

Water Associations Meeting

Vision, Mission, Challenge, Priority

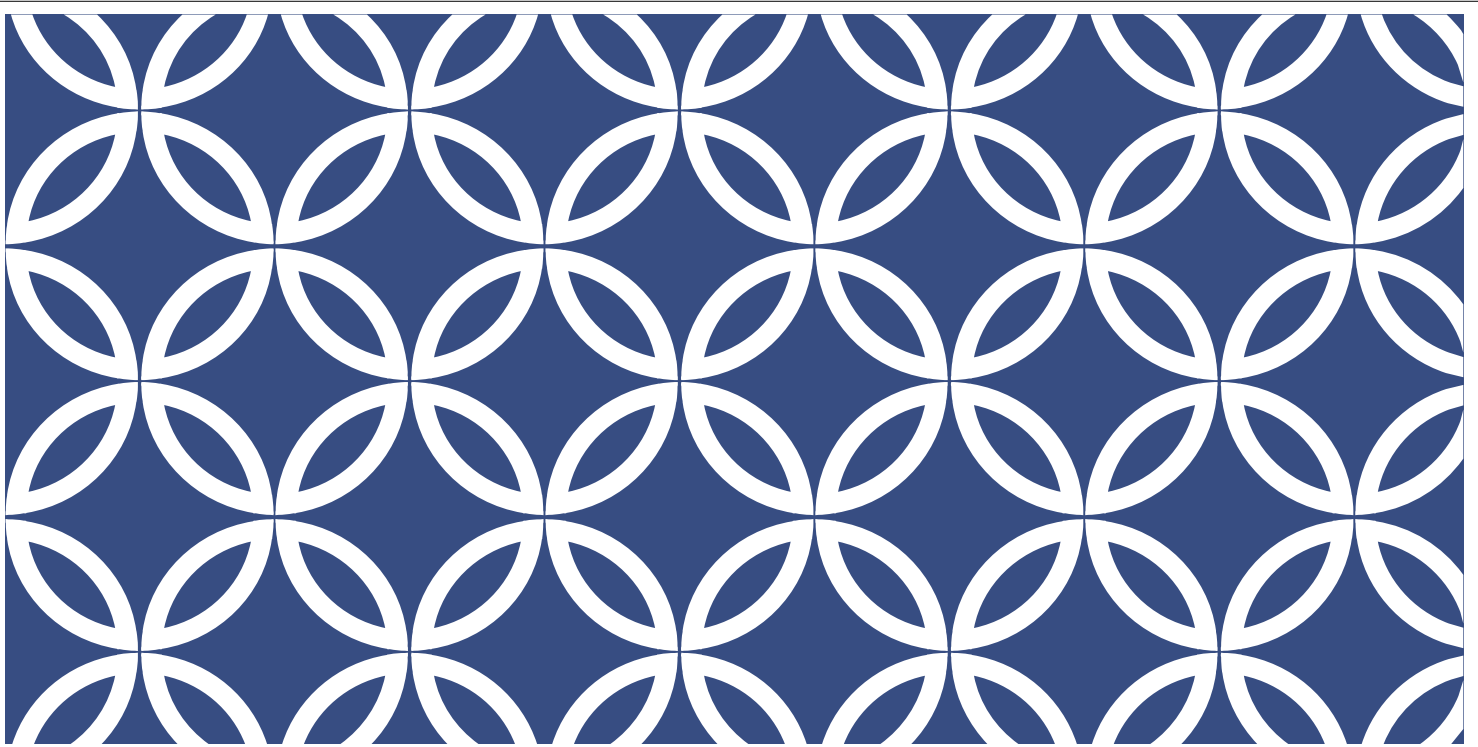
Thursday, 10 November, 2016
"1st /2nd Meeting Room",
Kyoto international Community House 1F

