

A CIVIL SOCIETY PERSPECTIVE FROM:  
BANGLADESH, CHINA, GERMANY & INDIA

# Guidance Notes for Sustainable Urban Infrastructure Investments

How the Asian Infrastructure Investment Bank (AIIB)  
can advance the urban transformation



Centre for Participatory Research and Development / Climate & Development Advice  
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# EXECUTIVE SUMMARY

Urbanisation is a global megatrend that will bring immense challenges in the coming decades, especially in Asia and Africa. Achieving the goals of sustainable development, limiting global warming and preserving ecosystems and biodiversity will depend to a large extent on whether we succeed in making the expansion and reconstruction of urban infrastructure sustainable.

In view of the chronic underfunding of infrastructure in most developing countries and emerging economies and a continuing strong growth in investment needs to bring about the transformation of cities towards poverty eradication, sustainability, greenhouse gas neutrality and climate resilience, development banks have a special role to play: Due to their particularly good knowledge of the capital markets in developing countries, as well as with favourable loans, venture capital and guarantees, they can reduce the investment risks of classic private investors and thus develop a leverage effect that corresponds to many times their own investments.

To ensure that infrastructure investments support the transformation of cities towards sustainable development pathways, we propose seven principles and 31 subordinate criteria. To operationalize them, we developed a sustainability traffic light system and applied it to the urban sector strategy, the urban project portfolio, the corporate strategy, the business plan 2021 and the financial risk management of the Asian Infrastructure Development Bank (AIIB). We chose the AIIB because the development of tomorrow's infrastructure is at the heart of its mandate, it is led by China and it is determined to be green, lean and clean. The same approach can be applied to other infrastructure investors and investees, too.

Our paper is intended as a contribution, making suggestions for how to guide investments in the urban transformation towards curbing emissions, enhancing resilience, protecting biodiversity and achieving the SDGs. The toolset that we present is preceded by an introductory section that summarises the most important urban challenges and transformative imperatives for action. This is complemented by concrete project examples that highlight different facets of the development of a sustainability-promoting infrastructure. All project examples were submitted to an international call for proposals and selected by the editors. They are illustrative and do not necessarily reflect the views of the editors.

The publication concludes with ten recommendations for the AIIB on how it can support urban transformation and become a sustainability and climate bank, by using our sustainability criteria: Urban net-zero principle, urban climate resilience principle, urban efficient land-use and spatial planning principle, urban nature-positive principle, circular economy & zero-waste principle, socially inclusive & resilient city principle, and urban pro-poor principle.

The following recommendations, among others, are included: Organisation of a stakeholder consultation process for reviewing our approach and suggestions; revision of the urban sector and the corporate strategy in view of the results of our sustainability check, including specific sustainability targets for portfolio development and target achievement indicators; inclusion of a climate – post-pandemic economic recovery in the business plan for 2022; amendment of key risk indicators, using metrics to quantify physical climate risks, as well as the stranded asset risk of carbon-intense infrastructure; wider disclosure of project-related documents of public interest; transparent documentation of the implementation of the pledge to fulfil the Bank's Paris alignment commitment by mid of 2023.

This report continues a series of reports already published, including one on the alignment of AIIB with the Paris Agreement and the SDGs (2019) and another on pro-poor and climate resilience principles for infrastructure investment, with a special focus on AIIB (2020).



## DESIGNING PLANET-, PEOPLE- & POCKET-FRIENDLY HOMES IN KERALA, INDIA

by Ajay Abey, Director of Centre for Sustainable Built and Natural Environment, Kerala,<sup>96</sup> India



### CHALLENGE

Housing is a basic right but soaring land prices and exorbitant cost of materials make dreams of owning a house difficult to achieve for many across India. Current practices of constructing houses in India tend to cut off inhabitants from their surrounding natural environment and pay little attention to environmental impacts of building materials across their full life cycle. Moreover, buildings in India are highly energy inefficient and usually fail to factor in seasonal variations or make use of available passive energy sources. Most affordable housing projects also fail to even provide quality living spaces for its residents. By some estimates, India has a demand for 50 million units<sup>97</sup> of houses in the affordable housing segment. The high ecological costs of meeting this important socio-economic right and possible ways of avoiding this zero-sum game is not getting the attention it should.



### SOLUTION

The Centre for Sustainable Built and Natural Environment (CSBNE), Kerala, has developed a new type of house which has a Rib and Skin Shell Slab System, Light Weight Masonry System and Multi-layer Roofing System, which they plan to make copyleft.

The techniques prioritise use of economical and eco-friendly materials and systems, with an emphasis on conserving and protecting resources, recycling and efficient use of materials. Processes that are conducive for the local economy are built into the techniques. The role of aided self-help is emphasised in the solutions.

The homes, designed as nuclear-family residential dwelling units, utilise the entire parcels of available land through development of built models on stilt platforms with lightweight floors. The buildings are energy-efficient, climatologically appropriate and culturally relevant, and provide a holistic built environment through backyard farming, cattle, poultry, fish rearing etc.

 KERALA, India

<sup>96</sup> [www.csbne.com](http://www.csbne.com)

<sup>97</sup> [https://www.business-standard.com/article/current-affairs/india-s-urban-housing-shortage-rises-54-to-29-mn-in-2018-report-120122300948\\_1.html](https://www.business-standard.com/article/current-affairs/india-s-urban-housing-shortage-rises-54-to-29-mn-in-2018-report-120122300948_1.html)



## RESULTS & LESSONS LEARNED

CSBNE has so far constructed five prototypes with areas ranging between 5,000-6,000 square feet. The modular planning and construction techniques result in material and time saving, requiring a smaller labour force on site. Uptake of the techniques is easy and fast because of their simplicity and localisation. Depending on site-specific contexts like accessibility the cost of constructing a building is at least 30% cheaper than a conventional building. This region-specific construction methodology can serve as a conceptual framework to address the affordable and sustainable housing scenario across India and internationally.

