

EXPLAINER

# Green Public Procurement 101: Building the Future with Low-Carbon Materials

**Green public procurement is not only about buying differently; it is about building a new industrial future**

Governments are among the largest buyers of cement, concrete, and steel for major infrastructure projects; from housing, schools and hospitals to roads, bridges and energy projects. By signaling the will to buy low- and near-zero emission materials, governments can drive demand, signal industry transformation, and align public investment with climate goals.



## HIGHLIGHTS

### 1. Governments are powerful market-makers for low carbon materials

Governments are often the largest buyers of industrial materials—purchasing a significant amount of steel in some countries. Their procurement decisions shape markets and can drive the shift to low- and near-zero emission construction materials.

### 2. Green Public Procurement (GPP) accelerates clean industry transformation

By signaling intent to buy climate-friendly cement, steel, and concrete, governments send a clear demand signal that supports innovation, attracts green investment, and stimulates job creation in local and regional supply chains.

### 3. Procurement puts policy into practice

By leveraging existing policies such as ecolabel programs and green building certifications or similar approaches, GPP helps countries turn climate goals such as Nationally Determined Contributions (NDCs) and industrial decarbonization roadmaps into real-world projects and market transformation.

### 4. Support is available for every stage of the GPP journey

UNIDO supports governments at all stages of their green public procurement journey through initiatives such as the Industrial Deep Decarbonization Initiative (IDDI), the Net Zero Partnership for Industrial Decarbonization (NZP-ID), and tools like the Global Matchmaking Platform (GMP). These provide access to peer learning, technical assistance, project development support, and connections to public and private financiers to help integrate low-emission cement, concrete and steel into procurement systems.

## 1. WHAT IS GREEN PUBLIC PROCUREMENT (GPP)?

Green procurement is the practice of buying goods and services, and public infrastructure, that has a reduced environmental impact throughout its life cycle. All governments buy a vast array of goods and services so they can meet government objectives, each of which may have multiple environmental impacts. To minimize these impacts many governments create GPP policies that target various high impact categories and environmental issues such as greenhouse gases in construction materials. GPP supports decarbonization by setting criteria for low emission materials in construction tenders, incentivizing innovation and emissions reductions in the supply chain.

**Through GPP  
Governments can  
drive demand for  
green cement,  
concrete and steel for  
public infrastructure  
projects**



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## 2. THE GPP OPPORTUNITY: IF YOU MAKE IT WE WILL BUY IT

Steel and cement are the materials of our modern societies, and they are also among the most carbon-intensive industrial materials on the planet – producing them accounts for [14-16% of global energy-related CO<sub>2</sub> emissions](#).

Public procurement represents approximately 14 per cent of Gross Domestic Product (GDP) in developed countries, and it is a powerhouse in developing economies, representing up to 30% of their GDP. In fact, governments are often the largest single buyers of cement, concrete, steel, and other industrial materials, particularly for major infrastructure projects — in some countries purchasing roughly 40% of all cement and 25% of all steel used in public construction. When governments take steps towards [buying low carbon products](#) it sends a signal to companies and investors that [demand for these products is rising](#).



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### GPP can:

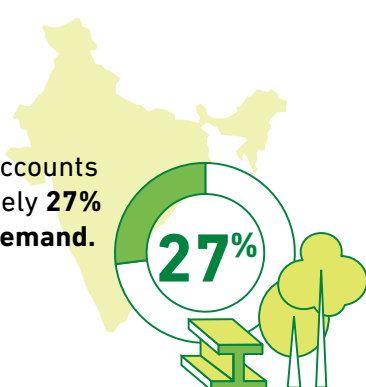
- Signal reliable, long-term demand for low- and near-zero emission materials, stimulating innovation, job creation and industrial transformation.
- Direct public funds toward cleaner technologies and materials to meet demand, accelerating the shift to low-carbon production systems.
- Prevent carbon lock-in by ensuring that new infrastructure includes low-emission materials from the start.



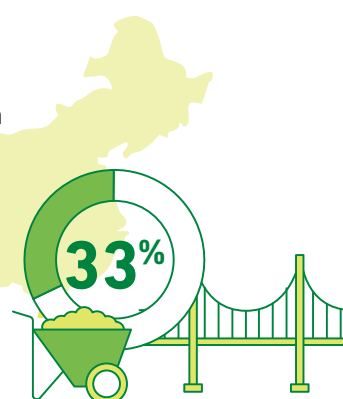
## Data from select emerging economies highlights the scale of public sector demand.

For example:

In India, public procurement accounts for approximately **27% of total steel demand**.



In China, public construction is estimated to drive around **33% of national demand** for both steel and cement, corresponding to roughly 350 million tonnes of steel and 775 million tonnes of cement annually.



