

## Abstract

A commonly used construction material in Nepal, brick is produced in approximately 1,000 kilns around the country, attracting investment worth USD 3.6 million. Across the country, kilns take an informal approach to production management and deal with a number of inherent social and environmental issues. Transformation in the brick sector has been slow and low-scale, which is largely a result of the enforcement of already existing sector-friendly policies and the absence or insufficiency of innovative policy reforms that embrace a longer-term perspective. This Strategic Policy Framework has been developed specifically for the brick sector with the aim of making the industry more energy efficient, environment friendly, and socially responsive. When the industry is able to get to such a stage, the resultant reductions in black carbon and carbon dioxide (CO<sub>2</sub>) emissions will lead to related health and development co-benefits.

The framework consists of a portfolio of policies relevant to brick industries, both existing and in the pipeline. Based on stakeholder consultations and a review of policies, the framework identifies policy gaps and issues, and provides recommendations. The policy recommendations corresponding to the issues identified cluster around i) industry promotion, ii) technology and environment, iii) labor conditions, and iv) monitoring and enforcement. Policy actions have been recommended while assessing their efficiency, effectiveness, and implementability.

This study identifies investment insecurity as a major constraint to the promotion of the industry. Procedural mechanisms that delay registration for new businesses and external factors that pose operational challenges to established kilns do not favour the promotion of the industry. Legally registered and operating kilns come under the scrutiny of multiple taxes, while non-registered kilns remain outside the tax and monitoring regime. Policy incentives that do exist to reward good practices are either inaccessible or remain undelivered due to the absence of feasible delivery mechanisms. The study recommends policy strategies that provide an enabling environment for the promotion of the industry. Simplified registration procedures including a provision for online registration, dedicated brick manufacturing zones/clusters, assurance of uninterrupted operation, and necessary legal arrangements for closing down non-registered kilns help establish such an environment. As strategic policies, the study recommends integrated and consolidated taxation, and the development of bylaws and guidelines for incentive delivery.

Environment friendly emission standards need to be set with the aim of fostering longer-term sectoral development. To allow the brick kiln industry to plan and choose clean technology and operational practices, technology neutral emission standards must be implemented with phase-wise, timebound targets for emission reduction. A more stringent emission standard must be set for sensitive locations such as urban areas, valleys, and heritage and conservation sites. Polluting firing technologies must be phased out, while preferential schemes and incentive packages must be provided for cleaner ones. Additionally, technologies that are suitable for the hilly region should be explored. The study also looks at ways in which to deal with issues related to optimizing raw materials and standardizing products.

Enforcement, implementation, and compliance with monitoring are major concerns with regard to workplace issues, employment conditions, and child labour. Some of the proposed provisions in the Occupational Health Safety (OHS) Minimum Standards need to be reviewed and revised, keeping in mind that the approved Nepal Standards on Ambient Air Quality, at least, are maintained. The study recommends that the process for approving regulations on child removal, repatriation, and rehabilitation be expedited, and that guidelines for immediate implementation be prepared and approved.



In conclusion, there is the need to develop a joint mechanism for compliance monitoring, sharing results linked to the renewal process of the industry, and providing incentives for the effective enforcement of policy provisions. The study recommends incorporating workplace and employment conditions, and child protection measures into such a joint compliance monitoring mechanism, which will also be linked to the renewal process. This mechanism will add value to awareness raising in the sector. Additionally, a standardized compliance monitoring protocol for relevant aspects such as emissions, child labour, and workplace and employment conditions, among others, should be prepared. Relevant institutions must be capacitated before implementation and guidelines are prepared to take action against kilns which do not achieve the required emission and labour compliance standards.

The suggestions and recommendations made by the study and stated above in a nutshell can help streamline the brick sector through necessary policy intervention.