Program Overview

Time	Speaker & Association	Title
09:30-09:45	Takayuki (Taka) Sawai Japan Water Works Association (JWWA)	VISIONS FOR THE FUTURE AS A MEMBERSHIP ORGANIZATION
09:45-10:00	Colin Chung American Water Works Association (AWWA)	US Water Challenges
10:00-10:15	Nan-Tzer Hu Chinese Taiwan Water Works Association (CTWWA)	Disaster Preparedness And Emergency Response For Taiwan Water Corporation (TWC)
10:15-10:30	Hae-hwa Choi Korea Water and Wastewater Works Association (KWWA)	KOREA'S CHALLENGES FOR WATER INDUSTRY FOSTERAGE
10:30-10:45	Mohmad Asari Daud Malaysian Water Association (MWA)	Spearheading Competent Workforce in Malaysia
10:45-11:00	Break	
11:00-11:15	Ashari Mardiono PERPAMSI (Indonesia Water Supply Association)	INDONESIA'S 10 MILLION NEW CONNECTIONS
11:15-11:30	Saowapa Deotrakul Thai Waterworks Association (TWA)	THAI WATERWORKS ASSOCIATION (TWA)
11:30-11:45	Adam Lovell Water Services Association of Australia (WSAA)	Water Associations Meeting
11:45-12:00	Sushmita Mandal International Water Association (IWA)	The International Water Association towards a water-wise world

Closing Remarks

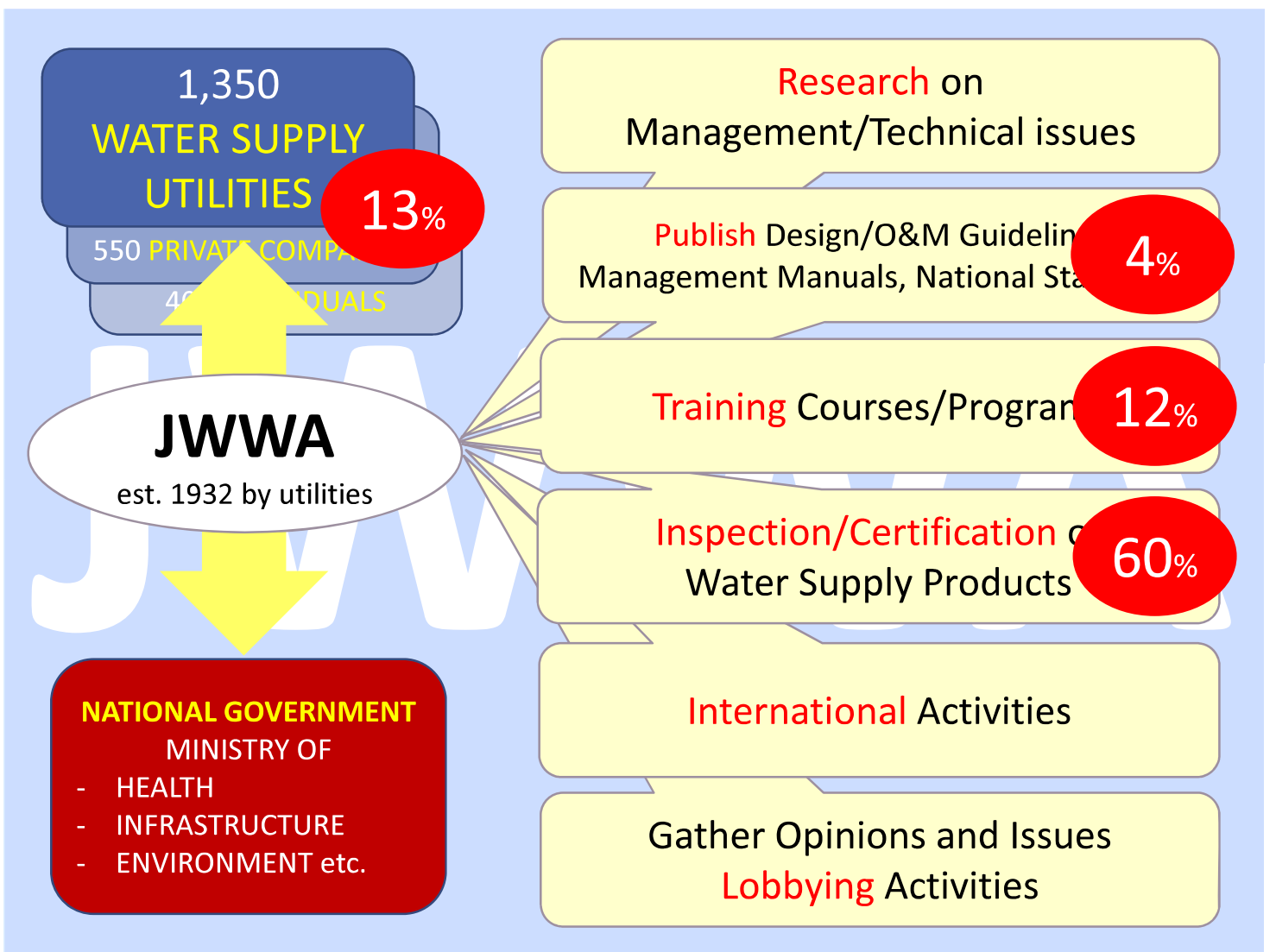
12:00-12:10 **Takamasa Ichimura**, Japan Water Works Association (JWWA)



