India: Selection of priority products and Preliminary Market Assessment - <https://wedocs.unep.org/bitstream/handle/20.500.11822/37038/SPPI.pdf?sequence=1&isAllowed=y>



Context for GPP in Assam

Assam, a north-eastern state in India, is actively addressing global challenges such as climate change, environmental sustainability and disaster resilience. In line with the Government of India's (GoI) commitment to the Paris Agreement, the Government of Assam (GoA) has implemented key policies and initiatives such as the State Action Plan on Climate Change, the Disaster Risk Reduction Roadmap 2030⁴ and introduced the Green Budget. These initiatives lay down actions and strategies to align the state departments with Sustainable Development Goals (SDGs).

A significant stride in this direction would be the adoption of Green Public Procurement (GPP) practices. GPP plays a crucial role in reducing emissions, enhancing resilience, and protecting the environment by ensuring responsible procurement of goods, works and services. This approach is particularly relevant considering the GoA's annual public procurement budget exceeds INR 30,000 crore. By integrating GPP, Assam can fulfil its climate and environmental commitments while promoting economic and environmental sustainability through data-driven processes.



Milestones for Climate Action in Assam

2016	Assam 2030: Our Dreams, Our Commitment document released in October 2016 that sets targets for the state to achieve various SDGs.
2017	Assam State Action Plan on Climate Change (2015-2020) announced in September 2015.
2018	Assam Agenda: 2030, Strategies & Actions for achieving SDGs in Assam was approved by the State Cabinet in 2018.
2021-22	Revised Assam State Action Plan on Climate Change (SAPCC) from 2021-2030 submitted to the Ministry of Environment, Forest and Climate Change as per revised guidelines. Disaster Risk Reduction Roadmap 2030 published by Assam State Disaster Management Authority (ASDMA) to build the state's capacity to mitigate disasters in 2022.
2023	Green Budget 2023-24 published by Government of Assam covering 14 key departments.

4

Assam State Disaster Risk Reduction Roadmap 2030 - https://asdma.assam.gov.in/sites/default/files/swf_utility_folder/departments/asdma_revenue_ueecopscloud_com_oid_70/this_comm/drr_road_map_2022.pdf



Existing Policy Ecosystem for the Adoption of GPP



Following diverse collaborations with the Government of Assam (GoA), CivicDataLab (CDL) has developed a blueprint for the implementation of a GPP framework in the state. This guidebook addresses the necessary steps needed for GoA to become the first state in India to commit to GPP (Green Public Procurement). Here, it is important to note that both the state of Assam and Government of India have already set the foundation stones in place for the adoption and deployment of GPP.

Therefore, the process of incorporating GPP principles can be eased as well as informed by the existing regulations, standards and frameworks designed to address climate action. For example, the successful implementation of GPP in Assam would need a holistic policy framework, guidelines and process reforms, which will complement existing Public Procurement Rules and Acts to strategically implement GPP.

The existing Assam Public Procurement Act (2017) and Assam Public Procurement Rules (2020) have created room for the introduction

of GPP in the state. The technical specifications as per the acts and rules, allow for the inclusion of environmental criteria when procuring goods, services and works, as well as purchasing, building and providing works, products and services by the government. Infrastructure projects and activities that harm the environment are prohibited under current regulations. The current legislative, regulatory and policy framework empowers procuring entities to encourage climate and environmentally friendly behaviour in procuring public goods, services and works.

In addition to the GoA's state regulations, there have been many advancements in favour of GPP and other GPFM mechanisms in India (refer to box on page 11) and beyond, in recent years. Commitment to incorporate climate action within government policies is gaining ground. Government bodies, corporations, research institutions, think-tanks and industry leaders have set up various standards, regulations and codes to promote greener alternatives. India is among the pioneers proactively adopting GPFM systems in the global south.

Existing regulations that enable adoption of GPP

- 1991** Launch of EcoMark
- 2001** Indian Green Building Council (IGBC) set up by CII
- 2006** The National Environment Policy - Purchase Preference of ISO 14000 goods & services
- 2006** BEE Star Label
- 2007** PM's Council on Climate Change suggest Green Procurement & Purchasing Guidelines
- 2008** Consultation on GPP Guidelines
- 2008** IISD and TERI report on Sustainable Public Procurement
- 2010** Installation of Bio-Toilets by Indian Railways in Passenger Coaches
- 2011** E-Waste (Management & Handling) Rules
- 2012** CII published Green Public Procurement Guidelines in India
- 2015** National Program for LED-based home and street lighting for energy efficiency
- 2017** GFR 2017 rules to ensure electrical appliances procurements to be notified with BEE star rating
- 2017** Energy Conservation Building Code (ECBC) set up by Ministry of Power through BEE
- 2018** Bharat Stage VI emission standards implemented for motor vehicles
- 2018** CII launches 'GreenPro' Rating for Green Product Certification in India
- 2018** Department of Expenditure under Ministry of Finance established a Task force on SPP
- 2019** UNEP Report on Sustainable Public Procurement in India