### 3. CO-BENEFITS BEYOND EMISSIONS

GPP policies have benefits far beyond emissions reductions such as:

- **Economic:** Stimulates green innovation, attracts climate-aligned investment, supports SME competitiveness for small and medium enterprises
- **Social:** Creates skilled jobs, improves public health through cleaner air
- **Political:** Demonstrates climate leadership and commitment to climate goals under the Paris Agreement (Nationally Determined Contributions)

## ADOPTING AND REPORTING ON GPP REQUIREMENTS FOR CEMENT AND CONCRETE IN THAILAND

The Decarbonization of the Cement and Concrete Sectors in Thailand project, funded by Environment and Climate Change Canada (ECCC) and managed by UNIDO, is aimed at advancing industrial decarbonization initiatives in the cement and concrete sectors. Through this project, UNIDO brings together government, industries, and financial stakeholders to develop practical decarbonization strategies and solutions to enable Thailand to reach its net-zero goals and pave way for greener growth in the sector. The project includes workstreams for policy, innovation, investment, standards and partnerships.

As part of this, recommendations are being developed for Green public procurement policies and inclusion of key sectors for GHG reduction. The project aims to promote and accelerate a new market for low-carbon cement and concrete leveraging the purchasing power of government in public construction projects.

This project was undertaken with the financial support of:  
Ce projet a été réalisé avec l'appui financier de :



Environment and  
Climate Change Canada

Environnement et  
Changement climatique Canada



## 4. HOW TO GET STARTED WITH GPP

Many governments already implement green or sustainable procurement through ecolabels or green building certifications. These can be entry points for integrating low-emission construction materials into procurement systems.

Getting started with GPP requires understanding the current policy landscape and identifying practical pathways for action.

### Governments can begin by:

- ✓ **Reviewing** procurement laws, strategies, and technical specifications to identify opportunities for introducing climate-related criteria
- ✓ **Aligning** procurement requirements with national standards, product labels, or performance-based benchmarks for materials like cement and steel
- ✓ **Consulting** with relevant ministries, procurement agencies, industry stakeholders, and standards bodies
- ✓ **Embedding** low-emission requirements in procurement manuals, tender documents, and evaluation procedures
- ✓ **Assessing** market readiness and considering how to use public demand to stimulate supply chain transformation

Evidence shows that GPP is most effective when embedded in broader industrial, innovation, and climate strategies, and when supported by inter-ministerial coordination and long-term signaling to industry.

The [DDI GPP Guidance](#) provides a practical framework for setting clear procurement targets and aligning them with national decarbonization and development goals. While based on the GPP Pledge, the guidance can be used by any government seeking to strengthen the role of procurement in supporting industrial transition.



## THE INDUSTRIAL DEEP DECARBONIZATION INITIATIVE

The [Industrial Deep Decarbonization Initiative](#) (IDDI) is an initiative of the Clean Energy Ministerial, coordinated by UNIDO, that uses [Green Public Procurement](#) (GPP) as a key driver to decarbonize heavy industries, focusing on steel, cement, and concrete. The initiative is open to all levels of government, at any stage of readiness, that want to begin reducing emissions from public infrastructure and construction.

One of IDDI's key initiatives is the **Green Public Procurement (GPP) Pledge**, an invitation to join peer governments and commit to the journey to buy low emission cement, concrete and steel in construction projects. The Pledge includes a statement of intent and four levels of commitment, allowing governments to choose an entry point aligned with their national priorities and capacities.

### "If you make it we will buy it" The Green Public Procurement Pledge



Governments pledging choose their starting point and level of ambition

#### Statement of intent

Start now to work towards key aspects of the pledge without timebound commitments.

#### Level One

Starting as soon as possible upon pledging, require disclosure of the embodied carbon in cement/concrete and steel procured for public construction projects.

#### Level Two

Starting no later than 2030, conduct whole project life cycle assessments for all public construction projects, and, by 2050, achieve net zero emissions in all public construction projects.

#### Level Three

Starting no later than 2030, require procurement of low emission cement/concrete and steel in public construction projects, applying the highest ambition possible under national circumstances.

#### Level Four

Starting in 2030, require procurement of a share of cement and/or crude steel from near zero emission material production for signature projects.



IDDI pledge makers will provide annual progress updates and share learnings with other participating governments.

## 5. GPP AND THE GLOBAL GREEN INDUSTRIALIZATION PACT

Green Public Procurement is one of the clearest ways governments can translate climate ambition into real action. As countries prepare to scale up climate-smart infrastructure, GPP becomes a delivery tool for the upcoming Global Green Industrialization Pact.

By incentivizing demand for low and near-zero emission cement and steel, governments not only reduce emissions, but they also lay the foundation for a more resilient, competitive, and inclusive economy.



## NEXT STEPS FOR GOVERNMENTS

Governments looking to integrate green public procurement into their climate and industrial strategies can begin by reviewing existing procurement frameworks and identifying opportunities to prioritize low-emission construction materials.

UNIDO, through the Net Zero Partnership for Industrial Decarbonization (NZP-ID) and the Global Matchmaking Platform, offers tailored support to countries at all stages of this process. This includes technical assistance, project pipeline development, capacity-building, and connections to technology providers and financiers.

Governments can also engage with the Industrial Deep Decarbonization Initiative (IDDI) to align with international best practices and take part in ongoing efforts to harmonize definitions and standards for low-emission cement, concrete, and steel.

Whether taking first steps or expanding existing efforts, governments can work with UNIDO to bring procurement goals to life in public infrastructure using low-carbon cement and steel.

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