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

Influencing Policy - Access to Finance - Accelerating Service Delivery

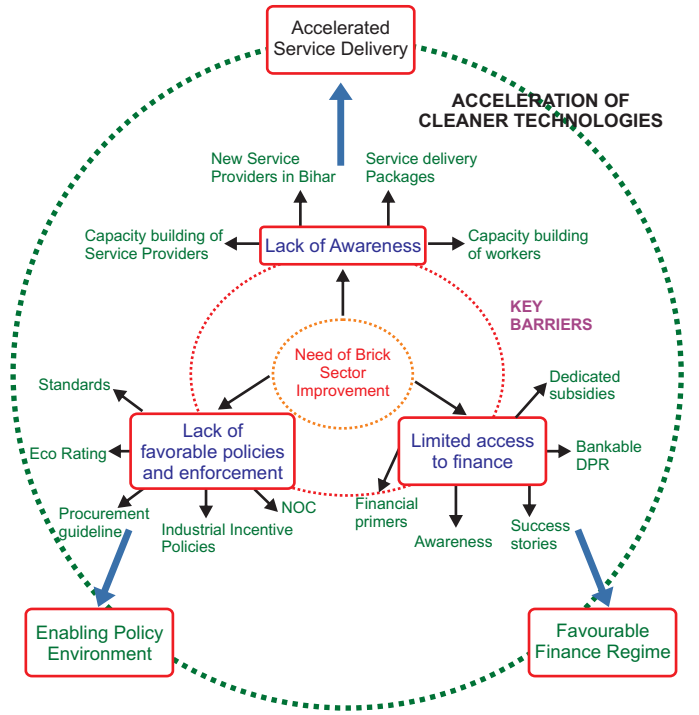
2nd largest producer of clay fired bricks in the world

More than 150,000 brick kilns produce 150-200 billion bricks annually

Consume 24 million tonnes of coal every year

Emit 41.6 million tonnes of CO_2 every year, accounting for 4.5% of total GHG emissions of India

Consume 350 million tonnes of fertile top soil every year



Project Approach

A three-pronged approach was adopted to create a favorable environment for the promotion of cleaner brick production technologies:

Enabling Policy Environment: Facilitate implementation of coherent policy measures for large scale roll out of cleaner brick production systems through inclusion in industrial promotional policies, preferential procurement, green rating systems, relaxing environmental compliance criteria 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 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.

Case Study

MAA Samleshwari Bricks is located in the Bolangir region of Odisha. Mr. Sangeet Agarwal, the owner of this unit started a Vertical Shaft Brick Kiln in January 2005. He is extremely happy by the coal savings and reduction of breakage in the kiln. Currently the coal consumption in this plant is only 10 tonnes per lakh of fired bricks and breakage is less than 4% due to moulding machine.

To reduce external fuel consumption, sponge iron waste, in the form of dust was added with the soil during the green brick preparation. Mr Sangeet Agarwal states “Looking at the high production and coal savings from VSBK, I am planning to expand the two shaft VSBK into a four shaft one and produce approximately 6 lakhs of fired bricks in one month.”

Through this initiative, Development Alternatives (DA) intends to create a preferential policy regime to accelerate the adoption of cleaner brick production technologies. The aim is to contribute to India’s capacity in enhancing energy security while mitigating greenhouse gases (GHG) emissions by improving the energy efficiency of the brick sector.

Task Force on Clean Building Materials

The Government of Bihar, in association with DA has been actively promoting the adoption of low carbon and resource efficient technologies especially fly ash brick technology in the state. An Inter Departmental Task Force on Accelerating Cleaner Production Systems in the Building Materials Sector in Bihar was set up in June 2012. The Task Force aimed to streamline the efforts of the various government departments involved. Convened by the Bihar State Pollution Control Board, its members include the Department of Environment and Forests, Department of Building Construction, Department of Industries and organisations like National Thermal Power Corporation (NTPC) etc.