KEY ● Standard ● Regulation ● Exploration ● Action

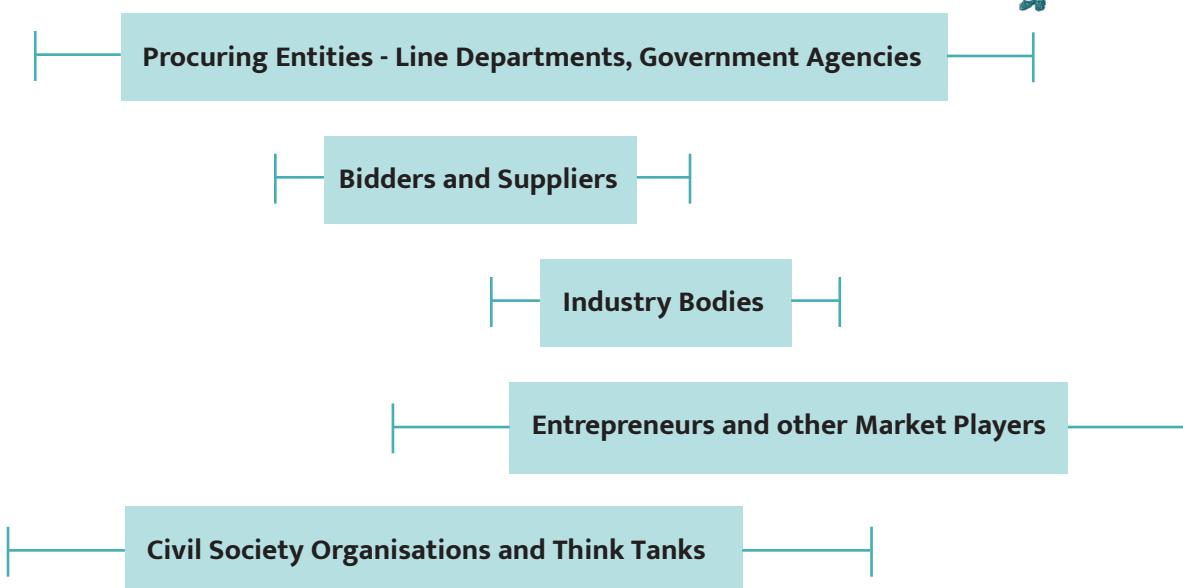


Implementing Green Public Procurement (GPP)

Implementation of Green Public Procurement (GPP) is a long term effort that requires systematic and institutional changes within government entities to buy better for the planet. It requires breaking the silos and collaboration where stakeholder groups like line departments, bidders, market players,

industry bodies, civil society organisations and academic institutions come together. To make this change successful two critical elements are required: Building the capacity of stakeholders to ensure a change in behaviour (moving away from the ‘business as usual’ approach) and the effective use of data.

GPP needs collaboration across all stakeholders



GPP necessitates the establishment of a single point of contact to coordinate the requirements, inputs and actionables from and for all diverse stakeholders involved. Given that the **Finance Department** of GoA has been at the forefront of championing procurement reforms and adopting data-driven processes, it is uniquely placed to spearhead the adoption of GPP. The Finance Department’s expertise and positioning in the government procurement machinery can help guide and unite stakeholders for effective deployment of GPP.

To ensure that the policy, guidelines and adoption of GPP becomes a reality, the Finance Department could set up a dedicated team, similar to a cell within the department. **The Green Public Procurement Cell (GPPC)** would include procurement officials from GoA, Finance Department, Department of Industry & Commerce, Department of Science, Technology & Climate Change. For effective and holistic climate-related interventions, such a cell would also need to engage with non-government stakeholders such as entrepreneurs, industry bodies and experts.



GPP adoption requires

- Updating technical specifications
- Training, raising awareness and building capacity of line departments and bidders
- Monitoring and evaluation of GPP performance

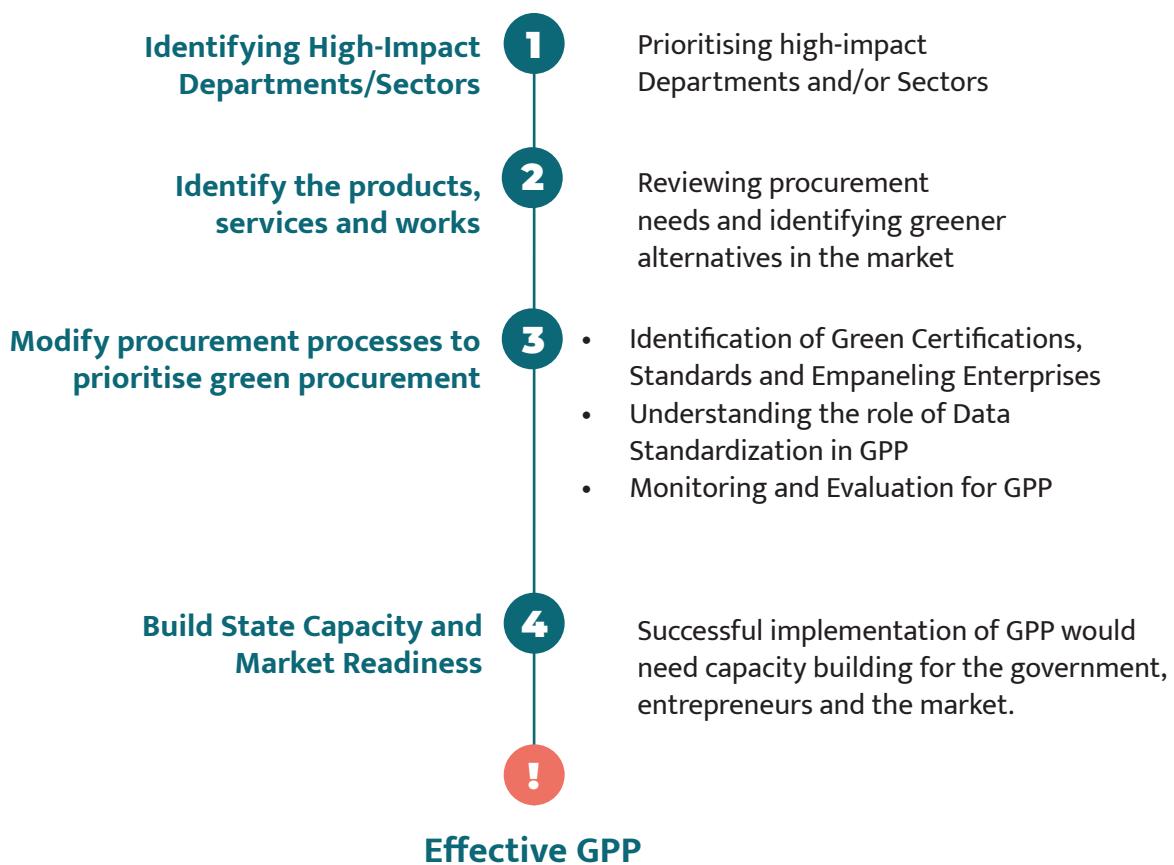
Anchored by the Finance Department, GPPC would specifically look at updating technical specifications, ensuring regular training, awareness and capacity building of

line departments and bidders. It would also monitor and evaluate GPP on a regular basis to increase on-ground impact and adapt to the complex requirements of climate action.

