# Concrete towers and material colonialism in the Global South



Concrete towers have become defining features of city skylines across Asia and Africa, symbolising rapid development and modernity in the Global South. However, beneath this architectural ambition lies a complex narrative intertwined with colonial legacies, economic imbalances, and pressing sustainability challenges.

Since gaining independence in the latter half of the 20th century, many countries in the Global South embarked on nation-building efforts that included the construction of civic structures and infrastructure projects designed to represent new national identities. Concrete emerged as the material of choice during this period due to its standardisation, industrialised production, and perceived modernity. Yet, this reliance on concrete often perpetuated colonial-era dynamics, as the material supply chains, technologies, and profits remained largely under foreign control.

Historically, colonising European powers disparaged indigenous building techniques and materials such as earth, bamboo, and timber, branding them as “primitive” or temporary. In contrast, masonry and later concrete were elevated as symbols of civilisation and permanence. This material hierarchy became ingrained in building codes, educational curricula, and financing systems, continuing to privilege concrete over local alternatives. As a result, traditional craftsmanship and environmentally friendly methods have declined in many regions, narrowing options despite ecological advantages.

Notwithstanding these challenges, architects from the Global South have demonstrated innovation within the concrete medium. For example, South Asian architects B.V. Doshi and Mahendra Raj pioneered efficient structural designs such as variable-thickness folded plates utilised in the Tagore Memorial Hall, achieving both material optimisation and striking architectural forms.

Today, the Global South produces 94% of the world’s cement, yet the associated profits, technologies, and environmental costs often flow to actors outside these regions. Indonesia alone contributed 26.8 million tonnes of greenhouse gas emissions from cement production in 2022. These emissions are counted against Indonesia’s carbon budget under international agreements, although much of the cement produced is exported. The environmental toll includes damage to sensitive ecosystems like those in Java, threatening water systems and cultural heritage. Similar patterns of resource exploitation and inadequate corporate accountability recur throughout the Global South.

Meanwhile, critical voices from wealthier nations in the Global North increasingly focus on condemning concrete’s significant carbon footprint, sometimes overlooking the development needs of rapidly growing populations in the Global South. While cement accounts for 1.5% of US carbon emissions and approximately 3% in Europe, it may represent up to 20% in some developing countries. This disparity highlights the complexity of concrete usage as an issue not merely of sustainability but also climate justice and development rights.

Researcher Urs Heierli emphasises the challenges facing alternatives to concrete: “Many people, even architects, are biased against concrete in favour of wood, bamboo or clay, but these materials don't meet the needs of the Global South.” Heierli notes that replacing just a quarter of global concrete consumption with wood would require increasing global forest cover by 14%, an area larger than India.

This multifaceted problem is described as a form of “material colonialism,” where historical patterns of resource extraction and economic control persist through the concrete industry. Addressing this requires fundamental changes in how production is managed and controlled.

New approaches offer some promise. In Palma, Mallorca, a social housing project led by H Arquitectes recycled demolished building materials into new concrete blocks, while using lime-based construction and hybrid techniques to reduce reliance on high-emission concrete. Similarly, Diébédo Francis Kéré, the first African recipient of the prestigious Pritzker Prize, integrates traditional building methods tailored to local climates with modern engineering to create sustainable structures suited to their environments.

These innovations underline the necessity for communities to have the autonomy to chart their own construction futures. Thea Riofrancos, an academic focused on climate activism, draws attention to the dilemma inherent in building infrastructure: “While building clean infrastructure has unavoidable material extraction demands, we must distinguish between necessary extraction and the exploitative extractivism that characterises the current cement industry.”

As concrete continues to shape urban landscapes from Lagos to Jakarta, local architects and policymakers are urged to extend their focus beyond technical solutions to encompass systemic concerns. This involves confronting colonial legacies embedded in global supply chains, challenging the extractive practices of multinational construction firms, and fostering economic models that prioritise environmental sustainability and community wellbeing over external profit.

In rapidly developing regions, where the demand for housing and infrastructure is urgent, concrete will remain a vital material. However, its future use may be transformed through locally-driven innovation, enhanced material efficiency, and governance structures that empower communities to both build and sustain their environments on their own terms.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://www.archdaily.com/1029570/the-colonial-legacy-of-concrete-in-the-global-south> - Supports claims about concrete's colonial legacy in the Global South, its association with development aspirations, and the systemic devaluation of indigenous building techniques in favor of European standards.
* <https://en.wikipedia.org/wiki/List_of_cities_with_the_most_skyscrapers> - Corroborates the prevalence of skyscrapers (often concrete-based) in Asian cities like Hong Kong and Shenzhen, reflecting their dominance in modern urban development.
* <https://skyscraper.org/the-modern-concrete-skyscraper/> - Documents concrete's technical applications in skyscraper foundations and structural systems, including examples like Jin Mao Tower, aligning with discussions of material efficiency and engineering innovation.
* <https://www.skyscrapercenter.com/buildings?list=tallest100-construction> - Lists skyscrapers under construction globally, emphasizing ongoing dominance of concrete-based developments in regions like South Taihu CBD (China), relevant to discussions of persistent material use patterns.
* <https://www.youtube.com/watch?v=sbZ_69Jrqbs> - Discusses skyscraper construction trends in Global South cities like Mumbai and Shenzhen, supporting claims about rapid urbanization and concrete's role in meeting infrastructure demands.
* <https://www.archdaily.com/1029570/the-colonial-legacy-of-concrete-in-the-global-south> - Reiterates the article's core argument about postcolonial nation-building efforts prioritizing concrete construction, while highlighting ongoing economic dependencies and sustainability challenges.
* <https://www.archdaily.com/1029570/the-colonial-legacy-of-concrete-in-the-global-south> - Please view link - unable to able to access data