

BUILDING CLIMATE RESILIENT WATER UTILITIES FOR WATER SECURITY

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- Brief Introduction
- The Methodology
 - Situation
 - Objectives
 - Key Actors
 - Activities
- Results and Conclusions



- WaterLinks – an NGO whose core business is promoting water operator partnership (WOP) program
- WOP is a peer-to-peer partnership between two or more water utilities: an experienced mentor and a less experienced mentee or recipient
- WOP is intended to help water utilities improved operational for better service delivery
- WaterLinks is also involved in training and development of toolkits – Toolkit for Coastal and Small Island State water and wastewater utilities to assess and manage climate change risks

- Philippines is ranked No. 3 as the most vulnerable country to the impact of climate change
- Susceptible to monsoons, thunderstorms and typhoons, storm surges and sea level rise
- By 2020, temperature is likely to rise by 1.2 to 2 degrees Celsius
- In the face of climate change, water management becomes complex and challenging for water service providers
- Urgent need to address climate change impacts to ensure water security

- Defining Water Security
- “The capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socioeconomic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability” (UNU 2013)
- 5 Dimensions of Water Security:
 - Household Water Security (access to piped water +improved sanitation)
 - Economic Water Security
 - Urban Water Security (urban water supply+ wastewater collection)
 - Environmental Water Security
 - Resilience to Water-related Disaster

- To strengthen the capacity of PAWD Community of Practice for ClimateChange (PAWD-CoP-CC)
- To help build climate resilient water utility able to contribute towards achieving water security



- As a response, multiple climate themed WOP or partnership was developed between Florida Water and Climate Alliance (FWCA) represented by Palm Beach County Water Utility
- Mentee or recipient- Philippine Water District Association (PAWD) Community of Practice for Climate change represented by six (6) Water Districts (WDs): Cagayan de Oro, Metro Iloilo, Isabela City, Leyte Metro, Metro Cotabato and Zamboanga city
- WaterLinks as partnership facilitator
- With support from USAID- Be Secure Project
- WOP was for a period of 15 months (April 2015 to June 2016)

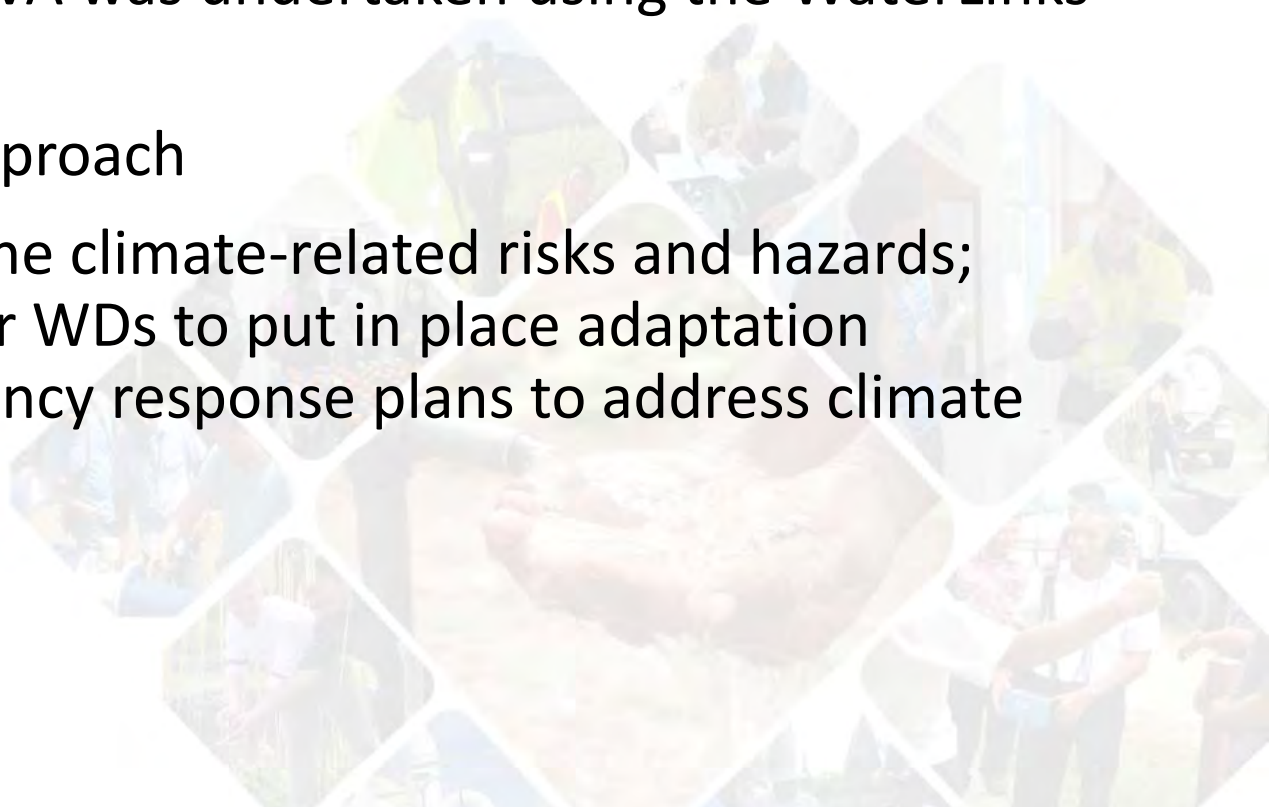
- The recipients have a total service connections from 9,000 to 86,000 and provide water service to 47,000 to 689,000 consumers
- Climate related hazards common to the recipients : extreme rainfall condition leading to flooding and water turbidity; low flow conditions due to drought; increased surface temperature causing algal bloom and affecting water quality; typhoon and storm surges affecting assets
- 3 of the 6 water districts were directly affected by Typhoons Washi in 2011 (Sendong) Fengshen (Frank)in 2008 and Haiyan (Yolanda) in 2013