Four steps for adoption of effective GPP

Deployment of GPP includes four critical steps for effective implementation. These are: Identification of high-impact sectors, products, works and services; Setting up process and

policy reforms that prioritise environmentally sustainable alternatives and Capacity building of the implementing agency as well as the market.



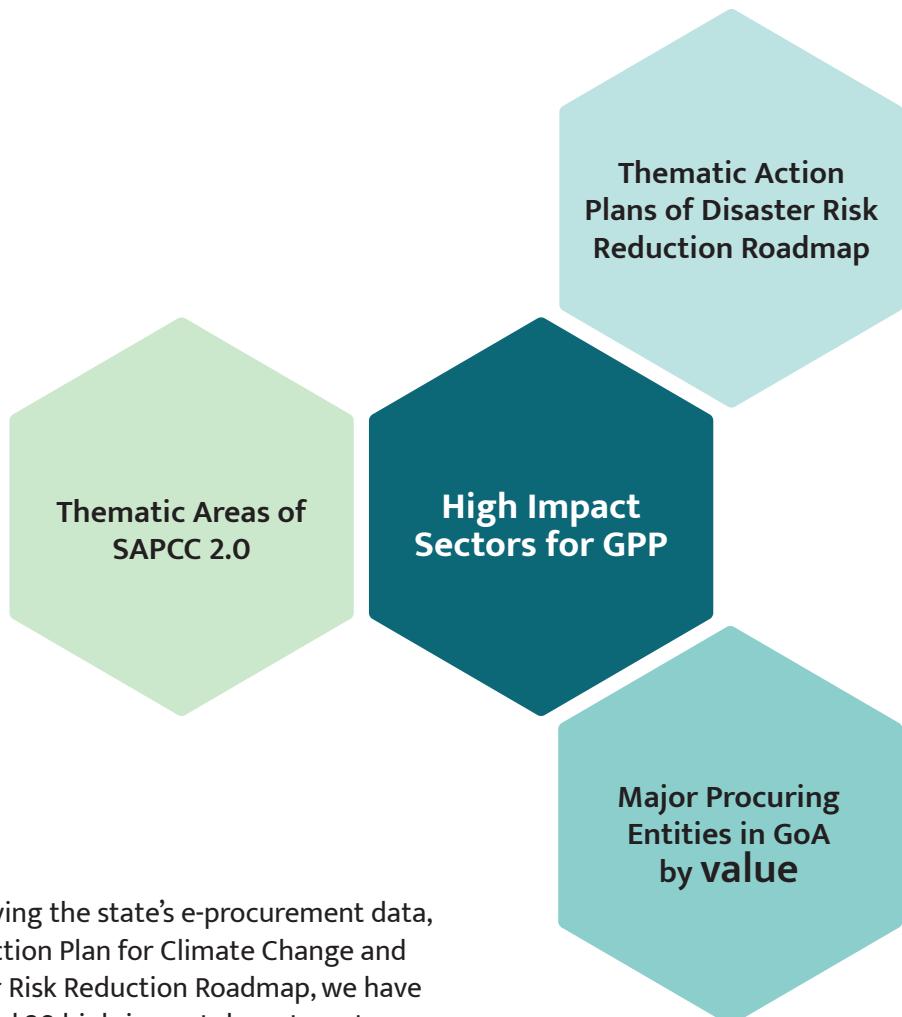
Step 1: Identify High-Impact Departments/Sectors

The GPPC in collaboration with the Finance Department and other departments should determine and outline priority departments.

- Identify and prioritise departments and sectors with the highest value of procurement.
- This must be cross-referenced with the priority sectors outlined in the Assam State

Action Plan for Climate Change (SAPCC) and Disaster Risk Reduction Roadmap 2030 (DRR Roadmap), which identify the departments vital for environment and climate action in the state.

- This will help identify department-specific projects and schemes that can be greened or improved for climate action and environment.



By studying the state's e-procurement data, State Action Plan for Climate Change and Disaster Risk Reduction Roadmap, we have identified 20 high-impact departments and sectors that must be prioritised for implementing GPP. (See Annexure 1)



Step 2: Identify Products, Services and Works

Once priority sectors and departments have been identified (see step 1, page number 14) the GPPC must work with these departments to shortlist products, services and works in consultation with the line departments and by building personnel capacity.

These products, services and works have to be curated for each department, based on the following

1

Value and Volume of procurement

2

Availability of Green Alternatives

3

Market Readiness

GPPC, in collaboration with other stakeholders, can do so via a market study and alignment with procurement data analysis.



