


A PROSPEROUS FUTURE requires pre-emptive planning



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Bangladesh faces a challenge: balancing development with resource limitations. One major issue is the rising infrastructure costs due to land scarcity. Elevated or underground structures are often needed to avoid encroaching on agricultural land and water bodies, which at-grade structures would otherwise have an impact, increasing financial strain. Strategic planning and innovative solutions for real needs are crucial for sustainable growth.

Bangladesh's population, currently 170 million, is expected to stabilise before gradually declining. Careful planning based on a "design population" is essential to ensure future infrastructure needs are met efficiently with balance across the geographical jurisdiction. A thorough assessment of current resources and a gap analysis will help policymakers develop long-term strategies that accommodate demographic changes.

STRATEGIC LAND USE AND URBAN DEVELOPMENT

Some projects may seem premature but are crucial for preventing chaotic urban sprawl. Without foresight, future development becomes costlier and more difficult. Pre-emptive construction in developing areas enables controlled expansion, reducing congestion and unplanned settlements.

Land acquisition remains a major hurdle. Expanding highways is difficult due to rising land prices from rapid urbanisation through the construction of the first highway. In Thailand, roads are designed with reserved land in the central median, preventing unauthorised occupation and reducing future costs of acquiring a developed highway shoulder. Bangladesh should adopt similar strategies to facilitate long-term infrastructure development while minimising acquisition challenges.



VISUAL: COLLECTED

TRANSPORTATION AND CONNECTIVITY EXPANSION

Airports require extensive land planning. Dhaka Airport's second runway expansion is now looking for manoeuvring due to urban encroachment. A pre-planned air funnel could have eased the bottleneck. Land usage planning is vital to avoid such constraints. If future airport expansions are anticipated, securing adjacent land and airspace should be a priority to prevent logistical and financial roadblocks. Haneda Airport in Tokyo was extended over Tokyo Bay. The Tokyo Bay Aqua Line had to be constructed in a combination of tunnel and bridges to save Haneda Airport airspace.

Rural connectivity is also crucial. Many rural roads are poorly planned due to land acquisition challenges, reducing overall transport efficiency. A well-planned rural road network supports economic development and maximises

national highway investments. Small roads should be designed for smooth traffic flow, avoiding unnecessary bends and inefficiencies caused by land disputes.

NATIONAL INVESTMENT GOALS

Transportation and education are key to national progress. Investments in these areas yield high returns. Improved transport networks enhance economic opportunities by linking rural areas to urban markets, boosting trade and tax revenue. Strengthening these networks not only enhances mobility but also fosters a more equitable distribution of economic benefits.

Infrastructure projects connect North and South Bengal, but micro-communication networks remain underdeveloped. A comprehensive master plan integrating land acquisition, economic development and maximises

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- » Bangladesh faces a critical challenge in balancing rapid development with limited land and resource availability, requiring strategic planning and innovative solutions.
- » The country must prioritise sustainable infrastructure development, including efficient land acquisition and connectivity, to manage future urban growth and population shifts.
- » By leveraging historical construction methods and exploring sustainable materials, Bangladesh can reduce costs and enhance the longevity of its infrastructure.
- » Investments in skilled workforce development and advanced engineering education are crucial for Bangladesh to build a self-sustaining, technologically advanced construction sector.
- » Emphasising eco-friendly building practices, circular economies, and efficient construction techniques can foster long-term economic growth while preserving the environment.



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