

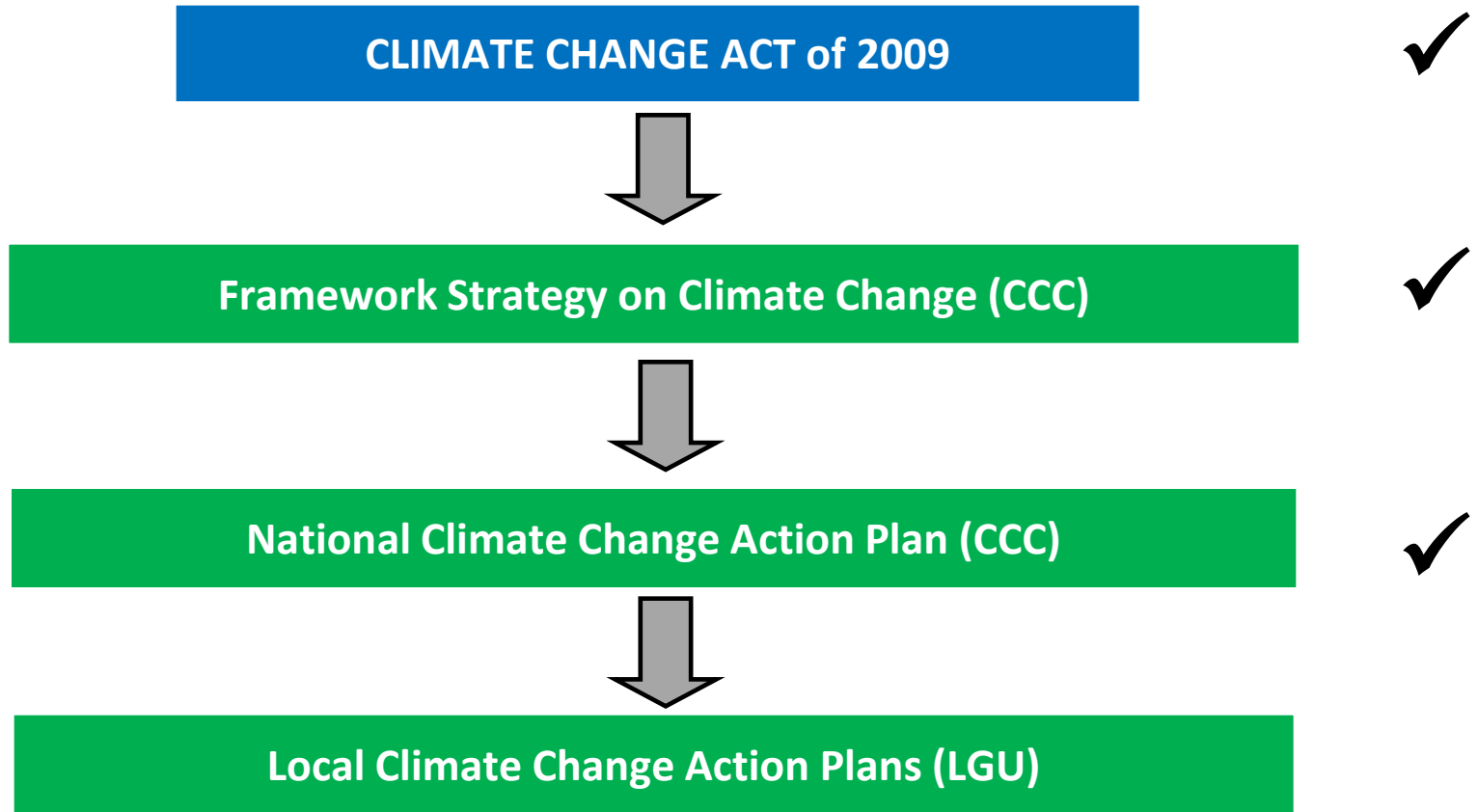


CLIMATE CHANGE ADAPTATION

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FRAMEWORK

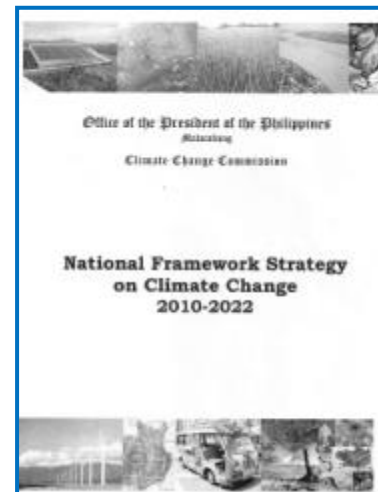
Manila Water's Climate Change adaptation programs are aligned with the Philippines' response to Climate Change