Step 3: Modify Procurement Processes to Prioritise GPP

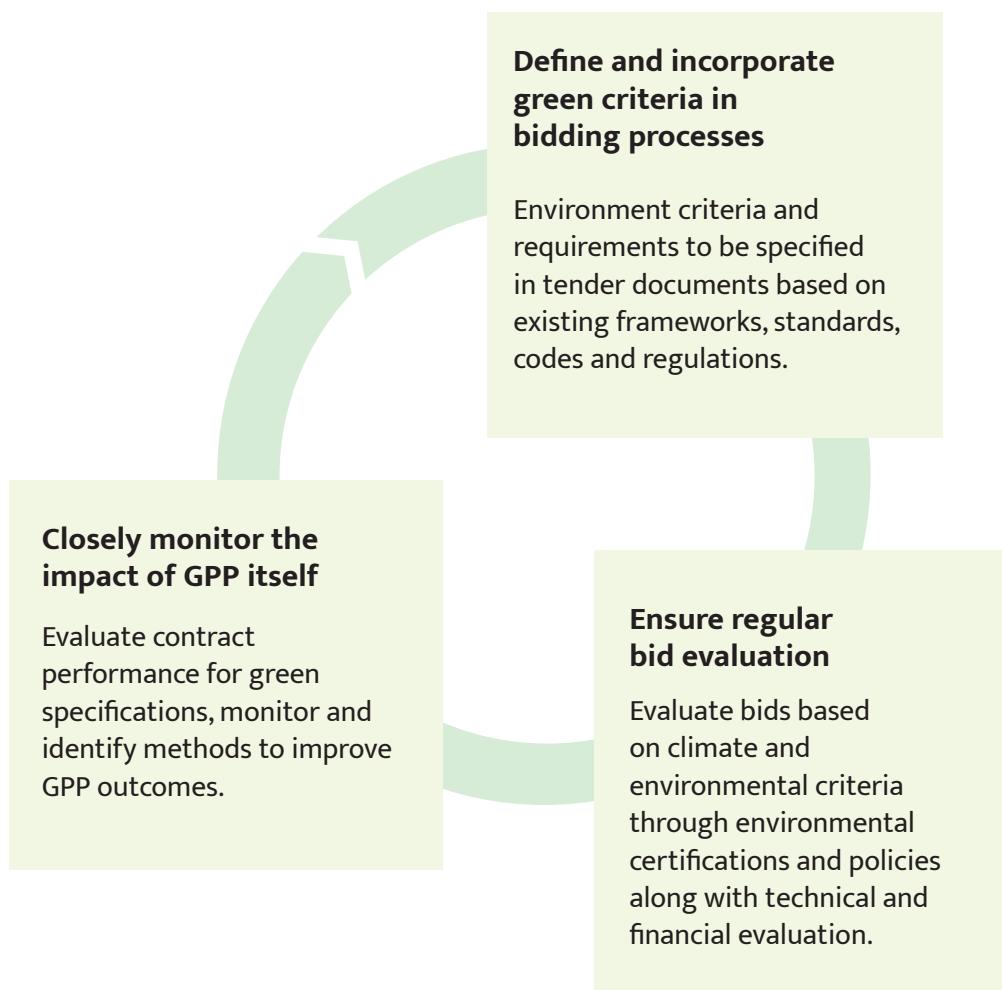
Traditionally, the process of procurement has largely been driven by considerations of cost, availability and the immediate utility of products and services. However, with emerging research and a growing global consensus on the need for sustainable practices and the increasing availability of alternatives, it's become abundantly clear that the dynamics of procurement need a transformative shift.

- First, since governments are among the largest buyers in the economy, their proactive green purchasing choices can set a compelling standard for sustainability.

- Second, such a transition would inevitably spur the market to innovate and supply greener alternatives, aligning with both the current scientific consensus and the environmental commitments made at state, national and global levels.

Successful implementation of GPP will require procedural and process reforms. Additionally, periodic capacity building and awareness workshops must be conducted for different procurement agencies. These need to be across sectors, departments and stakeholders.

Three key aspects specifically need to be highlighted:



Define Green Criteria

The tender (bidding) documents, criteria and assessments must explicitly include specific green criteria and requirements. The criteria also needs to be incorporated in the evaluation stages that bidders must meet.

This criteria can be identified and informed

based on relevance to the existing standards, regulations, codes and policies set up by the Government of India, industry bodies and other entities that promote sustainable and green practices making way for GPP.

Find the detailed list of standards in Annexure 1.



Prioritise Green Bidders

In the bid evaluation process, it is important to shift the focus from traditional L1 (lowest bid) procurement methods to more holistic approaches that prioritise environmental performance. This involves giving preference to product and service providers that adhere to recognised environmental standards, such as energy efficiency labels, green building certifications and eco-friendly manufacturing practices. Such a shift will not only encourage but also incentivise suppliers to develop the capacity to manufacture and supply products that meet these criteria in the future. Encouraging bidders based on green and environmental criteria within the tender

process will allow buyers to empanel and certify suppliers.

To effectively move away from L1 procurement, we should consider alternative methods such as Quality Cost Based Selection, Life-Cycle Cost Analysis, Eco-labeling and Green Certifications, Best Value Procurement and Multi-Criteria Analysis. Incorporating these methods into our procurement process will allow us to better assess the long-term value and sustainability of the products and services procured. This not only supports environmental objectives but also ensures investment in solutions that offer best value over time.





Quality Cost Based Selection (QCBS)

- QCBS is deployed by employing a weightage for evaluation of bids based on cost and quality
- This allows for a more balanced assessment by considering both the quality and the cost of offerings

Life-Cycle Cost Analysis (LCCA)

- LCCA evaluates the total cost of ownership, including operation, maintenance and disposal costs, alongside the initial purchase price
- Life Cycle Costing helps strategically inform advantageous decisions by considering the entire life cycle costs and not just the acquisition price allowing institutions to make more informed decisions that benefit the planet as well as the public coffers

Best Value Procurement (BVP)

- BVP seeks the best overall value, taking into account quality, efficiency, and sustainability where the contractor is evaluated on criteria such as competency and performance
- This method often involves interactive processes with vendors to comprehensively understand the benefits of their offerings

Multi-Criteria Analysis (MCA)

- This evaluates bids based on various predefined criteria, including cost, quality, sustainability and social impact, providing a nuanced assessment based on a broad set of values.





