

South-South Exchange Workshop on Brick Technology and Policy

9-10 May 2013, Kathmandu, Nepal

Background

Brick is one of the oldest manufactured building materials. Ancient records and excavations show that brick construction dates back more than 5000 years. One of the earliest types of brick was adobe brick, made of mud and straw and sun dried.

The brick manufacturing process basically has following steps - taking the raw material from the ground, or winning; preparing the raw material for use; forming the material into brick units; pre-drying the units; burning the brick in the kiln under controlled heat; and drawing and storing the brick. The burning process is one of the most specialized steps in the manufacture of brick.

Technological developments during the last century have helped to make the manufacture of brick a very efficient and highly productive process. More complete knowledge of the characteristics of the raw material, improved kiln designs, controlled heat in the kilns, and extensive mechanization have all played an important part in modernizing brick manufacturing.

In Asia, home to well over one fifth of the world's population fired, clay brick is the main building material, largely relying on old, manual technologies such as clamp kilns and Bull Trench Kilns (BTK). The brick making enterprises are dispersed throughout the region, with large clusters of brick kilns visible around cities; most production takes place in 300-400 clusters located in rural areas surrounding towns and cities. Coal is the main fuel used for firing bricks; and brick kilns in South Asia are estimated to consume around 50 million tons of coal/year. Inefficient coal combustion in traditional brick kilns leads to wastage of energy as well as large emissions of particulate, CO₂ and black carbon. Unregulated use of top agriculture soil for brick-making leads to degradation of fertile agriculture land. Most of the brick makers are small landowners, farmers or owners of small businesses

Brick kiln modernization offers a large potential for energy savings; reduction in black carbon and CO₂ emissions; saving agricultural land from degradation; improving the profitability of brick enterprises; improving working conditions and health of workers and providing better quality building material to consumers,.

The Brick Initiative of Climate and Clean Air Coalition (BI/CCAC), National Institute of Ecology of Government of Mexico, and the International Centre for Integrated Mountain Development (ICIMOD) invite you to explore these opportunities and challenges at South-South Exchange Workshop on Brick Technology and Policy. The workshop will be held in Kathmandu from 9-10 May 2013.

Objectives

The objective is to exchange knowledge, share experience, and lessons learnt in introducing energy-efficient and low-emission technologies in the process of modernizing the brick sector, on the technology, policy and regulatory fronts. The workshop also aims to bring together regional

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technical and policy brick kiln expertise to discuss a mechanism to promote the development and implementation of national strategies for cleaner brick production and put in place knowledge delivery networks to increase the rate of technology adoption.

Participants

The participants invited will be from the representatives of brick entrepreneurs; government officials from regulatory offices; country participants from HKH region, Vietnam, Latin America and Africa; partners of the CCAC and representatives from relevant non-profit, international, and intergovernmental agencies.

Expected outputs

The workshop is expected to bring the following outcome:

- Better understanding of brick kiln technologies and policy interventions used in different countries.
- Information sharing among participants about CCAC and its activities

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Tentative Agenda

9 May 2013, Thursday	
9:00-09:30	Registration
9:30-10:30	Opening Session
	<ul style="list-style-type: none"> • Dr. David Molden, Director General, ICIMOD • Ministry of Science, Technology and Environment • CCAC secretariat • Brick Initiative • 20 Years experience in Brick Sector -SDC
<i>10:30 -11:00 Break</i>	
11:00 – 13:00 SESSION I (TECHNOLOGY):	
In this session, participant country representatives will give presentations to provide some background information of their countries which will cover at least the following information brick sector background with information on technology profile and changes, energy efficiency, and air pollution emission, etc.	
Technical Presentation (12 Mins) Chair: TBC	
	<ul style="list-style-type: none"> • Sameer Maithal • Vishma Pandit • Martin Bendeler (tbc)
Country Presentations (10 mins) Chair: Arun Shrestha	
	<ul style="list-style-type: none"> • Afghanistan • Bangladesh • China • India • Myanmar • Nepal • Pakistan
<i>13:00 – 14:00 Lunch Break</i>	
14:00 – 15:00 SESSION I (TECHNOLOGY): Chair: LAC	
	<ul style="list-style-type: none"> • Vietnam • LAC • Africa
<i>15:00 – 15:30 Break</i>	
15:30 – 17:30 SESSION II (POLICY): THE ROLE OF THE STATE IN MODERNIZING THE BRICK SECTOR – Chair Dr. Eklabya Sharma, Director programme Operations, ICIMOD (Panel Discussion)	
Panellists - TBC	
This segment will discuss the policies and experiences applied in different countries targeting at the issues in the brick sector. The objective is to share information on public policies and regulations that have successfully addressed the main challenges of the brick sector, as well as identifying barriers and opportunities to scaling up the modernization of the sector.	
In this session, participant country representatives will give which will cover at least the following information:	

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| 1) major issues/challenges the brick sector faces; |
| 2) the role of the State – federal, state and local policies- in regulating the brick kiln sector; |

Dinner hosted by ICIMOD

Field Trip

10 May 2013, Friday

Field Trip to Brick Kilns

- Kiln 1
- Kiln 2
- Lamatar – improve charring (If time permits)