VISIONS FOR THE FUTURE AS A MEMBERSHIP ORGANIZATION

Taka Sawai

Deputy Director for International
Japan Water Works Association



ISSUES AND CHALLENGES

...in the future

- ✓ *We may be put in more severe situation*
- ✓ *New ideas and challenges are needed for further development*

measures

JWV
ESTABLIS
RE-DEF

to contribute

“SAFETY”
“RESILIENCE”
“SUSTAINABILITY”

of Water Supply

WE?

SUPPORTER
FOR
WATER SECTOR

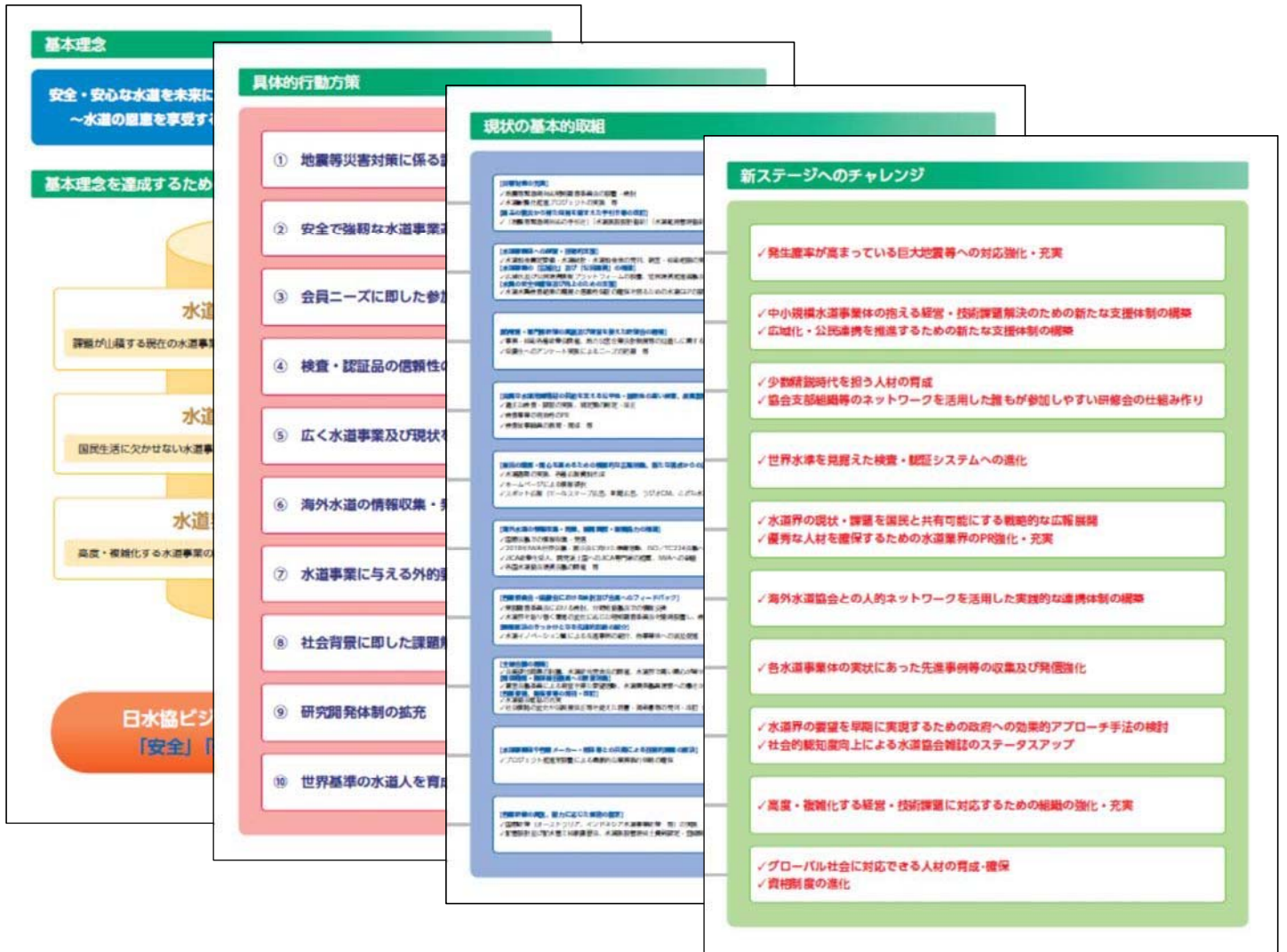
Strengthen support activity according to members' needs

