

Terms of Reference

Political Economy Analysis (PEA) on the Introduction of LC3 Cement in Nepal under SDC's Building Project Nepal

1. Context

Switzerland is committed to tackling global climate change. In line with this commitment, the Swiss Agency for Development and Cooperation (SDC) supports partner countries in their efforts to mitigate greenhouse gas emissions and adapt to the impacts of climate change. As part of this mandate, SDC has funded extensive research at the École Polytechnique Fédérale de Lausanne (EPFL) on the development of a low-carbon cement technology known as **Limestone Calcined Clay Cement (LC3)**.

LC3 offers a viable and scalable alternative to traditional Portland cement by replacing a significant share of energy-intensive clinker with calcined clay and limestone. This innovation reduces CO₂ emissions by up to 40% and lowers energy demand during production, representing a major step toward decarbonizing the global cement industry.

Following successful research and pilot projects worldwide, the most notable achievements have occurred in India. Over nearly a decade of collaboration among EPFL, the Indian Institute of Technology Delhi, and industrial partners, India has introduced the **first commercially available LC3 cement** to the market (JK Cement Ltd.) and the Indian Bureau of Standards (BIS) has published the **national standard IS 18189:2023 – Portland Calcined Clay Limestone Cement**, formalizing LC3's place within the industry.

Encouraged by these results, SDC is exploring the potential to promote LC3 in Nepal. A recent field study conducted with an Indian technical partner assessed the availability of raw materials, particularly clay and limestone, with **positive findings**, confirming suitable clay deposits near major cement factories. However, while the technical potential is promising, the **political economy context** in Nepal poses significant uncertainty for large-scale adoption.

The cement sector in Nepal is characterized by overcapacity following the post-Gorkha earthquake reconstruction boom, intense competition, and a fragmented market comprising public, private, and FDI-backed producers as well as clinker importers and manufacturers. A few dominant firms wield considerable market influence, while smaller producers face financial constraints and struggle to remain competitive. These structural challenges are compounded by governance issues, including regulatory shortcomings, limited institutional capacity, and potential informal practices that shape market dynamics. More specifically, the introduction of LC3 in Nepal's cement industry faces governance-related risks that could affect its successful adoption and scaling. Institutional capacity constraints, particularly within the Nepal Bureau of Standards and Metrology (NBSM), may hinder the timely development, enforcement, and monitoring of new standards necessary for LC3 certification. Informal practices, such as opaque decision-making, preferential treatment, and the possible capture of regulatory processes by vested interests, further challenge transparency and fair competition. The sector's concentration among a few large FDI-backed producers may also generate resistance to low-carbon innovations that threaten existing investments, while its fragmented nature leads to inconsistent compliance and uneven regulatory enforcement. Addressing these governance risks will be essential to designing effective engagement strategies, strengthening institutional integrity, and fostering an enabling environment for the sustainable and transparent introduction of LC3 in Nepal.

2. Objectives of the Assignment

In the context presented above, SDC seeks to commission a **Political Economy Analysis (PEA)** to better understand the drivers, constraints, and governance dynamics that influence the feasibility of introducing LC3 in Nepal. The purpose of this PEA is to assess the **feasibility and enabling conditions** for promoting and scaling up LC3 in Nepal, considering the political, economic, institutional, and governance constraints and obstacles that shape climate-related reforms and technological innovation. For this, the analysis aims to:

- Identify the key political, economic and social dynamics as well as **motivations and disincentives** among key stakeholders for introducing LC3 within the cement sector,

including how market incentives, vested interests, and political alignments influence openness to low-carbon innovation.¹

- Examine the **governance and regulatory environment**, including potential risks, formal and informal decision-making structures, and institutional capacities relevant to standardization and market regulation.
- Assess the **capacity of the Nepal Bureau of Standards and Metrology (NBSM)** to develop or adopt a national standard for LC3 and explore opportunities to leverage the Indian BIS standard.
- Based on the findings, develop **pathways of change** that could lead to the introduction of LC3 in Nepal and propose strategic options and **engagement pathways** for SDC and partners to foster a supportive environment for LC3 uptake, aligning market interests with climate objectives.

The findings will inform SDC's strategic decision on whether and how to support LC3 deployment in Nepal and provide evidence-based recommendations for policy dialogue, stakeholder engagement, and risk mitigation.

3. Scope of Work

The consultant shall conduct the Political Economy Analysis following the SDC PEA methodology² which includes three phases, i.e., Problem Definition, Analysis, and Operational Implications structured along a seven-step analytical framework.

Phase 1: Problem Definition

1. **Purpose and Objective:** Refine the proposed problem definition (see objectives of the assignment), complementing mentioned points, introducing further relevant aspects, and highlighting key factors for the analysis.