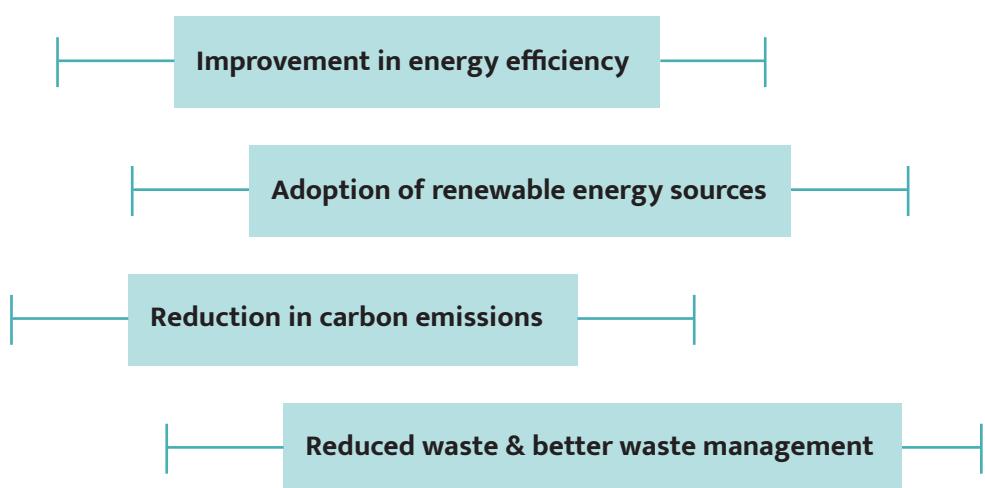
Monitoring and Evaluation of GPP outcomes

To maximise impact and ensure sustainability, GPP deployment will be most effective with a detailed monitoring and evaluation framework. Complete feedback loops and processes need to be put in place to ensure that the evolving requirements of the GPP landscape are met with appropriate actionables. A feedback loop will include inputs from line-departments, industry bodies, users/ beneficiaries of the procured items, market players (bidders) and other relevant stakeholders of the GPP ecosystem.

The GPPC, in collaboration with relevant stakeholders, needs to define specific key

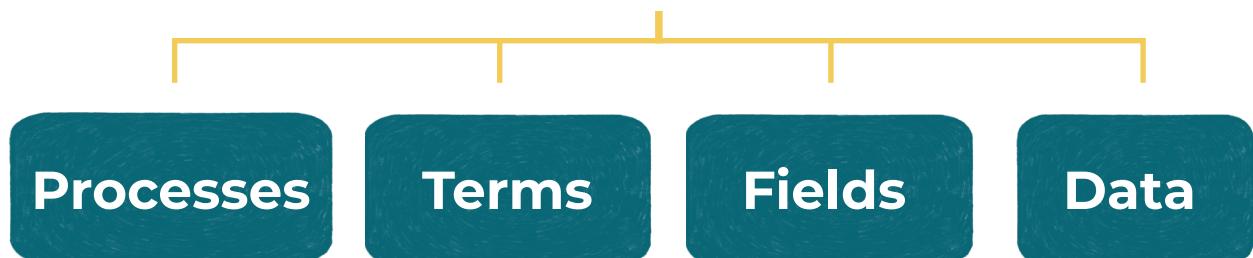
performance indicators (KPIs) like the proportion of procurements that include green criteria and the degree of green criteria that is met during procurement by each department. Measuring these KPIs is made possible through standardisation and tagging of procurement data to better monitor outcomes and evaluate the next steps and interventions.

GPPC needs to review and analyse the impact of the changes brought by its adoption and suggest areas for better interventions. The impact of GPP can be measured in the following terms, among others:



Data Standardisation for GPP

To create a consistent framework and successfully deploy GPP, standardisation is needed for



Standardisation can be accomplished by



Example - These processes need to capture fields such as the requirements related to energy efficiency, eco-label certifications, waste reduction, recyclability and other green criteria. This will help ensure that environmental considerations are explicitly earmarked in the tender requirements.

Existing procurement portals like State Public Procurement Portal (SPPP), Government e-Marketplace (GeM) and Government eProcurement System of NIC (GePNIC) already capture various fields for the tendering process.

Step 4: Build State Capacity and Market Readiness

Successful implementation of GPP necessitates capacity building for all stakeholders including government agencies and entrepreneurs in the market. This will benefit the demand and supply chains of GPP.

It is also essential to take into account market readiness when deploying GPP and this can easily be achieved by establishing a comprehensive feedback loop with all GPP stakeholders.

Capacity Building for procuring entities

- Conduct periodical workshops and capacity-building exercises
- Disseminate awareness regarding GPP principles, practices and other sustainability related procurement criteria
- Create training material, frameworks and guidebooks
- Leverage data by enhancing in-house capacity and through partnerships

Capacity Building for the Market

- Spread awareness regarding implementation of GPP
- Advertise existing initiatives and provisions that encourage GPP adoption
- Establish dialogue with industry bodies and market players
- Encourage participation through incentivisation and incubation

For instance, the GoA has existing initiatives like the Green Innovation Fund⁵ and Start-up Assam that can help identify, target and support entrepreneurs.

Such initiatives encourage innovation in the market and also help adoption of GPP principles by entrepreneurs.

⁵ Text from Assam State Budget 2023-24 “ a Green Innovation Fund will be set up with a corpus of Rs 25 cr for promoting Research & Development Grants for Green Solutions and Alternatives Incubation Program in collaboration with state agencies (like Guwahati Biotech Park, Startup Assam).



Data-Research Analysis For GPP Of Products, Services And Works

Open Contracting India is an initiative by CivicDataLab in partnership with a global non-profit charity called The Open Contracting Partnership (OCP) which aims to make public procurement processes more efficient, accessible and participatory.

In 2021, GoA opened its contracting data to the public with the support from CivicDataLab (CDL). Following this, CDL mapped 45,830 tenders published on the GoA's e-tenders portal based on the international global standard for contracting data called Open Contracting Data Standard (OCDS).

Out of the **45,830 tenders** published by various procuring agencies in Assam **between 2016 and 2023**, data-analysis by CDL found

38,074
Works Tenders



5,657
Goods Tenders

2,099
Service Tenders

Note - This is a subset of products and services procured by the state as these tenders have been moved to the Government e-Marketplace based on the notification 'FEB.224/2021/5' ⁶.

