

# Climate Change Adaptation

Assessing the Capacity of and Helping  
Water Services Providers in Asia to  
Adapt to Climate Change Impacts

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## presentation **OUTLINE**

- Assessment of water service providers
- Partnering for Adaptation
- Case Study on Adaptation – Manila Water



## assessment

# BACKGROUND

- Climate is changing – “the past is not the future”
- Extreme events are the “new normal”
- Likely to disrupt urban water services delivery
  - Raw water shortages
  - Water quality degradation
  - Infrastructure damage
  - Operating procedures
- **How vulnerable?**



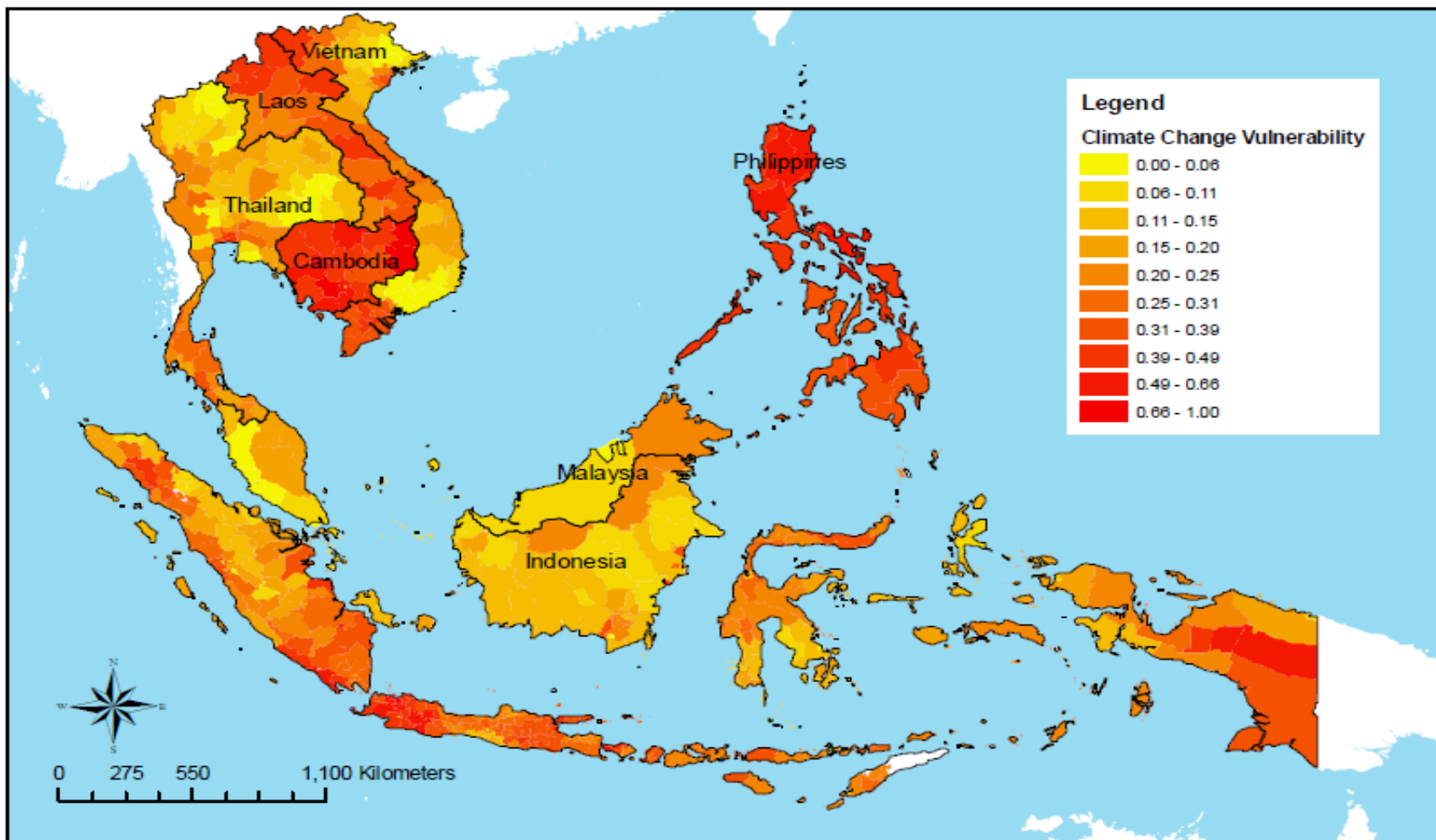


Figure 6. Climate change vulnerability map of Southeast Asia

*From "Climate Change Vulnerability Mapping for Southeast Asia" Yusuf and Francisco 2009*

## assessment **CONTEXT**

### **Capacity to Cope**

- Risk management
- Structural vs. Non-Structural
- Sensitivity - Cost vs. benefits
- Mainstreaming – Planning process
- Now vs. Later - proactive, reactive, do nothing
- **How to prepare? What is being ready?**