Phase 2: Analysis

2. **Foundational Factors:** Examine historical, structural, and socio-economic factors shaping the cement sector, including investment trends, market liberalization, and foreign direct investment patterns.
 - How are the money flows in Nepal's cement sector, where does public, private, and FDI money come from, how is it distributed and who controls it?
 - What are the main factors that shape the overall sector?
3. **Rules of the Game:** Analyze formal and informal institutions, laws, standards, and practices that define power relations and influence decision-making in the cement sector.
 - How inclusive or exclusive are political and economic bargaining processes (limited/open-access orders)?
 - What is the competition for political power? What is the "currency" of bargaining, the mechanisms through which influence happens (e.g. loyalty, patronage, rents)?
 - What is the economic distribution of wealth and the dependency of various economic actors on each other and with power elites. What change or which reforms have been tried and failed, and why did they fail?
 - How is the cement sector regulated?
4. **Actors and Agents:** Identify and assess key stakeholders' interests, capacities, and influence. Determine who gains or loses from LC3 adoption and what incentives or constraints drive their positions.
 - Who are the stakeholders in Nepal's cement industry? How do they organise? Why are they involved? How do the stakeholders relate to each other, including beyond the obvious?
 - How do the stakeholders see the issues at stake, i.e., the adoption of LC3?
 - What are the big incentives that might encourage a buy-in for change (e.g. debt relief, legacy, carbon tax, security for certain groups)? What are the big disincentives?

¹ key stakeholders in this document refers to, among others, government agencies, the private sector, and consumers.

² SDC PEA framework ([link](#))

- What do we know about how the trade-offs between incentives and disincentives are normally weighed?
- What are NBSM's capacities to standardize LC3, and what are the implications/likelihood of adapting the Indian BIS standard for LC3 cement?
- How willing and able are cement industry actors to adopt and invest in this technology as pioneers?

Phase 3: Operational Implications

5. **Pathways of Change:** Develop plausible pathways of change that explain how the successful introduction might plausibly arise (if any) and develop a Theory of Change highlighting possible entry points, leverage points, and sequencing of actions to be undertaken by SDC to promote LC3 adoption.
 - How do the political economy dynamics at work create the possibilities for change? What are local incentives/pressures for positive change? What is the scope to promote development?
 - What is the spectrum of the reform space in the cement sector? What are lessons learned from previous programmes (similar reforms or introduction of new technology in Nepal, or Introduction of LC3 in India)?
6. **Operational Implications:** Based on pathways of change, propose strategies for SDC and partners to engage with stakeholders, address governance and market barriers, and align incentives toward the introduction and uptake of LC3 cement.
 - What kind of partnerships should the SDC aim for, with whom and why? What interventions can support existing change processes or try to nudge existing processes into a certain direction that enables the uptake of LC3 cement?
 - What does it mean for the positioning of Switzerland within the donor landscape?
 - Which kind of policy messages should be prioritised?
7. **Ensure Adaptation:** Recommendations on monitoring, evaluation and learning processes that should be adopted based on the learnings from the PEA to ensure that the evolving context is continuously assessed from a political economy perspective.
 - What kind of spaces for reflection should be established at SDC Nepal as well as with partners to think about possible adaptations to the pathways of change and, subsequently, the operational implications?

4. Deliverables

The deliverables expected from this consultancy are:

1. **Inception Report:**
 - a. Discussing/refining the problem definition, detailing proposed methodology, work plan, interview list, sources, timelines, risks, ethical or sensitivity issues.
 - b. Clarify any deviations from SDC's standard PEA steps and justify them.
2. **Interim Report / Field Findings**
 - a. Findings from desk research, field interviews and stakeholder mapping.
 - b. Preliminary assessment of foundational factors, rules of the game and actors/agents.
 - c. First reflections on pathways of change and possible strategic entry points for SDC.
3. **Draft PEA Report**
 - a. Full analysis across all tasks.
 - b. Pathways of Change and proposed Intervention Strategies / Theory of Change.
 - c. Options/recommendations for SDC's role.
 - d. Risk analysis (including governance risks, market risks).
4. **Final PEA Report**
 - a. Incorporated feedback from SDC and relevant stakeholders.
 - b. Clear actionable recommendations.
 - c. Executive Summary.
 - d. Presentation / Workshop to present findings to SDC (and relevant stakeholders such as government, industry in Nepal).

- e. Facilitate discussion of recommended pathways, possible implementation strategies.

5. Timeline & Duration

The assignment is expected to start on **January 19th, 2026**, and will require max **50 working days** (combined) from contract signature to final report delivery expected no later than **March 20th, 2026**.

Indicative milestones:

- Inception Report: within 2 weeks of contract start
- Interim Report: by mid-point
- Draft Report: 2 weeks before final workshop
- Final Report: within 2 weeks after feedback

6. Resources & Support

- Access to recent technical / field studies (including the raw-material study).
- Assistance from SDC country office for stakeholder introductions.
- Access to regulatory documents, standards, market data.
- Possibility of collaboration with local experts / partners.

7. Ethical Considerations & Sensitivity

- Ensure confidentiality of interviewees where requested.

Be sensitive to political tensions, vested interests.

- Transparent about sources of information. Terms and Conditions of the Employment

8. Consultancy Team Profile

The required qualifications of the consultant team, ideally composed of one political economy analyst and one expert of the domestic cement sector, are as follows:

- Proven experience in conducting political economy analyses, preferably in Nepal.
- Advanced degree in political economy, governance, development studies, or related field.
- Strong understanding of Nepal's institutional and policy landscape.
- Demonstrated in-depth understanding of Nepal's cement sector, including its technical, institutional, and political economy dimensions.
- Excellent analytical, writing, and facilitation skills.