The GPP recommendations can easily be incorporated as environmental criteria of standard bidding documents and the tendering processes. The environmental criteria suggested here are based on existing codes and

standards followed across the country.

Annexure 2 of this guidebook provides a list of such codes, regulations and criteria that can be incorporated to enable GPP.

⁶ In 2022, Finance Department (GoA) notified an office order making it mandatory for all departments to procure goods and services available in GeM (Government e-Marketplace) through GeM (barring few exceptions) - FEB.224/2021/5 (Government of Assam, Finance Department)



GOODS

Data analysis from the Government e-Marketplace (GeM) and e-Procurement portal can help understand and map the volume of procurement that can be greened. It allows line

departments to identify products and services with sufficient maturity in the market to provide greener alternatives.

Between FY 2018-19 to 2022-23 some of the top goods in terms of tender value, procured by GoA, include

Vehicles and Vehicle Spares
INR 867 crore

Machinery
INR 199 crore

Electrical Equipment
INR 99.22 crore

Computers
INR 55.27 crore

For GPP, these could be categorised under the following

High-value, low-volume Goods

Vehicles, electrical and renewable energy, among others

Low-value, high-volume Goods

Office supplies, cleaning supplies, among others

Examples of GPP for Goods (Products)



Office Supplies: Choose products from recycled or eco-friendly materials, such as recycled paper, biodegradable pens and energy-efficient printers.



IT and Electronics: Choose energy-efficient computers, laptops, and servers with eco-label certifications. Encourage procuring electronic products that meet energy efficiency standards, such as the Bureau of Energy Efficiency (BEE) star rating system.



Lighting: Promote energy-efficient LED lights and fixtures as they consume less electricity and have a longer lifespan than traditional lighting options.



Vehicles: Emphasise procuring electric vehicles (EVs) or hybrid vehicles for government use. This can help reduce carbon emissions and promote sustainable transportation.



Electrical Equipment: Opt for energy-efficient electrical equipment with BEE star ratings, such as energy-saving switches, fans and air conditioners.



Printing and Packaging: Encourage using eco-friendly printing practices, such as double-sided printing and reducing paper waste. Procure recycled or FSC-certified paper products.



Furniture and Fixtures: Choose sustainable and eco-friendly furniture from recycled materials or certified sustainable wood.



Cleaning and Sanitation Products and Services: Promote eco-friendly cleaning products with biodegradable ingredients and minimal environmental impact.



Renewable Energy Solutions: Explore the procurement of renewable energy solutions like solar panels, wind turbines or biomass systems for government buildings.





SERVICES

GoA spends an average of INR 545.67 crore annually on procurement of services through e-procurement portal*. As per the procurement data analysis, high-impact sectors by tender value, which have feasible green alternatives available in the market are as shown below.

Principles and specifications of GPP for the services mentioned below can be achieved by defining environmental criteria for the service providers and encouraging adoption of sustainable practices throughout the service delivery supply chain.

High-Impact Sectors with feasible Green Alternatives in the market

Shipping and Transportation Services
INR 58.81 crore

Housekeeping/ Cleaning Services
INR 40.78 crore

Repair/ Maintenance Services
INR 10.61 crore

Examples of GPP for services



Transportation and Logistics

- Collaborate with logistics providers to prioritise fuel-efficient transportation, which is possible through route optimisation and low-carbon mode of transportation.



Building Maintenance and Cleaning

- Promote eco-friendly cleaning products.
- Reduce water and energy consumption.
- Adopting efficient technologies like high-pressure pumps for cleaning.



Waste Management

- Adopt sustainable waste management practices like proper disposal of e-waste and hazardous material in line with the waste management government regulations such as e-Waste (Management and Handling) Rules, 2010⁷ and Solid Waste Management Rules, 2016 and other regulations.



Energy Efficiency Management

- Conduct energy consumption audit.
- Adopt policies and practices that reduce energy consumption.
- Retrofit electronics and appliances with energy-efficient alternatives.
- Install clean energy technologies.



WORKS

In terms of volume as well as the number of tenders, 'works' are by far the GoA's biggest category of procurement, amounting to, on average, INR 34,578.15 crores annually.

Infrastructure or public works constitute a significant portion of India's GDP, highlighting the scale and influence of this sector on the nation's economy.

With the construction sector being a major contributor to carbon emissions, accounting for approximately 39% of global CO₂ emissions from energy and process-related sources⁸, the urgency to act becomes even more pronounced. Global data also suggests that the cement industry is responsible for 8% of all global emissions⁹.

Reducing emissions in Public Works involves adopting design efficiencies and technologies that minimise energy use. For instance, globally, **energy demand in buildings can be reduced by up to 50% by 2050** if efficient technologies are employed. This approach cuts down on emissions and enhance cost savings over time.

Enhancing resilience is another key dimension through creating infrastructure capable of withstanding environmental shocks, such as earthquakes and extreme weather events.

Protecting natural capital is also an important element to GPP in Public works to emphasise ecosystem preservation. This includes avoiding deforestation and ecological displacement from infrastructure projects, and afforestation or reforestation programs to maintain the ecological balance.

To achieve these goals, various strategies are employed, ranging from policy initiatives that mandate the use of low-carbon materials and sustainable design principles, to procurement processes that prioritise green criteria, including life cycle costing. This will not only contribute to environmental sustainability but will also set a precedent for others to follow. Successful GPP in public works is likely to create maximum impact, significantly reducing the state's environmental footprint while also building resilience.

Between FY 2018-19 and 2022-23, some of the top-works in terms of tender value, procured by GoA include

**Building
INR 70,475 crore**

**Electrical Works
INR 22,117 crore**

**Water Works
INR 3,752 crore**

**Roads
INR 15,502 crore**

⁸ Global Status Report for Buildings and Construction 2019 – Analysis - IEA - <https://www.iea.org/reports/global-status-report-for-buildings-and-construction-2019>

⁹ Concrete needs to lose its colossal carbon footprint (nature.com) - <https://www.nature.com/articles/d41586-021-02612-5>





Examples of GPP for works



Greener materials

- Include sourcing materials with low carbon-footprint
- Use recycled and reclaimed materials and prioritise locally sourced materials
- Encourage the adoption of sustainable alternatives like eco-friendly concrete, bamboo and recycled plastics

Example: Bricks from recycled materials such as fly ash and plastic waste that are cost-effective, sustainable and also provide thermal insulation.



