



## Accelerating Clean and Low Carbon Technology Initiatives in the Indian Brick Sector

*The Indian brick sector can reduce CO<sub>2</sub> emissions by 100 million tonnes by 2020:*

- *by achieving 50% savings in fuel consumption through energy efficient technologies*
- *supporting the Government of India's voluntary emission reduction target of 25%*

### Background to the Initiative

The Indian construction industry is booming with an annual growth rate of 9%, while contributing to 8% of the GDP. In order to fuel this boom, the unorganised brick sector directly employs 8 million people each season to produce over 170 million bricks in 150,000 units. Every year they use 350 million tonnes of fertile top soil and 24 million tonnes of coal, emitting 42 million tonnes CO<sub>2</sub>e. Rising energy prices, competing uses for limited resources, labour shortages and poor working conditions in the face of increasing demand necessitate urgent action.



Internationally heralded as the cheapest avenue for GHG mitigation, the brick sector carries a huge potential for transformation through adoption of clean production systems for emission reduction and improving energy and resource efficiency by means of industrial waste utilisation and process modifications.

Although technology options exist, evidence of spontaneous adoption of cleaner technologies and practices is lacking. This is due to cumbersome regulatory procedures starting from applying for land to accessing finance as well as inadequate information, incentives and consumer demand for cleaner, low carbon construction material.

The challenge is to integrate technology-policy measures to achieve the twin objectives of augmenting supply while lowering carbon emissions. Another challenge is implementing favourable market and non market incentives to accelerate the uptake of clean production over conventional energy and resource intensive systems.

### Initiative

The **Development Alternatives** Group, supported by **Shakti Sustainable Energy Foundation** has launched an initiative to create a preferential policy regime in order to accelerate the uptake of clean brick production technologies in the country.

The aim is to contribute to India's capacity in **enhancing energy security** while **mitigating GHG emissions** by improving the energy efficiency of the brick sector through enabling **policy** support, increasing access to **finance**, and accelerating **service delivery**.

### Target Area

The states of **Bihar** and **Orissa** have been chosen for accelerated multiplication in select clusters.

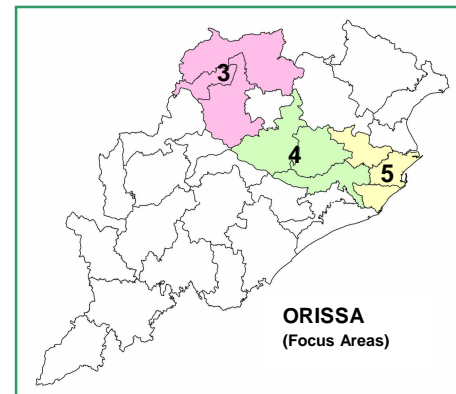
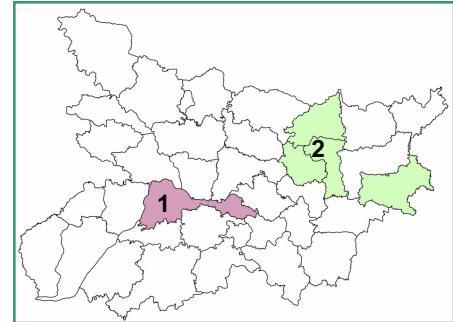


**Bihar** needs over 7500 million bricks over the next five years just to meet the rural housing gap of 1.1 million dwellings per year. Potential savings of 2.8 million tonnes of CO<sub>2</sub>e are possible while creating livelihoods for 0.35 million people by introducing cleaner production systems. Focus clusters for these interventions are:

1. Patna-Danapur
2. Saharsha-Supual-Katihar-Madhepura

**Orissa** is poised to be a major hub for manufacturing industries, which will lead to the generation of enormous quantities of industrial wastes. The use of industrial wastes like fly ash, dolochar etc. in brick production can potentially save over 4.6 million tonnes of CO<sub>2</sub>e per year. Setting up 800 new units just to utilise the available fly ash will lead to the generation of over 15000 jobs for local people. Focus clusters are:

3. Sambalpur-Jharsuguda-Sundergarh
4. Cuttack-Dhenkanal-Angul
5. Jajpur-Kendrapara



### Key Aspects of the Initiative

- **Enabling policy environment**

Facilitate implementation of coherent policy measures for large scale roll out of cleaner brick production systems through the issuance of promotional orders for waste utilization, procurement of eco products, inclusion in industrial promotional policies and green rating criteria, relaxing environmental compliance criteria, establishment of unified standards, etc.

- **Favourable financial regime**

Provide an impetus for adoption of low carbon brick production technologies by influencing promotional orders for funds earmarked for clean technologies, assisting the formulation of financial packages, facilitating development of simplified banking guidelines and enabling information services for technology, credit and incentives to entrepreneurs.

- **Accelerated service delivery**

Accelerate service delivery to selected clusters in the brick industry through customisation of solutions, establishing a network of business development associates, equipment and service suppliers and building their capacities for demand creation and delivery of solutions.

**The initiative is working towards doubling the number of clean brick production units while triggering a threefold increase in investment in clean production systems.**

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