SPEAKER
FOR
WATER SECTOR

Strengthen PR activity to let people understand more about importance of water supply

THINKTANK
FOR
WATER SECTOR

Strengthen research, investigation and human resources development activities



EXAMPLES OF NEW INITIATIVES

Emergency Drill with Utilities in Whole Country

➤ Strengthening countermeasures for disasters



EXAMPLES OF NEW INITIATIVES

Events to Promote PPP activities

➤ Promoting PPP and integration of small utilities



EXAMPLES OF NEW INITIATIVES

JWWA Water Innovation Awards

➤ Promoting capability for new solutions



Mallscape Advertising

EXAM NEW



あつ！
コキコ！コキコ！
水野くん♡って私、
大好きです！！
そんな水野くん♡が
見られるの、
日本の高い
水道技術があって、
安全でおいしい水道水が
届いているからよね！！
水野くん♡と
水道水への思い、
どう伝えたいの？
これらきつと私、
水野くん♡と結婚して、
ふたりで生活を営んでいくのね……！！
でも、その生活は当たり前にあるものじゃない！！
私と水野くんが難産な生活を送るためには、
安全でおいしい水道水を送るために、
これからも水道水を飲み続けるために、
これからの水道施設は、
適切に更新していくことが大切よね！！
それから、日本は、
おかしくないんだもん！！
いざという時にも、大切な水道水が
止まらないために、副都心も進めて、
最新の水道にしていかなくちゃ！！
ってことを水野くん♡にも
伝えなきゃあ！！

私たちの生活は、安心で安全な水道水があってこそ、営むことができます。
水道水が止まらないために、全国の水道事業者たちは、水道施設の更新や副都心に、力を尽くして取り組んでいます。
大きな責任が伴うこれらの対策は、水道事業者だけでなく、水道水を愛する私たちみんなにとっての大切な課題なのです。

みんなで考えたいね、
日本の「水道水」。

公団社団法人 日本水道協会
www.jwva.or.jp



papers for Kids

EXAMPLES OF NEW INITIATIVES

International Training Program for Utility Staffs
➤ Strengthening relationship with overseas associations and developing human resources





IWA World Water Congress & Exhibition 2018

Shaping Our Water Future



16-21 SEPTEMBER 2018, TOKYO, JAPAN





American Water Works
Association

Dedicated to the World's Most Important Resource™

US Water Challenges

Colin Chung
AWWA International Relationship Manager

2016 JWWA General Assembly & Research Conference
November 10, 2016

Order of Presentation

- Introduction
- US Water Challenges
 - Climate Change
 - Aging Infrastructure
 - Water Quality
- Q&A



AWWA 2016

- 50,000+ members in **98** countries
 - Utilities
 - Service Providers
 - Individuals
- 150 staff in 2 office locations
- 43 Sections
- 6 Councils
- 6,000 Volunteers active in Committees