FRAMEWORK

Philippine Framework Strategy on Climate Change (2010 – 2022)

- Vision: A climate risk-resilient Philippines
- Goal: To build adaptive capacity of communities, increase resilience of ecosystems and enhance mitigation opportunities
- ADAPTATION as the core strategy



MITIGATION	ADAPTATION
<ul style="list-style-type: none">• Energy Efficiency & Conservation• Renewable Energy• Environmentally Sustainable Transport• Sustainable Infrastructure• National REDD+ Strategy• Waste Management	<ul style="list-style-type: none">• Enhanced Vulnerability and Adaptation Assessment• Integrated Eco-system based Management• Climate-responsive Agriculture• Climate Responsive Health Sector• Water Governance & Management• Disaster Risk Reduction & Management

MANILA WATER'S CLIMATE CHANGE RESPONSE

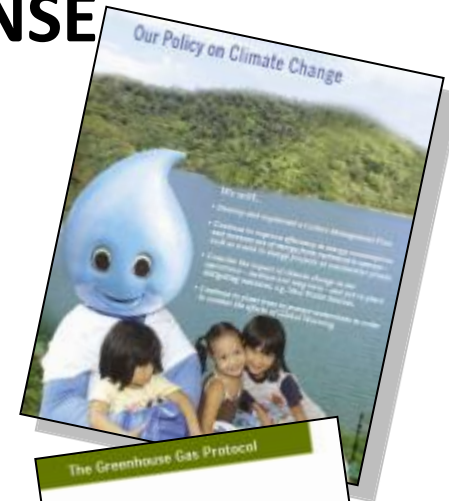
- Manila Water is the first Philippine company to adopt a Climate Change Policy in 2007 and adopted Enterprise Risk Management in 2009

MITIGATION

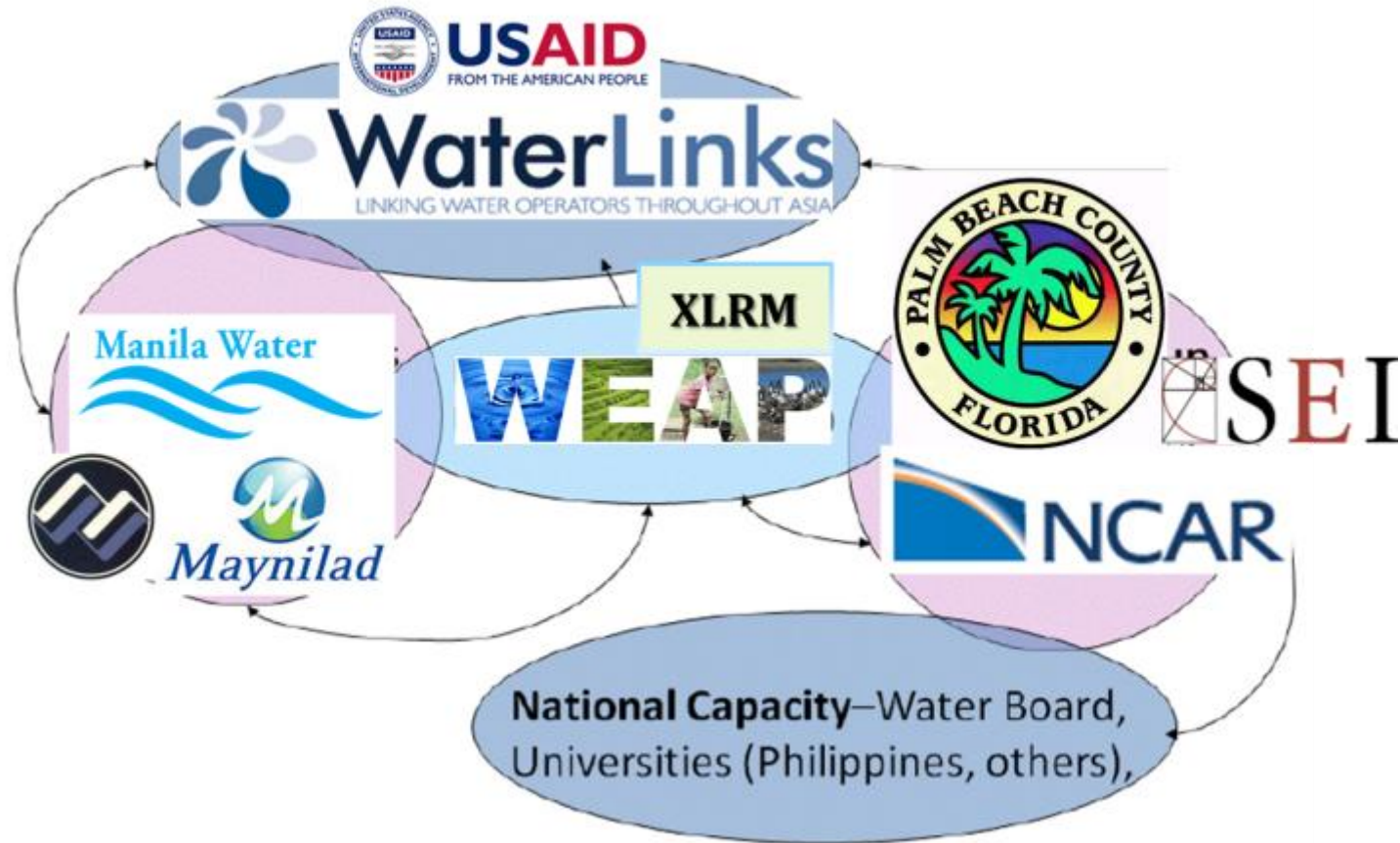
- Greenhouse Gas Accounting and Reporting
- CDM Projects like Waste-to-Energy
- Energy & fuel saving initiatives

