BUYING BETTER for THE PLANET

A Guidebook for Green Public Procurement in Assam

open contracting india

Report Authors
Phani Datta Surampudi, Associate Researcher, CivicDataLab
Kabeer Arora, Lead, Open Contracting India Initiative, CivicDataLab
Gaurav Godhwani, Co-founder and Executive Director, CivicDataLab
Moyna Manku, Head of Communications, CivicDataLab

Research and Coordination
Arun Sudarsan, Senior Researcher, CivicDataLab

Research Team
Anusha Das, Fellow, CivicDataLab
Aparna S, Fellow, CivicDataLab
Sania Javed, Fellow, CivicDataLab

Guidance and Peer-Reviewers
Gavin Hayman, Executive Director, Open Contracting Partnership
Bernadine Fernz, Head of Infrastructure, Sustainability and Asia, Open Contracting Partnership
Lindsey Marchessault, Director for Data and Engagement, Open Contracting Partnership
Nanda Sihombing, Senior Program Manager for Asia, Open Contracting Partnership

Published by
CivicDataLab Private Limited

Suggested Citation
Buying Better for the Planet: A Guidebook for Green Public Procurement in Assam, CivicDataLab, December 2023

Published in January 2024

Design
Rutu Tank, Fellow, CivicDataLab
Prateek Draik, Illustrator, Communication Consultant, CivicDataLab

Buying Better for the Planet

A Guidebook for Green Public Procurement in 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.

TABLE OF CONTENTS

Acknowledgement

We thank the Finance Department, Government of Assam for their valuable inputs in developing this guidebook.

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 in Assam. It aims at guiding stakeholders in the public procurement process to transition towards an 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 that will participate in the green public procurement to understand and implement GPP practices effectively. It aims to provide these entities with the knowledge and tools necessary to incorporate green practices into their procurement decisions.

The adoption of Green Public Procurement is critical to contribute towards reducing carbon emissions, and fostering environmental sustainability by aligning procurement with global, national, and sub-national Sustainable Development Goals.

We at CivicDataLab emphasise a data-driven approach to ensure informed and impactful procurement choices, strengthening Assam's overall climate and green initiatives. This guidebook is a collaborative attempt to bring successful implementation of GPP in Assam in a data-driven manner. The adoption of GPP has the potential to set a precedent and serve as a model for green procurement practices that can be replicated in other states and sectors.

Introduction

Green Public Procurement (GPP) or buying better for the people and 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 emissions[1]. 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 of this expenditure and ensuring its sustainability is by institutionalising Green Public Finance Management (GPFM).

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

Green Public Finance Management (GPFM) benefits, in a nutshell

- Greening government budgeting
- Green Public Procurement
- Fiscal interventions on climate action
- Environmental and financial sustainability
- Achieving SDG commitments
- Effective deployment of funds for climate action
- Strengthen existing climate initiatives across sectors

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 also augments the process of effective allocation and expenditure of this quantum of government spending for an **environmentally responsible 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

This document details how different kinds of public procurement can be greened with specific examples and available alternatives. 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)

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

Lifecycle Cost

- GPP evaluates costs associated with maintenance, operation and disposal
- Not just one-time acquisition costs
- Leads to informed procurement decisions
- Gives better value for money
- Enables long-term impact

2

Climate and Environmental Sustainability

- GPP prioritises the best value for climate and environmental impact
- Uses technical specifications
- Encourages the use of climate and environmentally-friendly materials
- Energy efficiency
- Reduces greenhouse gas emissions

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 can minimise waste throughout the procurement process
- Prioritise products and services with minimal packaging
- Promote the use of reusable or recyclable materials
- Encourage suppliers to adopt other waste reduction practices
- Enabling Right to Repair Principles
- Ensuring Repair and repurposing

Understanding Life Cycle Costing (LCC)

An important principle of GPP is the adoption of Life Cycle Costing (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** time frames of the asset.

Case Study

In 2019, United Nations Environment Programme (UNEP), Confederation of Indian Industry (CII) and The Energy and Resources Institute (TERI) published a report titled - *'Sustainable Public Procurement in India: Selection of priority products and Preliminary Market Assessment'* [3]. This document lists out proposed priority products for sustainable public procurement based on a preliminary market assessment for the same. Room air conditioners is one such product for which the LCC has been calculated (refer to box).
The report provides a **'Sample comparison of the total cost of ownership (TCO) for room air conditioners base d on BEE Star Ratings'** under specific conditions and assumptions including an appliance lifespan of 10 years and the tariff is considered as INR 10 per unit cost of electricity.

