

Additional Reading Material on Nature-Based Solution in Malaysia

Based on recent urban planning initiatives and environmental policies, Malaysia is actively incorporating nature-based solutions to balance rapid development with ecological conservation.

Here is an identification of initiatives and strategies in Malaysia :

1. Conservation Zoning

National Physical Plan (RFN4): Focuses on spatial sustainability, utilizing a "Central Forest Spine" (CFS) strategy to connect fragmented forests, reducing urban sprawl, and protecting ecological corridors.

Environmentally Sensitive Areas (ESAs): Designated areas, such as coastal mangrove zones, are protected to act as natural buffers against erosion and storm surges.

Buffer Zones & Green Lungs: Urban planning, particularly in city master plans, incorporates protected green spaces, such as Kuala Lumpur's Taman Tugu, to act as urban lungs.

2. Green Infrastructure Projects (NBS)

Penang Nature-Based Climate Adaptation Programme: A UN-Habitat project, in collaboration with Think City and the Penang Island City Council (MBPP), focusing on pocket parks, green roofs, and green facades to manage stormwater and urban heat.

Blue-Green Corridors: Integration of rivers, canals, and lakes with surrounding vegetation (e.g., restoring waterways in Penang) to improve water quality and reduce flood risks.

Permeable Surfaces: Implementation of permeable pavements in parking lots and urban areas to facilitate groundwater recharge and reduce runoff.

Sime Darby Property Initiatives: Creating green infrastructure, such as the Elmina Central Park, which acts as a carbon sink and biodiversity hub.

3. Biodiversity Efforts

Habit Connectivity (Elmina Central Park): Designed with six sub-theme parks (Forest, Arts & Cultural, Urban, Community, Wildlife, and Sports) to act as a wildlife connector for species.

Native Species Reintegration: The Urban Biodiversity Initiative (UBI) at Universiti Malaya's Rimba Ilmu Botanic Garden focuses on planting native Malaysian species in urban areas to restore ecosystems.

Wildlife Crossings: Studies on habitat connectivity in areas like Bukit Cherakah suggest implementing wildlife crossings to reduce roadkill risks and improve movement between fragmented forest patches.

4. Environmental Benefits

Reduction of Urban Heat Island (UHI): Green walls, roof gardens, and tree-lined streets are being implemented in cities like Kuala Lumpur and George Town to lower ambient temperatures and improve thermal comfort.

Improved Water Management: The use of wetlands, rain gardens, and bioretention swales manages stormwater, reducing flash flood risks while improving water quality.

Recreational and Health Benefits: Enhanced urban green spaces (UGS), such as community gardens and parks, provide recreational areas that improve the mental and physical well-being of residents, addressing health inequalities.

Air Quality and Carbon Sequestration: Urban forests and greened areas, such as the mangrove restoration projects, sequester carbon and filter air pollutants.