



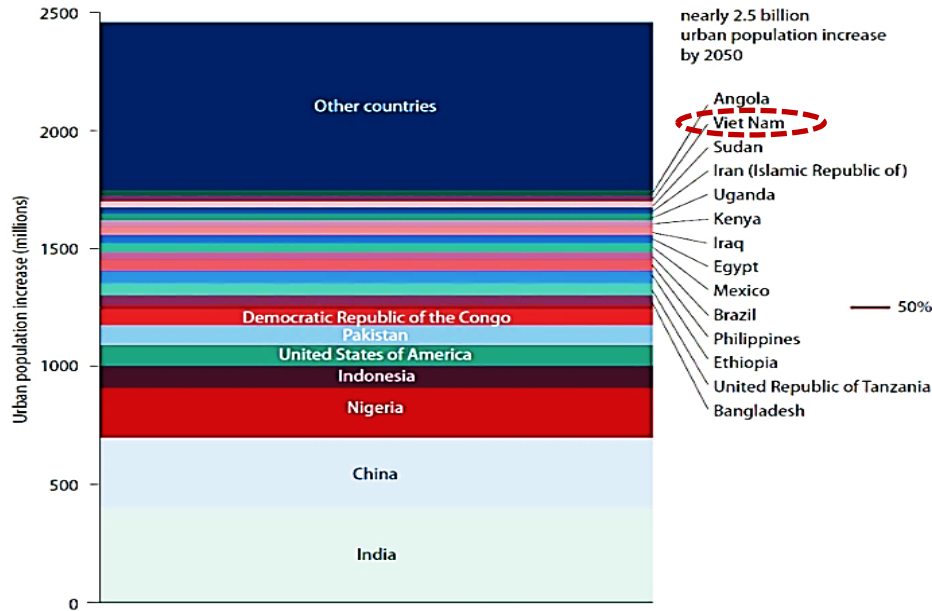
SUSTAINABILITY TOWARD URBANIZATION

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Global urbanization trend

In 1950, 2/3 of the population worldwide lived in rural settlements → **by 2050** we will observe roughly the reverse distribution with **70%** of the humanities to live in cities (estimated 3.5 billion people)

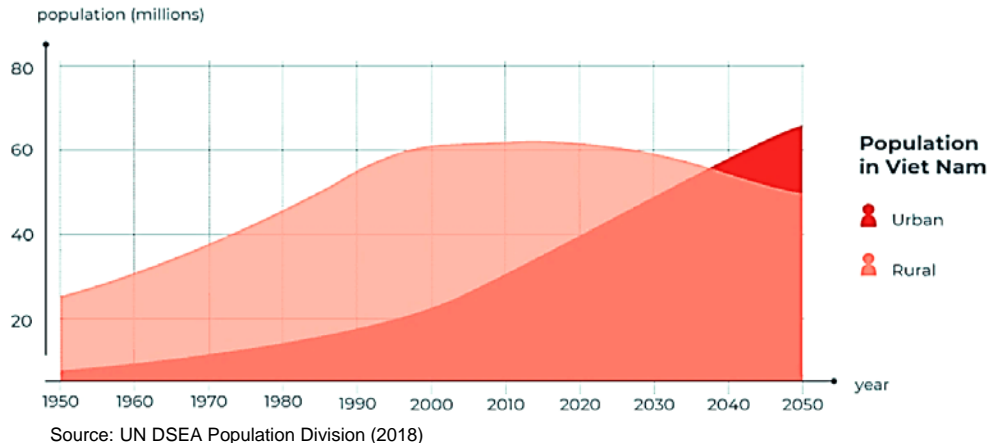


Source: UN World Urbanization Prospect (2014)

- Urban centers currently occupy **less than 5% of the world's landmass**. Nevertheless they account for around **82% of Global GDP and 70% of both global energy consumption and greenhouse gas emission**
- Between now and 2050, 90% of the expected increase in the world's urban population will take place in the urban areas of **Africa and Asia**

→ **Building smart and sustainable cities is a top priority for social development globally**

Vietnam urbanization trend

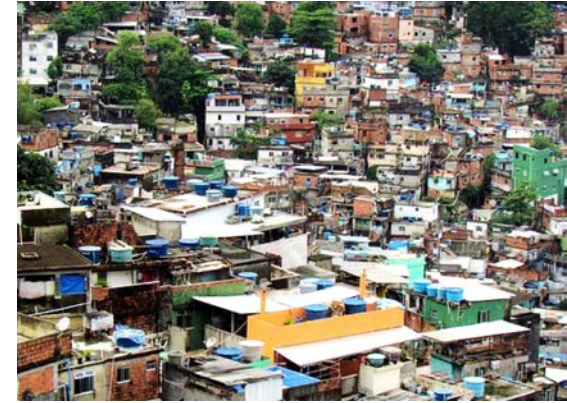


Key figures of Vietnam urbanization:

- **75%** of urban population lives in low elevation zones
- **13.9 million** additional urban households requiring 3.14 million additional housing units
- **40%** of households in secondary cities do not have access to water supply systems
- Only **10%** of the waste water of those cities is treated by a centralized system

Vietnam urbanization challenges

- Big cities in Vietnam need to make efforts to develop not only on the smart side but also on the sustainable side to meet the increasing demand due to economic development and pressure from population growth (including urban poverty)
- The challenge for cities in Vietnam is how to apply appropriate technological and non-technological solutions to meet the economic, social and environmental needs of city residents with diversity in composition, including the immigrant community, disabled community, poor community, in the present and in the future
- Another big challenge for Vietnam is his long coastal borders which is a high natural disaster risk associated with global climate change threat
- Finally infrastructure governance is a key cornerstone which required adaptation of current situation and short/mid and long term planning integration



Vietnam is the largest infrastructure spender in SEA by percentage of GDP



Source: YCP Solidiance Report (2020)

Sustainability toward urbanization



GREEN GROWTH

3 Global challenges in the construction sector

CLIMATE ACTION

Total decarbonisation of the built environment;

HEALTH, EQUITY AND RESILIENCE

A built environment that delivers healthy, equitable and resilient buildings, communities and cities;

RESOURCES AND CIRCULARITY

A built environment that supports the regeneration of resources and natural systems, providing socio-economic benefit through a thriving circular economy.

Infrastructure

Infrastructure plays a vital role in the sustainable development of cities and the adoption of smart technology. Major infrastructure areas that will be a key focus for improvement:



Transportation & Mobility systems



Energy & Water systems



Digitalization



Green buildings



Circularity (environmental protection and waste management)



Inclusiveness (equity & well-being)

However to make it happens this is critical to promote cooperation among stakeholders in the development of smart and sustainable cities.

Through **smart governance**, urban planners, policymakers, leaders need to collaborate early with experts in urban development, digital solution delivery, innovation, research, and all other stakeholders; at the same time, continuously consult with them during the process to build and improve cities

Systematic sustainable approach




- Digital infrastructure (*GIS, digital technology...*)
- Urban load reduction (*satellite cities, rural infrastructure development, decentralization tax & costs...*)
- Public infrastructure (*public transportation, utilize underground space, TOD...*)
- Circularity (*green materials, green energy, green agriculture...*)
- Natural disaster resilience (*storm, flooding, landslides...*)
- Health & Well-being (*air quality, dust, noise pollution, sanitation, waste...*)
- Equity & Access (*social housing, relocation, violence...*)



Globally, **SDG 11**: Sustainable cities is clearly featured in the agenda 2030 to make cities & human settlements inclusive, safe, resilient and sustainable

In Vietnam, MOF issue **Resolution 06-NQ/TW** on Planning, construction, management and sustainable development of urban areas in Vietnam til 2030 with a vision toward 2045

Sustainable built environment principles

	CARBON	Prioritise renovation of existing buildings and eliminate both operational and embodied carbon emissions across a building's life cycle
	RESILIENCE	Enhance the ability of homes and communities to respond to external shocks and stressors by integrating climate resilience and promoting adaptation.
	CIRCULARITY	Drive waste out of the construction value chain by reducing use of primary materials and optimising use of resources and materials
	WATER	Conserve and protect water resources and guarantee equitable access to safe and sustainable, potable water and sanitation
	BIODIVERSITY	Prioritise nature-based solutions that enhance, expand, and protect the natural environment and restore biodiversity loss
	HEALTH	Develop healthy, equitable and resilient buildings and cities that deliver improvement in public health and wellbeing
	EQUITY AND ACCESS	Ensure all citizens have equal access to safe, healthy, sustainable homes and communities.

Case studies



Sustainable cities integrated approach pilot in India

Focus on waste management (biogas from sewage treatment plant, organic waste, solid waste to energy, compost plant and landfill gas management)



Integrated adoption of New energy Vehicles in China

Facilitate and scale up the integrated development of New Energy Vehicles and Renewable Energy



Climate change, Clean Energy and Urban Water in South Africa

Catalyze market-based approaches to reducing GHG emission in municipal waterworks

THANK YOU

For Your Attention

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