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

Committed to the Paris Agreement's objectives, the Government of Assam (GoA) has implemented key policies to mitigate environmental risks. Assam, a North-Eastern state in India, is actively addressing global challenges such as climate change, environmental sustainability, and disaster resilience. Initiatives such as the State Action Plan on Climate Change, the Disaster Risk Reduction Roadmap 2030[4], and the introduction of Green Budgets. These steps emphasise R&D in fiscal reforms and align with the United Nations Sustainable Development Goals (SDGs), especially in clean energy and sustainable infrastructure.

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 crores. By integrating GPP, Assam aims to 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 to set targets for the state to achieve the various SDGs.

2017 — **Assam State Action Plan on Climate Change** (2015-2020) was announced in September 2015.

2018 — **Assam Agenda: 2030**, strategies & actions for achieving SDGs in Assam- approved by State Cabinet in 2018.

2021-22 — **Revised Assam State Action Plan on Climate Change (SAPCC)** from 2021-2030 submitted to 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 for 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_uneecopscloud_com_oid_70/this_comm/drr_road_map_2022.pdf

Existing Policy Ecosystem for the Adoption of GPP

Following diverse collaborations with 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 as well as Government of India have already set in place 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 the existing Assam Public Procurement Act (2017) and Assam Public Procurement Rules (2020) to strategically implement GPP Procurement.

The existing Assam Public Procurement Act and Assam Public Procurement Rules allow 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 the current regulations. The current legislative, regulatory and policy framework empowers procuring entities to encourage climate and environmentally friendly behaviour for supplying public goods, services and works.

In addition to the GoA's state regulations, there have been many advancements in 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 for proactively adopting GPFM systems in the global south.

Existing regulations that enable adoption of GPP

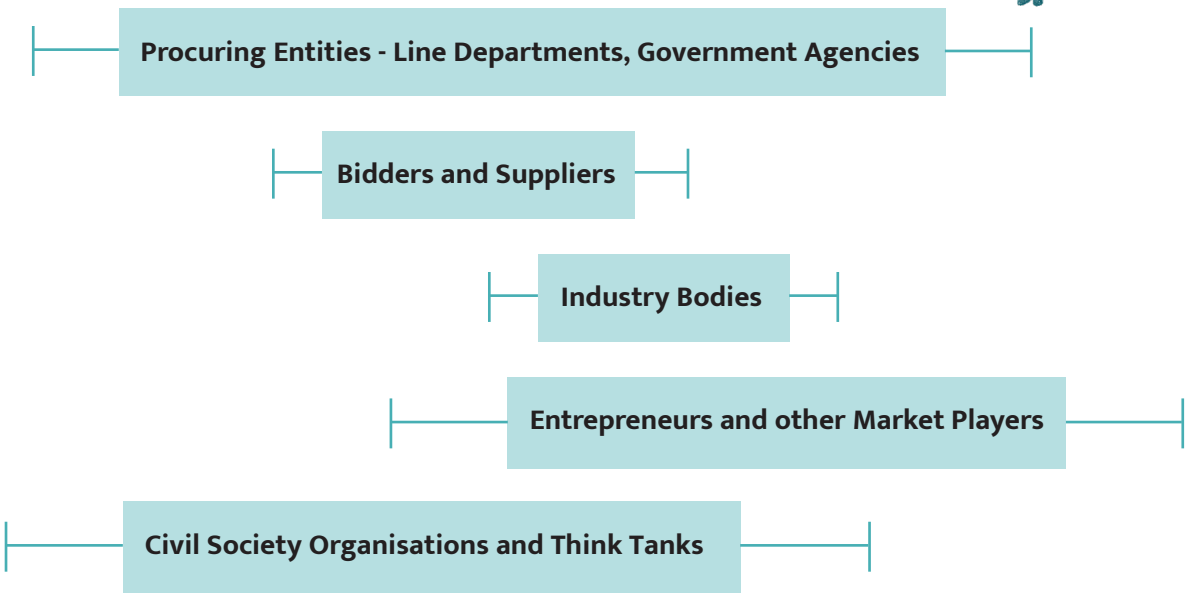
1991	Launch of EcoMark
2001	Indian Green Building Council (IGBC) set up by CII
2006	The National Environment Policy - Purchase Preference of ISO 14000 goods & services
2006	BEE Star Label
2007	PM's Council on Climate Change suggest Green Procurement & Purchasing Guidelines
2008	Consultation on GPP Guidelines
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

Deployment of Green Public Procurement (GPP)

Implementation of Green Public Procurement (GPP) is a long term effort that requires a systematic and institutional change within government entities to buy better for the planet. It requires breaking the silos and collaboration from across stakeholders groups like line departments, bidders, market players, industry bodies, civil society organisations and academic institutions to come together. To make this change successful, building the capacity of stakeholders to ensure change in behaviour (moving away from the 'business as usual' approach) and effectively using the data are two critical elements.