841 members outside
North America



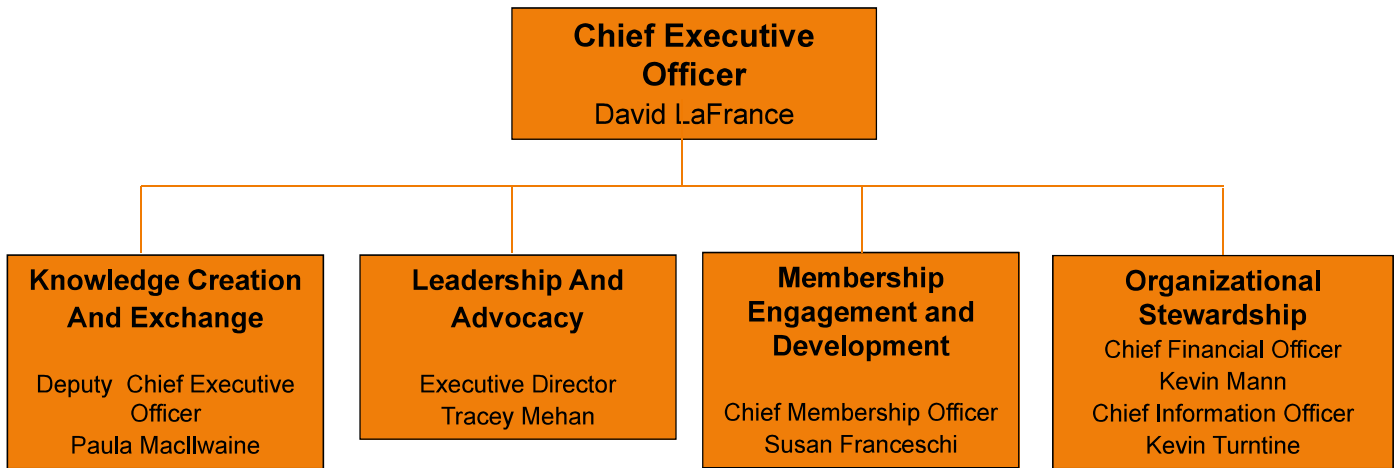
AWWA Goals

- **Knowledge, Creation & Exchange** – **Create & exchange** knowledge to benefit public health and the needs of the water community.
- **Leadership & Advocacy** – Lead the water community by **identifying trends and issues**; actively informing consumers, media, lawmakers, regulators, manufacturers, consultants, and water professionals; and by advocating for public policies and other actions promoting safe water and reflect sound science.
- **Member Engagement & Development** – Create vibrant and expanding **opportunities** for the development of all water professionals.
- **Organizational Stewardship** - Create an effective & efficient organization by engaging in strategic partnership.