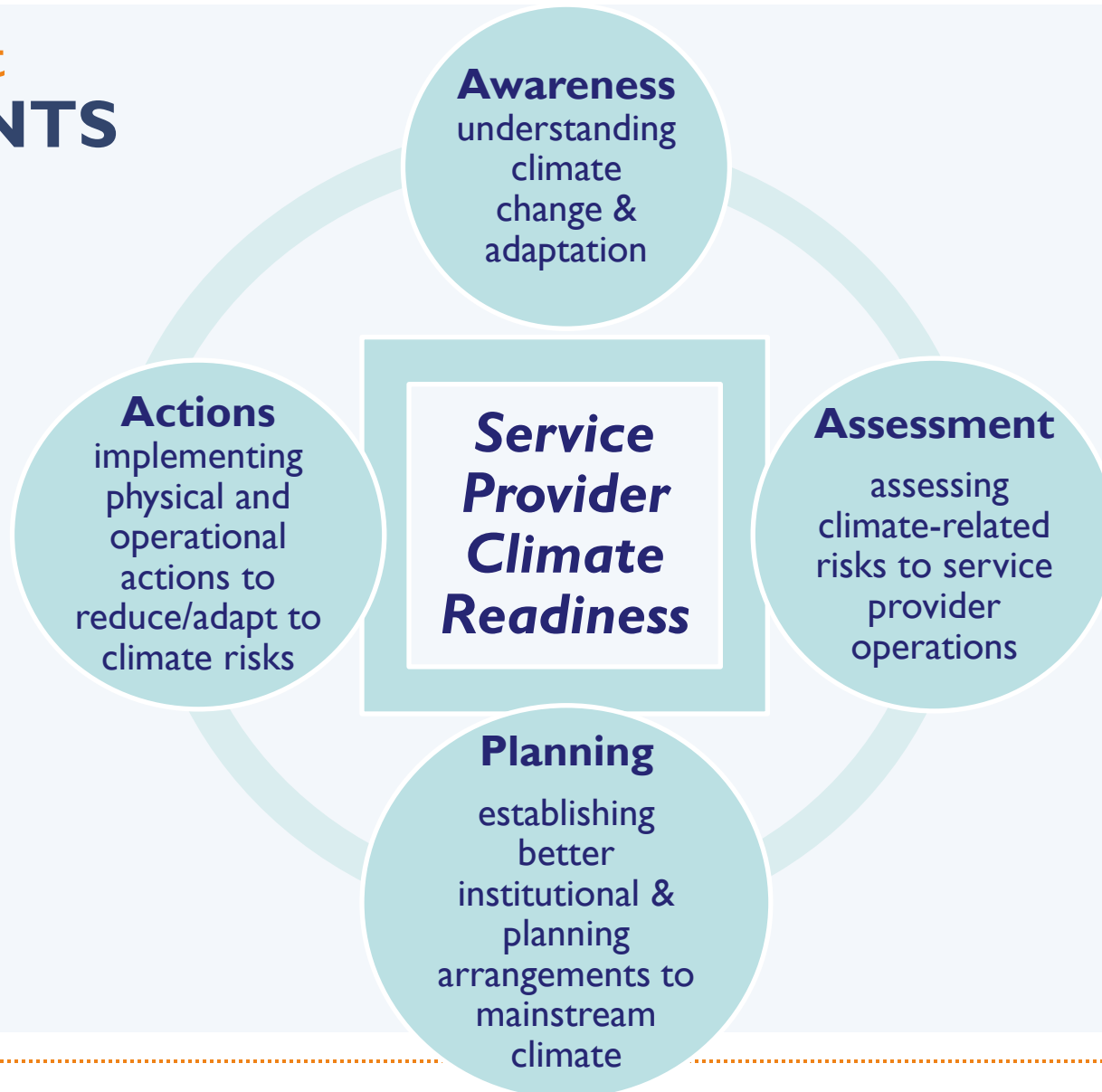


assessment

## **OBJECTIVE**

- (1) gather and analyze both qualitative and quantitative information to determine the “readiness” of service providers
- (2) identify capacity building needs for adaptation efforts; and
- (3) document good practices undertaken by various service providers to stimulate knowledge exchange and peer-to-peer learning.

assessment  
**ELEMENTS**





## assessment

# APPROACH

- 14 participating service providers in the region
- 7 water supply and sanitation; 1 sanitation; 6 water supply
- National, state, municipal levels
- Ho Chi Minh City, Bangkok, Johor Baru, Medan, Penang, Manila, Phnom Penh, Singapore, Perth (Australia), state of Rajasthan (India)
- Attended Inception Workshop in Nov 2011
  - Recognize approach
  - Understand potential risks to operations



assessment  
**APPROACH**

**Inception Workshop (Nov 2011)**

**Assessment Survey (Feb - Mar 2012)**

**Survey Results Analysis (Mar - Apr 2012)**

**Dissemination Workshop (May 2012)**

**Final Report on “Readiness” (Jun 2012)**



## assessment

# OUTPUTS

- Better understanding of readiness to address impacts from climate change
- List possible actions to improve the existing levels of readiness
- Identify knowledge and/or capacity gaps
- Promote further exchange of information and knowledge, and support (partnerships) to address gaps through various networks
- Participating services providers represent regional leaders – community of practice?
- **Linking with ASEAN efforts**

## climate change **PARTNERSHIP**

- Adapting to the impacts of climate change is a priority the Philippines
- Water resources remain vulnerable and water services providers face significant challenges in understanding and planning for possible climate impacts
- Piloting a partnership on adaptation
  - ◆ Manila Water and Maynilad Water in Quezon City (ASEAN ESC member) and Palm Beach County Water Utility District in the U.S. and U.S. National Center for Atmospheric Center
  - ◆ Goal: better understand potential climate change impacts in operations and identify ways to integrate climate change related risks into planning process - software, decision-making

# Case Study - Manila Water