GPP needs collaboration between all stakeholders



GPP necessitates the establishment of a single point of contact to coordinate the requirements, inputs and actionables from, and for all the diverse stakeholders. 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 adoption of GPP. The Finance Department's expertise and positioning in the government procurement machinery can help guide and unite the stakeholders for effective deployment of GPP.

To ensure setting up the policy, guidelines and adoption of GPP, 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 domain experts.

GPP adoption will require

- Updating technical specifications
- Regular training, awareness and capacity building of line departments and bidders
- Monitoring and evaluation of the performance of GPP in Assam

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 its 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.

Identifying Priority Sectors 1
Prioritising high-impact Departments and/or Sectors

Review Procurement Needs 2
Identifying Green Alternatives for various goods, works and services

Prioritise Greener Alternatives 3
- Identification of Green Certifications, Standards and Empaneling Enterprises
- Understanding the role of Data Standardization in GPP
- Monitoring and Evaluation for GPP

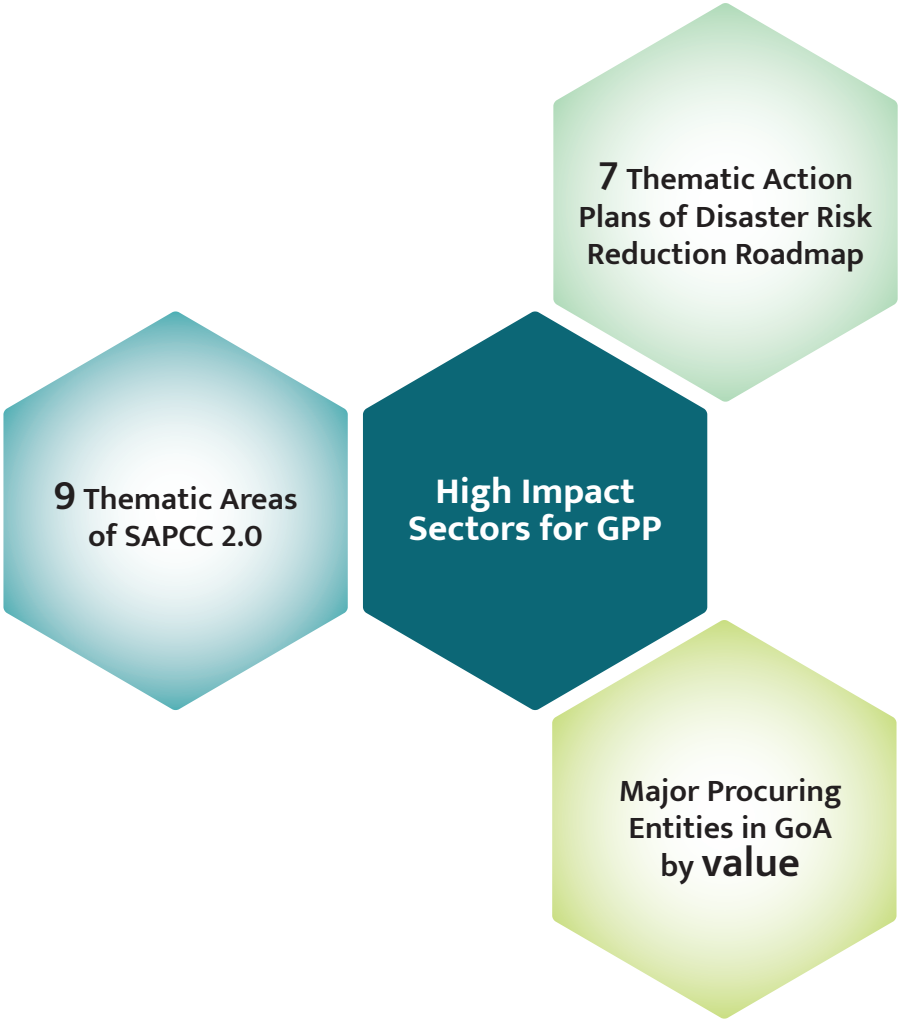
Enhance Capacity and Market Readiness 4
Successful implementation of GPP would need capacity building for the government, entrepreneurs and the market.