Building Climate Resilient Water Utilities for Water Security (The Method)

RISK MANAGEMENT CYCLE	TOP-DOWN APPROACH
Establish baseline	<p>Identification of historical operational disruptions</p> <p>Assessment of historical rainfall & temperature variations</p> <p>Establishment of salinity baselines</p>
Forecast trends	Projection of rainfall & temperature scenarios
Assess changes from baselines	<p>Estimation of climate change impacts</p> <p>Assessment of flood impacts</p> <p>Assessment of droughts</p> <p>Forecasting sea level rise and changes in salinity</p> <p>Identifying water supplies shortfall</p>
Select and implement appropriate adaptation options	<p>Evaluation of adaptation options</p> <p>Implementation of final actions</p>

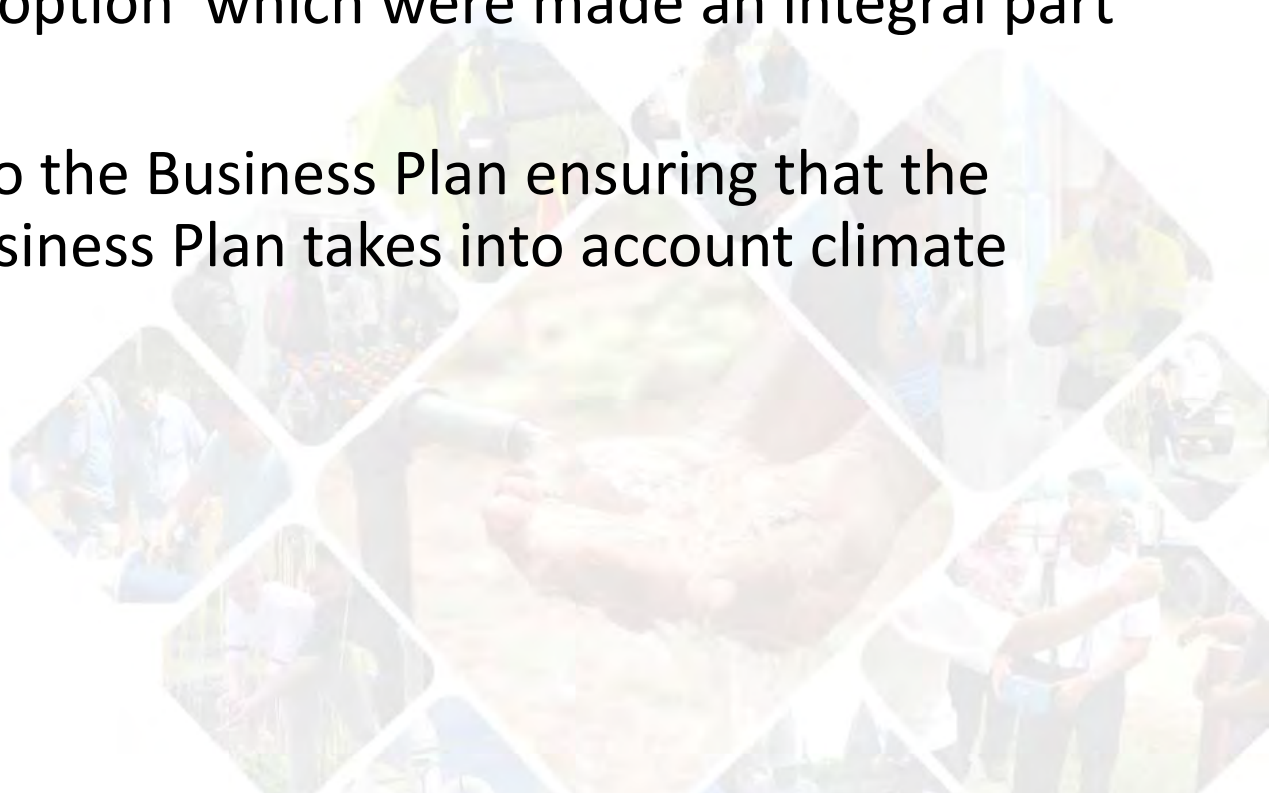
Building Climate Resilient Water Utilities Through WOP (The Results)

- The 2 important outputs: Vulnerability Assessment Report (VAR) of the 6 WDs and 6 climate resilient business plans
- How was it done: the VA was undertaken using the WaterLinks Toolkit
- Adapts a top-down approach
- VA Report identified the climate-related risks and hazards; provides solid basis for WDs to put in place adaptation measures and emergency response plans to address climate change challenges



Climate Resilient Business Plans

- Takes into account the result of the VA in terms of the identified adaptation option which were made an integral part of the Business Plans
- VAR output as input to the Business Plan ensuring that the preparation of the Business Plan takes into account climate change impacts



- The VAR and climate resilient Business Plans are the first to be prepared by any WDs in the country
- Made possible under a WOP, the platform provided by WaterLinks to transform the WDs into climate resilient water service providers, ensuring the achievement of **water security at the local levels (household water security)**
- WOP as an effective approach to helping build capacities in climate change adaptation
- WOP as new way to achieve water security through peer-to-peer learning exchanges among water utilities

Building Climate Resilient Water Utilities Through WOP (Conclusions)

- Through the WOP approach, WaterLinks have successfully facilitated and completed more than 70 partnerships across Asia benefiting more than 2,500 water operators personnel with improved skills in water service delivery and provided 1 million people with improved water and sanitation ensuring **water security**



Thank you!

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