Environmental clearances and audits

- Incorporate environmental clearances and audits
- Specify and implement compliance mechanisms
- Include explicit criteria for climate/environmentally friendly design, materials, technologies or outcomes

Example: Assam can draw from the experience of World Bank-funded projects in the state, where environmental clearances and audits were conducted as part of the project approval process. These assessments evaluate a project's potential impact on air quality, water resources, biodiversity and ecosystems.



Resilient structures

- Increase resilience to natural disasters and climate change by incorporating design principles for infrastructure development through guidelines and standards set by IGBC, GRIHA, LEED and others

Conclusion

As the world grapples with the formidable challenge of climate change, the urgency for strategic actions across sectors has never been greater. In this context, Assam's Green Public Procurement (GPP) initiative will mark a significant stride forward. Building on the momentum of the Green Budget implemented in the fiscal year 2023-24, GPP has emerged as the next step in the direction to reduce the environmental footprint of government purchases by making greener choices and setting up examples for other sectors to make environmentally sustainable decisions.

In the last fiscal year alone, Assam's e-procurement of goods, services and works totalled an impressive **INR 58,000 crore**, revealing the substantial potential for transitioning to green alternatives. Recurring expenditures in areas like Air Conditioners and Vehicles (**totalling over INR 950 crore in**

tender value between 2018-19 to 2022-23) can be optimised by prioritising energy-efficient and greener options, such as electric/hybrid vehicles and energy-efficient air conditioners. Similarly, the adoption of environmentally responsible construction materials and services that minimise ecological harm highlights Assam's commitment to environmental sustainability as civil works made up over **INR 15500 crore worth of e-tenders between FY 2018-2019 and 2022-2023**.

The state has also witnessed innovative and eco-friendly market solutions, such as the use of bamboo for ethanol production, recycling of waste plastic into construction materials and creating paper and yoga mats from water hyacinth. These efforts not only showcase local innovation but also reinforce the practical viability of sustainable practices.



This guidebook presents a strategic framework to integrate GPP in Assam, identifying high-impact sectors and enhancing state capacity for market readiness.

The approach is encapsulated in the four key steps detailed below

1 Identify High-Impact Departments/Sectors

Align with the Assam State Action Plan for Climate Change and Disaster Risk Reduction Roadmap 2030 and focus on sectors with significant procurement values

2 Identify Products, Services and Works

Conduct training, workshops and capacity building and collate lists based on procurement value, available green alternatives availability and market readiness

3 Modify Procurement Processes

Transition to sustainable procurement methods like QCBS, LCCA, BVP and MCA, with a focus on incorporating green criteria in tendering and evaluation

4 Build State Capacity and Market Readiness

Implement workshops and awareness programs, leverage partnerships and utilise initiatives like the Green Innovation Fund and Start-up Assam

Continuous efforts towards behavioural change are crucial in embedding the value of GPP in state machinery and processes. Demonstrating the benefits and feasibility of green alternatives can catalyse a paradigm shift in procurement practices across various departments.

The implementation of GPP in Assam represents a pivotal move towards a sustainable future. At CivicDataLab, we're

dedicated to expanding this initiative beyond Assam and aspire to establish it as a model state for GPP implementation.

The tangible impacts of GPP in Assam will serve as a powerful impetus, motivating other regions across India to embrace similar practices and thereby significantly enhance environmental and economic benefits on a national scale.

Bibliography

1. Implementing Open and Sustainable Public Procurement: a new toolkit - - <https://www.open-contracting.org/2022/06/14/implementing-open-and-sustainable-public-procurement-a-new-toolkit/>
2. FM Reviews Capital Expenditure & Payments of Maharatnas and Navratnas CPSEs - <https://pib.gov.in/PressReleasePage.aspx?PRID=1586546#:~:text=Public%20procurement%20as%20a%20percentage,of%20works%2C%20goods%20and%20services>
3. EaPGreen - Handbook on Sustainable Public Procurement - https://www.oneplanetnetwork.org/sites/default/files/handbook_spp.pdf
4. A handbook on green public procurement 3rd Edition- https://sustainable-procurement.org/fileadmin/user_upload/layout/Documents/Buying-Green-Handbook-3rd-Edition.pdf
5. Green Public Procurement: An Overview of Green Reforms in Country Procurement Systems (World Bank) - <https://www.worldbank.org/en/events/2021/12/09/green-public-procurement-an-overview-of-countries-green-procurement-practices>
6. OECD - 'Going Green : Best Practices for Sustainable Procurement' - oecd.org/gov/ethics/Going_Green_Best_Practices_for_Sustainable_Procurement.pdf
7. Sustainable Public Procurement in India: Selection of priority products and Preliminary Market Assessment - <https://wedocs.unep.org/bitstream/handle/20.500.11822/37038/SPPI.pdf?sequence=1&isAllowed=y>
8. Assam State Disaster Risk Reduction Roadmap 2030 - https://asdma.assam.gov.in/sites/default/files/swf_utility_folder/departments/asdma_revenue_uneecopscloud_com_oid_70/this_comm/drr_road_map_2022.pdf
9. E-waste Management and Handling Rules 2011 - https://www.meity.gov.in/writereadda/files/1035e_eng.pdf
10. Global Status Report for Buildings and Construction 2019 – Analysis - IEA - <https://www.iea.org/reports/global-status-report-for-buildings-and-construction-2019>
11. Concrete needs to lose its colossal carbon footprint (nature.com) - <https://www.nature.com/articles/d41586-021-02612-5>



About Us

CivicDataLab (CDL) is a private research lab working at the intersection of data, tech, design and social science to strengthen access to public information and improve citizen participation in governance in India. CDL works to harness the potential of open knowledge movements and better enable citizens to engage in matters of public reform. CDL works closely with governments, non-profits, think tanks, media houses, universities and other actors to grow

their data and tech capacity to enable data-driven decision-making at scale.