!

Effective GPP

Step 1: Identify High-Impact Departments/Sectors

- Identify and prioritise departments and sectors with the highest value of procurement.
- This must be supplemented with the identification of priority sectors outlined in the Assam State Action Plan for Climate Change and Disaster Risk Reduction Roadmap 2030, which recognises those departments that are vital for environment and climate action in the state.
- This will help in the identification of department-specific projects and schemes that can be greened or be better improved for climate action and environment.
- **The Green Public Procurement Cell (GPPC)** in collaboration with the Finance Department and other departments can determine and outline priority departments based on this analysis.



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

Step 2: Identify Products, Services and Works

- Once the priority sectors and departments have been identified (see step 1, page number 14) the GPPC must work with the departments to shortlist products, services and works by conducting personnel training, awareness workshops and capacity building exercises for the line departments.

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

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

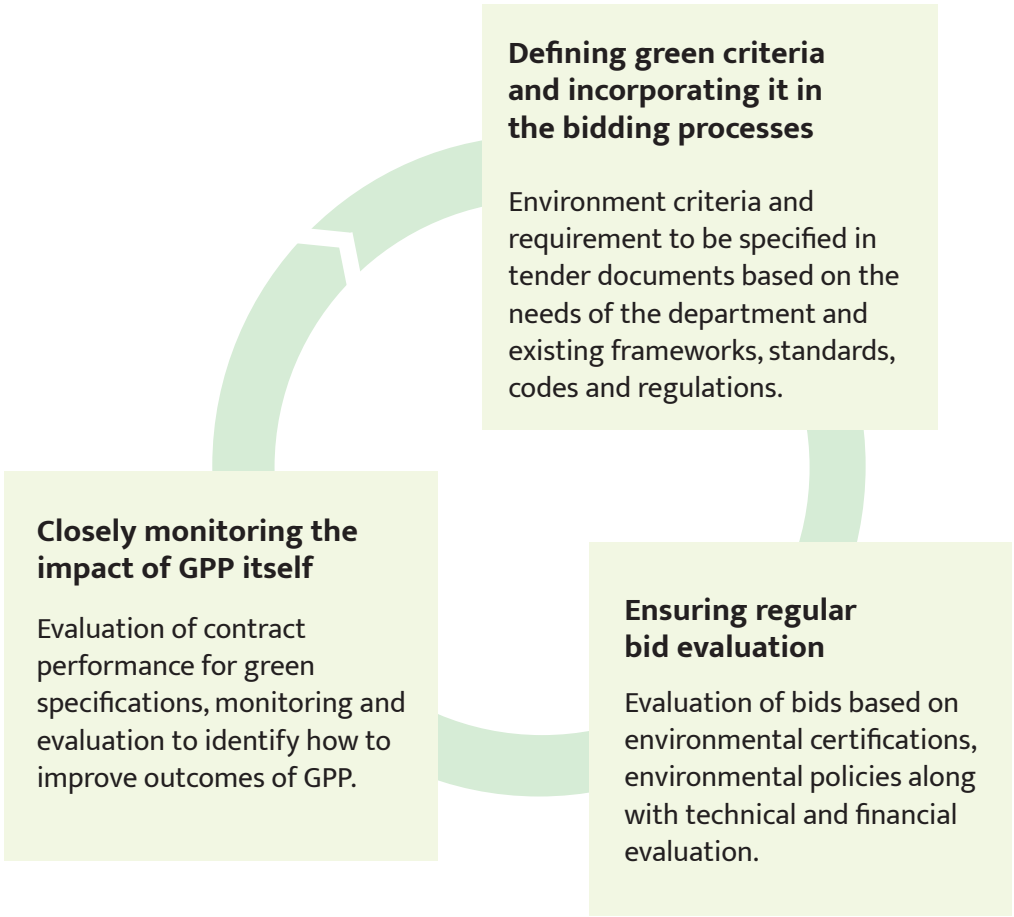
Step 3: Modify procurement processes to prioritise GPP

Traditionally, the process of procurement has largely been driven by considerations of cost, availability and the immediate utility of products and services. Green Public Procurement (GPP), due to perceived challenges associated with pricing and the limited availability of eco-friendly alternatives, often takes a back seat. 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.

- Firstly, as the government is one of the largest buyers in the economy, its proactive green purchasing choices can set a compelling standard for sustainability.
- Secondly, 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.