ADAPTATION

- Climate proofing existing and future water assets
- Disaster Risk Reduction / Business Continuity Plans
- Groundwater resources management
- New Water Sources
- Watershed initiatives
 - Ipo
 - La Mesa
 - Marikina



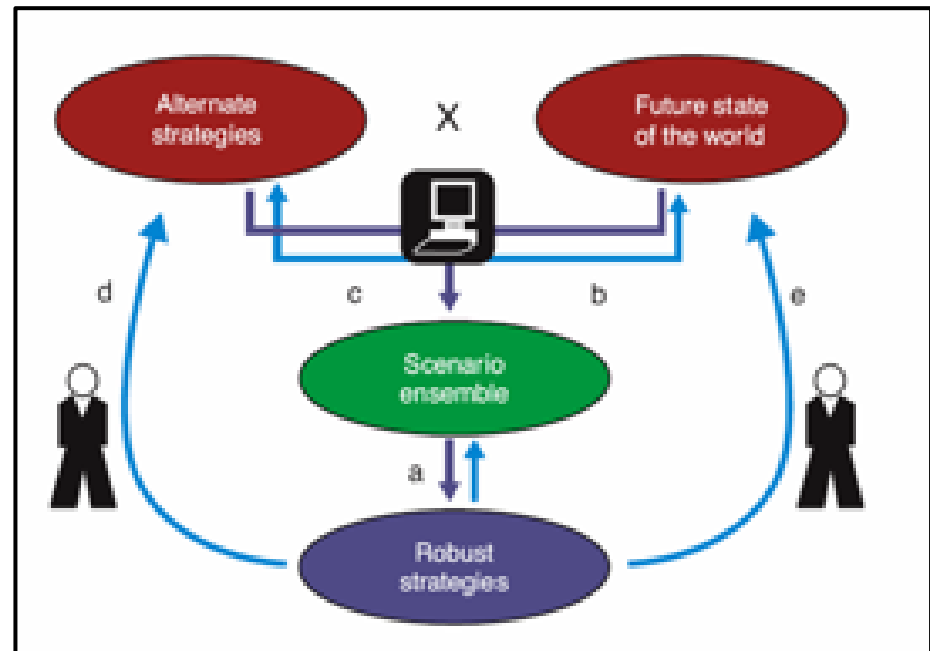
WATER OPERATORS PARTNERSHIP FOR CLIMATE CHANGE ADAPTATION