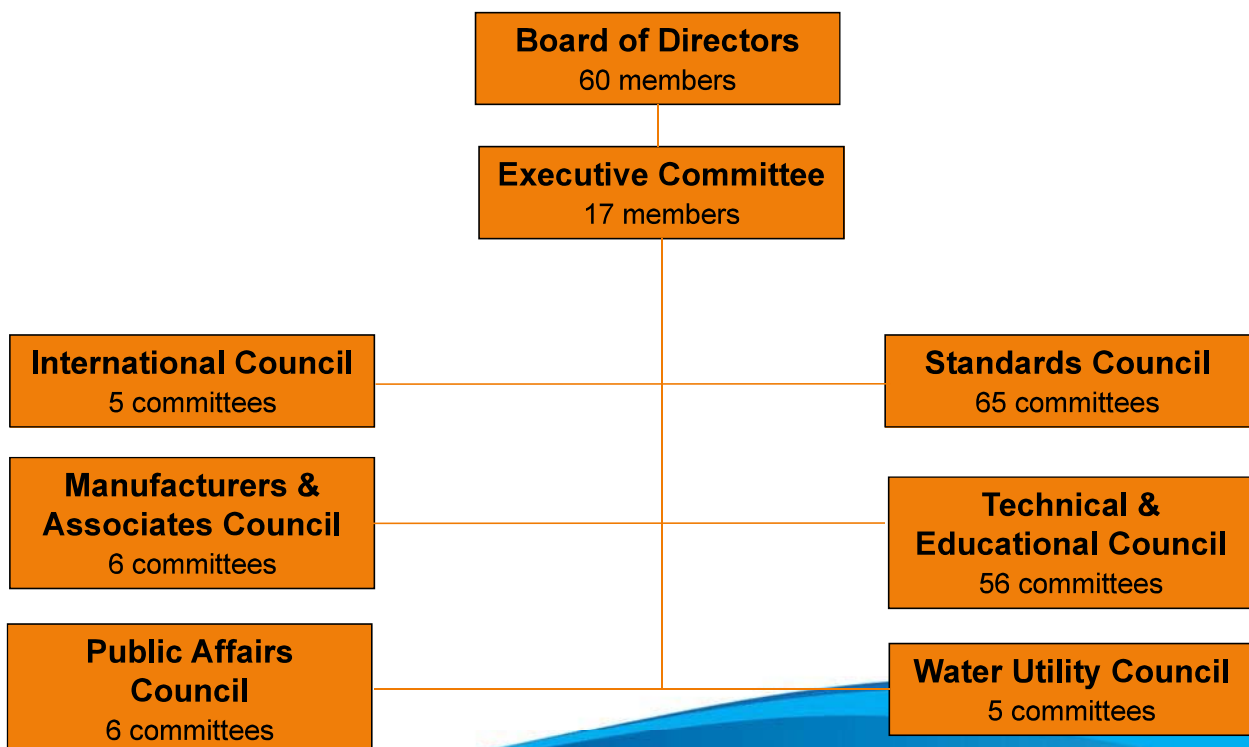
Staff Organizational Design

Supports the Association's Strategic Plan



Volunteer Organizational Design

Supports the Association's Strategic Plan





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Water Challenges

Biggest US Challenge





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Water Shortage (California)

California's 6th Year Drought



(Left) Folsom Lake March 2011
(Right) Folsom Lake January 2014



(Left) NASA satellite image of Sierra Nevada on January 18, 2013
(Right) NASA satellite image Sierra Nevada on January 18, 2014



(Left) Lake Oroville July 20, 2011
(Right) Lake Oroville January 16, 2014

Source: Drought.ca.gov



California's 6th Year Drought



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Mark Svoboda
National Drought Mitigation Center



<http://droughtmonitor.unl.edu/>

California Water Action Plan

Notable items:

- Making water conservation a way of life in California
 - Executive Order → mandatory 25% reduction in water use
- Increase self-reliance and integrating water management across levels of government
 - Water recycling
 - Desalination
- Developing a more reliable and sustainable water supply
- Preparing for more frequent and severe droughts
- Expanding water storage and managing groundwater supplies
 - Increase water storage
 - Protect over pumping of groundwater supply
- Increasing flood protection
 - Prepare for flood triggering intense storms
- Seeking new water resource funding sources
 - Increase research funding for ecosystem, watershed, infrastructure, and drinking water



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Aging Infrastructure

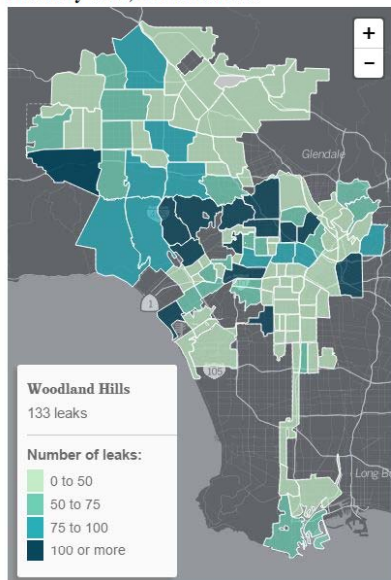
Water Leaks in Los Angeles

L.A.'s aging water pipes; a \$1-billion dilemma

By **BEN POSTON** and **MATT STEVENS**

FEB. 16, 2015

Leaks by area, 2010 to 2014



Sources: Los Angeles Department of Water and Power, MapBox and OpenStreetMap.