For implementing GPP, for and within government procurement agencies, procedural reforms are needed. Additionally, periodic capacity building and awareness workshops must be conducted for different procurement agencies. These need to be across sectors, departments and stakeholders for the successful implementation of GPP.

Three key aspects specifically need to be highlighted, these include:



Define Green Criteria

The tender documents, criteria and assessments must explicitly include specific green criteria and requirements in the bidding documents. The criteria also needs to be incorporated in the evaluation stages for the bidders to 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 sustainability. 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 the following alternative methods such as Quality Cost Based Selection (QCBS), Life-Cycle Cost Analysis (LCCA), Eco-labeling and Green Certifications, Best Value Procurement (BVP) and Multi-Criteria Analysis (MCA). 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 method allows for a 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 is a way to inform strategically 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 approach 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 would 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 would include inputs from line-departments, industry bodies, users/ beneficiaries of the procured items, market players (bidders) and other relevant stakeholders of the GPP ecosystem.

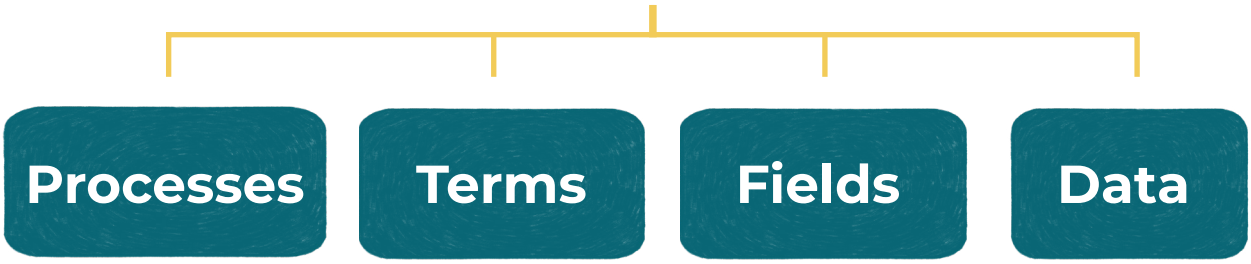
The Green Public Procurement Cell (GPPC) in collaboration with relevant stakeholders needs to define specific key performance indicators (KPIs) like the number of procurements, which include green criteria across departments, and the degree of green criteria that is met during procurement by each department. This is possible through standardisation and tagging of procurement data allowing for better monitoring of outcomes and evaluating the next steps and interventions required.

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

- **Improvement in energy efficiency**
- **Adoption of renewable energy sources**
- **Reduction in carbon emissions**
- **Better waste management**

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 like requirements related to energy efficiency, eco-label certifications, waste reduction, recyclability and other green criteria. It would help ensure that environmental considerations are explicitly earmarked in the tender requirements.

The current 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: Building State Capacity and Market Readiness

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

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

Capacity Building for the 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 as well as 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 Fund[5] 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 at making 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 - It is important to note that 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 suggestions for GPP deployment in government procurement of goods, services and works can easily be incorporated as environmental criteria of standard bidding documents and the tendering processes. The environmental criteria suggested here, are based on the 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 the line departments to identify products and services with sufficient maturity in the market to provide greener alternatives in order to implement GPP.

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	Machinery	Electrical Equipment	Computers
INR 867 crores	**INR 199 crores**	**INR 99.22 crores**	**INR 55.27 crores**

For GPP, these could be categorised under the following

High-value, low-volume Goods
such as air conditioners and electric vehicles

Low-value, high-volume Goods
such as paper and stationery

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 cof 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 crores annually** on procurement of services through e-procurement portal*. As per the procurement data analysis, the 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 crores

Housekeeping/ Cleaning Services
INR 40.78 crores

Repair/ Maintenance Services
INR 10.61 crores

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, 2010[7] 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.

7 E-waste Management and Handling Rules 2011 - https://www.meity.gov.in/writereaddata/files/1035e_eng.pdf

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 sources[8], the urgency to act becomes even more pronounced. Global data also suggests that the cement industry is responsible for 8% of all global emissions[9].

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 also can enhance cost savings over time.

Enhancing resilience is another key dimension through creating a resistant 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 in infrastructure projects, and implementing 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. It is likely to create maximum impact by allowing for greener and more resilient construction materials and significantly reduce the state's environmental footprint and build resilience.

Greening procurement under works category, presents unique challenges compared to GPP for products and services because of the limited access, availability and financial feasibility of the sustainable alternatives. However, by focusing on greener materials, resilient structures, ensuring environmental clearances and audits, the GoA can make significant strides in promoting sustainable infrastructure development.