XLRM

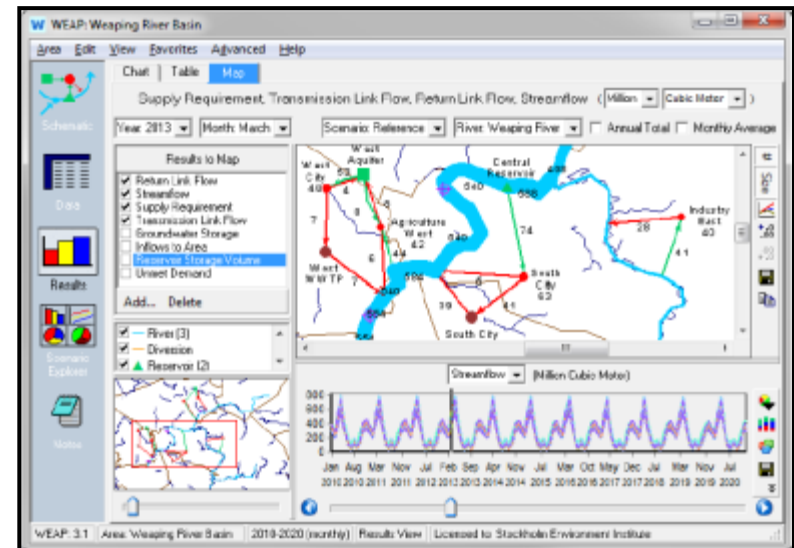
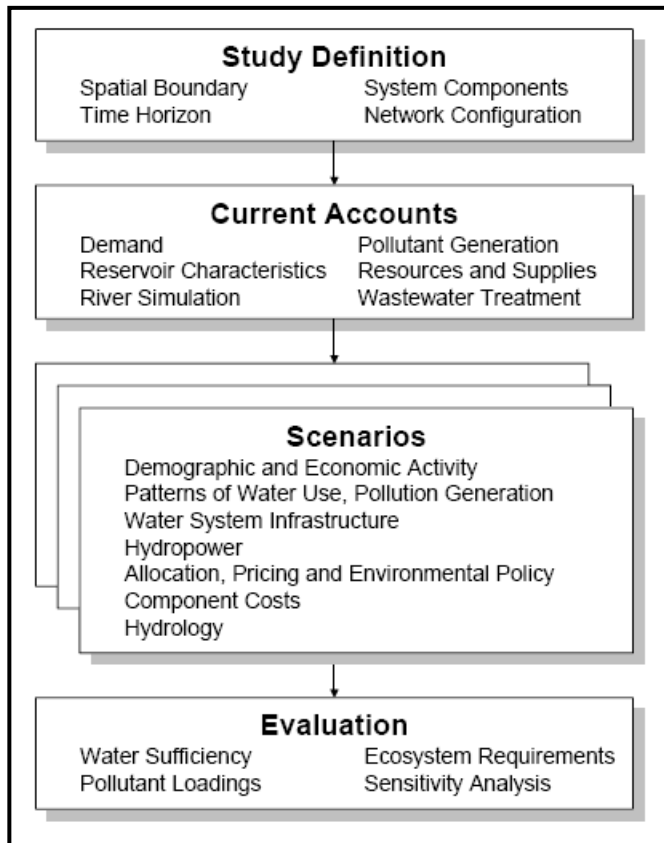
While conventional analysis characterize uncertainties before ranking options, the robust decision making (RDM) approach starts from selecting decision options and then estimate utilities of options to identify potential vulnerabilities of potential strategies.

Uncertainties (X)	Management Strategies (L)
<ul style="list-style-type: none"> Climatic conditions Hydrologic response to climate conditions Demographic factors Institutional and regulatory environment 	<ul style="list-style-type: none"> Current management Near-term investments, programs, pricing strategies Signposts that trigger management changes or new investments Deferred management changes and/or new investments
Models (R)	Outcomes (M)
<ul style="list-style-type: none"> Climate models Climate downscaling methods Rainfall-runoff models Water system and management models Water quality models 	<ul style="list-style-type: none"> Water demand Supply reliability Water quality Environmental and recreational objectives Cost (to agency and customers)



WEAP

- Water balance database
- Scenario generation tool
- Policy analysis tool





Securing the Future Today