

Overarching Goal: Address the impacts of climate change and natural hazards on physical infrastructure in Local Government through Asset Management Programs for developing adaptation strategies.

Key words: asset management; physical infrastructure; climate change; decision making framework; adaptive capacity

Policy 1. Asset management of road surface infrastructure must be improved in order to provide protection against climatic changes, natural hazards and extreme weather events.

Program 1.1 Road Design: PI should be enforced through use of alternative construction, material and design.
Program 1.2 Operation of Roads: Advanced operational techniques for maintenance and rehabilitation should be employed.
Program 1.3 Finance for Roads: Cost estimation of climate change impact should be included in asset valuation and depreciation.

Policy 2. Management, design and construction of stormwater systems must be enhanced to increase resilience to changing climate, natural hazards and extreme weather events.

Program 2.1 Stormwater Systems Design: PI should be enforced through use of alternative construction, material and design.
Program 2.2 Operation of Stormwater Systems: Advanced operational techniques for maintenance and rehabilitation should be employed.
Program 2.3 Finance for Stormwater Systems: Cost estimation of climate change impact should be included in asset valuation and depreciation.

Policy 3. Adaptive capacity of critical infrastructure should be strengthened to deal with the unpredictability of storm events, droughts, temperatures, precipitation patterns and sea level rise inundation.

Program 3.1 Education: Capacity should be built/improved through knowledge sharing, enhanced understanding and awareness about climate change.
Program 3.2 Implementation: Current policies and regulations should be redesigned and/or modified to ensure the successful implementation of adaptation actions to improve adaptive capacity of asset management of critical infrastructure.
Program 3.3 Management: A dynamic anticipatory management approach should be employed to learn from other experiences, respond to feedbacks, attain innovations and take pro-active action.

Physical Infrastructure Adaptation Options Framework