Since 2018, CivicDataLab (CDL) has been working with the state of Assam to bring data-driven policy and governance reforms and strengthen the data ecosystem, specifically focusing on supporting the data management practices related to budget, inclusive budget statements, green budget and public procurement.



Highlights of CivicDataLab's work in Assam:

- Co-created open data platforms like the Assam Budget Explorer and the Assam Public Procurement Explorer that help government agencies to make data-driven decisions and citizens to better understand budget and procurement data.
- Collaborated with Assam State Disaster Management Authority (ASDMA) to support development and deployment of 'Intelligent Data Solution for Disaster Risk Reduction' (IDS-DRR), which is an analytical decision-making platform. IDS-DRR hosts all relevant flood related datasets in one place. It uses advanced data models to generate actionable insights for decision-makers for efficient flood and disaster management.
- Engaged and assisted GoA's Green Budget through capacity building for key line-departments and compilation of the Green Budget 2023–24 document.

Annexure 1: Identify High Impact Sectors and Departments

Thematic Sector in Disaster Risk Reduction Roadmap 2030	Key Sector in State Action Plan for Climate Change (SAPCC) 2.0	Associated State Departments and Agencies
Resilient Social Sector & Infrastructure		<ol style="list-style-type: none"> 1. PW (B&NH) 2. PWD (Roads) 3. Education Department
Resilient Recovery & Build Back Better	<ul style="list-style-type: none"> • Water Resources • Forests & Biodiversity • Energy 	<ul style="list-style-type: none"> • Public Health Engineering Department • Water Resources • Power Department • Irrigation Department • Environment and Forest Department
Resilient Critical Infrastructure		
Resilient Cities & Towns	<ul style="list-style-type: none"> • Human Habitat • Transport 	<ul style="list-style-type: none"> • Transport Department • Guwahati Smart City Ltd. • Urban Development Department • Guwahati Municipal Corporation
Resilient Livelihoods	<ul style="list-style-type: none"> • Agriculture and Allied Sector • Human Health 	<ul style="list-style-type: none"> • Industries & Commerce Department • National Health Mission • Health and Family Welfare Department
Resilient Preparedness for Response	<ul style="list-style-type: none"> • Disaster Management 	<ul style="list-style-type: none"> • R&DM (ASDMA) • Fire & Emergency Services, Assam
Shared Resilience & Ensuring Results	<ul style="list-style-type: none"> • Strategic Knowledge Management 	<ul style="list-style-type: none"> • Finance Department • Printing & Stationery Department • Department Science & Technology

*Out of the 20 departments, 15 are among the top 20 procurement entities of the Government of Assam (through e-Procurements data from 2016-17 to 2021-22¹⁰)



Annexure 2: Codes and Regulations to support GPP

A2.1. Green Codes and Regulations for Procurement of Civil Works

Code/Standard	Description	Agency Responsible	Legal/Governmental Commitments
Indian Green Building Council (IGBC)	Provides a Green Building Rating System that promotes sustainable construction practices.	Indian Green Building Council (IGBC)	No specific legal/governmental commitments
Leadership in Energy and Environmental Design (LEED)	is an Internationally recognised green building certification system that encourages energy efficiency and sustainable design in buildings.	U.S. Green Building Council	No specific legal/governmental commitments
Energy Conservation Building Code (ECBC)	Provides guidelines for energy-efficient design and construction of commercial buildings.	Bureau of Energy Efficiency (BEE)	Mandatory compliance for certain buildings under the Energy Conservation Act 2001
Bureau of Indian Standards (BIS)	Establishes standards for various construction materials, which can be used as a reference for selecting eco-friendly alternatives	Bureau of Indian Standards (BIS)	Mandatory adherence to standards under the Bureau of Indian Standards Act 2016
National Green Tribunal (NGT) Act	Enables enforcement of compliance with green procurement practices and ensures accountability in environmental conservation.	National Green Tribunal (NGT)	Legal framework under the National Green Tribunal Act 2010 for environmental issues and disputes

A2.2. Green Standards and Regulations for Procurement of Products

Procuring eco-friendly products is a key aspect of Green Public Procurement (GPP) in Assam. Over the years, various codes and regulations have been

established in India to promote environment-conscious purchasing practices.

Code/Standard	Description	Agency Responsible	Legal/Governmental Commitments
Bureau of Energy Efficiency (BEE) Star Labelling Program	Promotes energy efficiency in electronic products such as refrigerators, air conditioners, and televisions by providing star ratings.	Bureau of Energy Efficiency (BEE)	Mandatory labelling and compliance under the Energy Conservation Act 2001
Energy Efficiency Services Limited (EESL) Procurement Guidelines	Provides guidelines for procuring energy-efficient products, including LED lights and energy-efficient appliances, for government projects.	Energy Efficiency Services Limited (EESL)	Mandatory procurement of energy-efficient products for government projects
Bharat Stage Emission Standards (BSES) for Automobiles	Sets emission standards for vehicles in India to control air pollution and improve fuel efficiency.	Ministry of Road Transport and Highways (MoRTH)	Compliance with BSES for vehicle emissions and fuel efficiency
E-Waste (Management and Handling) Rules (2011)	Regulates the management and handling of electronic waste, including proper disposal, recycling, and responsible procurement.	Ministry of Environment, Forest and Climate Change	Mandatory adherence to e-waste management rules for responsible procurement of electronics
Bureau of Indian Standards (BIS) for Electronics	Establishes standards for electronic products related to safety, performance, and eco-friendliness.	Bureau of Indian Standards (BIS)	Compliance with BIS standards for safety and eco-friendliness in procured electronics





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