The Mandate of Task Force is to recommend, monitor and advise on accelerating production, availability, acceptability and use of low-carbon technologies and building materials in Bihar. The major objectives are:

- To ensure savings of natural resources like coal and soil
- Reduce pollution from the operation of existing technologies

DA provides technical and secretarial support to the Task Force. Over the last two years, the Task Force has emerged as a key decision making venue where policy ideas are discussed and vetted.

Policy Interventions

Through their policy interventions along with awareness generation activities, Task Force has managed to:

- Enhance the rates of fly ash bricks in the state Schedule of Rates (SoR)
- Streamline the process of procurement of fly ash from NTPC, Kahalgaon.

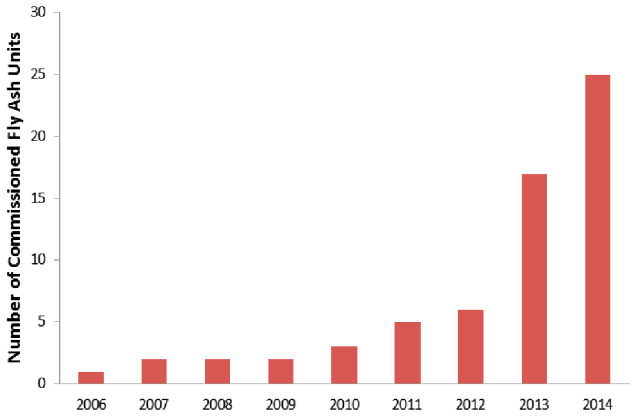
Other intervention areas include:

- Development of a rating system for fly ash bricks
- Use of fly ash bricks in public construction
- Inclusion of fly ash brick production technology in the thrust area of Bihar Industrial Incentive Policy 2011
- Exemption of cleaner brick production technologies from the list of industries ineligible for incentives in the Bihar Industrial Incentive Policy 2011
- Amendment of mining royalty structure on the basis of production capacity and soil use of different brick production technologies
- Relaxation in the Citing Criteria of Brick Kilns owing to low pollution levels of these technologies

The Fly Ash Brick Sector of Bihar

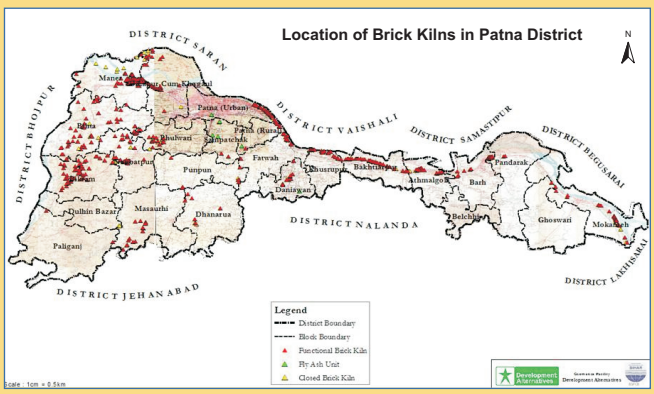
With the current and future increase in the production of fly ash in Bihar, 4389 fly ash units can be set up. The potential impacts of these fly ash units are:

- Annual production of fly ash bricks – 10.53 billion
- Annual savings of coal – 31.6 million tones
- Annual savings of carbon emissions – 7.27 million tonnes
- Annual savings of fertile top soil – 31.6 million tonnes



Zoning of Brick Kilns

Due to increased infrastructure needs in the Patna district, the demand for bricks has immensely increased. As a result, there has been an upsurge in number of red brick kilns on the either side of Ganga. Realising the environmental implications, DA has conducted an inventorisation of the red brick kilns in the Patna district of Bihar. The aim of the initiative is to assess the damage to the environment. It aims to develop a Decision Support System to assess and mitigate further damage to the environment.



For further details, please contact:
Development Alternatives
B-32, TARA Crescent, Qutub Institutional Area, New Delhi - 110 016, India
Tel: 91 (11) 2656 4444, 2654 4100, 2654 4200, Fax: 91 (11) 2685 1158
Email: mail@devalt.org, Website: www.devalt.org