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

Building	Electrical Works	Water Works	Roads
INR 70,475 crores	**INR 22,117 crores**	**INR 3,752 crores**	**INR 15,502 crores**

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
- 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
- Prioritise projects based on environmental sustainability
- Specify and implement compliance mechanisms
- Conduct comprehensive environmental audits

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

Resilient structures

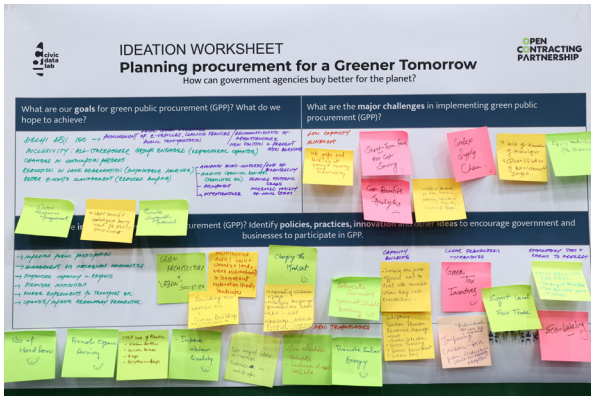
- Incorporate resilience principles for infrastructure development
- Ensure longevity and adaptability
- Reduce vulnerability to natural disasters and climate change
- Lower environmental footprint
- Design structures that can withstand extreme weather events

Conclusion

As the world grapples with the formidable challenges of climate change, the urgency for strategic actions across sectors has never been greater. In this context, Assam's Green Public Procurement (GPP) initiative marks a significant stride forward. Building on the momentum of the Green Budget implemented in the fiscal year 2023-24, GPP emerges 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 crores**, revealing the substantial potential for transitioning to green alternatives. Recurring expenditures in areas like Air Conditioners and Vehicles **(totalled to over INR 950 crores in tender value between 2018-19 to 2022-23)** can be optimised by prioritising energy-efficient and eco-friendly options, such as electric/hybrid vehicles and energy-efficient air conditioners. Similarly, the adoption of eco-friendly construction materials and services that minimise ecological harm highlights Assam's commitment to environmental sustainability as civil works made up over **INR 15500 crores 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 for integrating 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**

Aligning with the Assam State Action Plan for Climate Change and Disaster Risk Reduction Roadmap 2030, and focusing on sectors with significant procurement values.

2 **Identify Products, Services, and Works**

Through training, workshops, and capacity building, while curating lists based on procurement value, green alternatives availability and market readiness.

3 **Modify Procurement Processes**

Transitioning 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**

Implementing workshops and awareness programs, leveraging partnerships, and utilising initiatives like the Green Innovation Fund and Start-up Assam.

Continuous efforts towards behavioral 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, aspiring to establish it as a model state for GPP implementation.

The tangible impacts of GPP in Assam serve as a powerful impetus, motivating other regions across India to embrace similar practices and thereby significantly enhancing 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/writereaddata/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.

CivicDataLab's work in Assam: Highlights

- 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.
- Collaboration 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.
- Involved in GoA's Green Budget through capacity building for key line-departments and compilation of the Green Budget 2023–24 document.

Annexure 1: Identifying 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		1. PW (B&NH) 2. PWD (Roads) 3. Education Department
Resilient Recovery & Build Back Better	• Water Resources • Forests & Biodiversity • Energy	• Public Health Engineering Department • Water Resources • Power Department • Irrigation Department • Environment and Forest Department
Resilient Critical Infrastructure		
Resilient Cities & Towns	• Human Habitat • Transport	• Transport Department • Guwahati Smart City Ltd. • Urban Development Department • Guwahati Municipal Corporation
Resilient Livelihoods	• Agriculture and Allied Sector • Human Health	• Industries & Commerce Department • National Health Mission • Health and Family Welfare Department
Resilient Preparedness for Response	• Disaster Management	• R&DM (ASDMA) • Fire & Emergency Services, Assam
Shared Resilience & Ensuring Results	• Strategic Knowledge Management	• 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 2021-22[10])

10 https://assam.open-contracting.in/

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

open contracting india

open-contracting.in

OPEN CONTRACTING PARTNERSHIP

open-contracting.org

Follow us on social media

twitter.com/civicdatalab
github.com/CivicDataLab
instagram.com/civicdatalab
linkedin.com/company/civicdatalab

civic data lab

Write to us at

info@civicdatalab.in
open-contracting@civicdatalab.in