By the numbers

6,730 — Miles of pipe in the DWP water main network

435 — Miles of deteriorated water mains that DWP wants to replace, about 6.5% of the network

\$1.34 billion — Cost to replace at-risk water mains by 2025

\$44 million — Annual average amount DWP has spent on pipe replacement in the last eight fiscal years

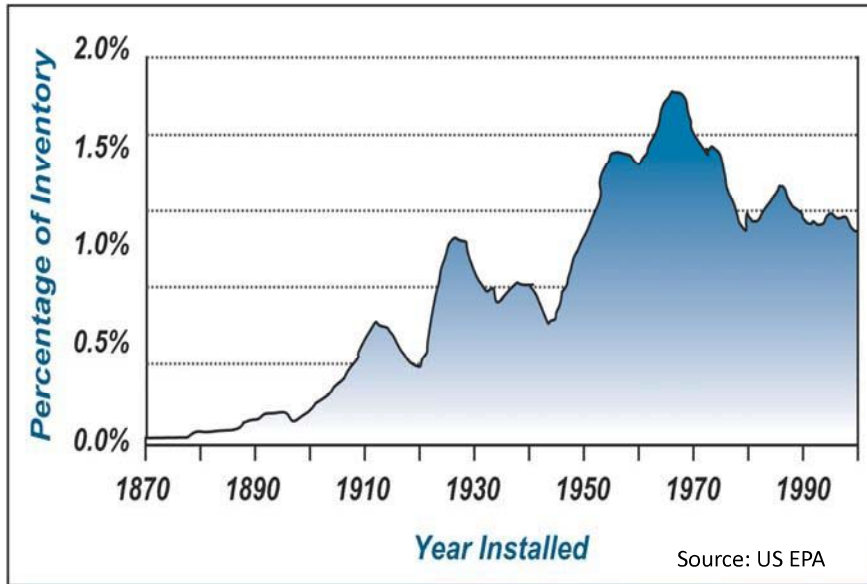
\$135 million — Annual spending needed to reach 10-year pipe replacement goal

Source: Los Angeles Department of Water and Power



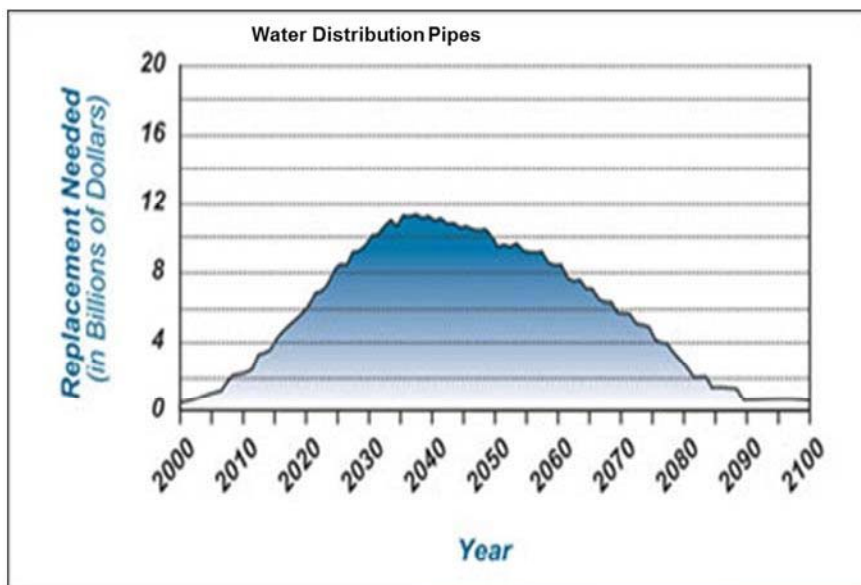
Historical Development Trend of US Infrastructure

- Age distribution of water pipes for 20 major cities



Historical Development Trend of US Infrastructure

- Age distribution of water pipes for 20 major cities



Why Be Concerned?

- Old assets are in need of replacement (aging asset)
- Decreasing revenue (reducing water demand)
- Can our current financial plan pay for future capital needs?
- Want to understand the estimated magnitude and timing of replacement and rehabilitation needs
- Want to proactively manage the future needs



Asset Management



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Water Quality

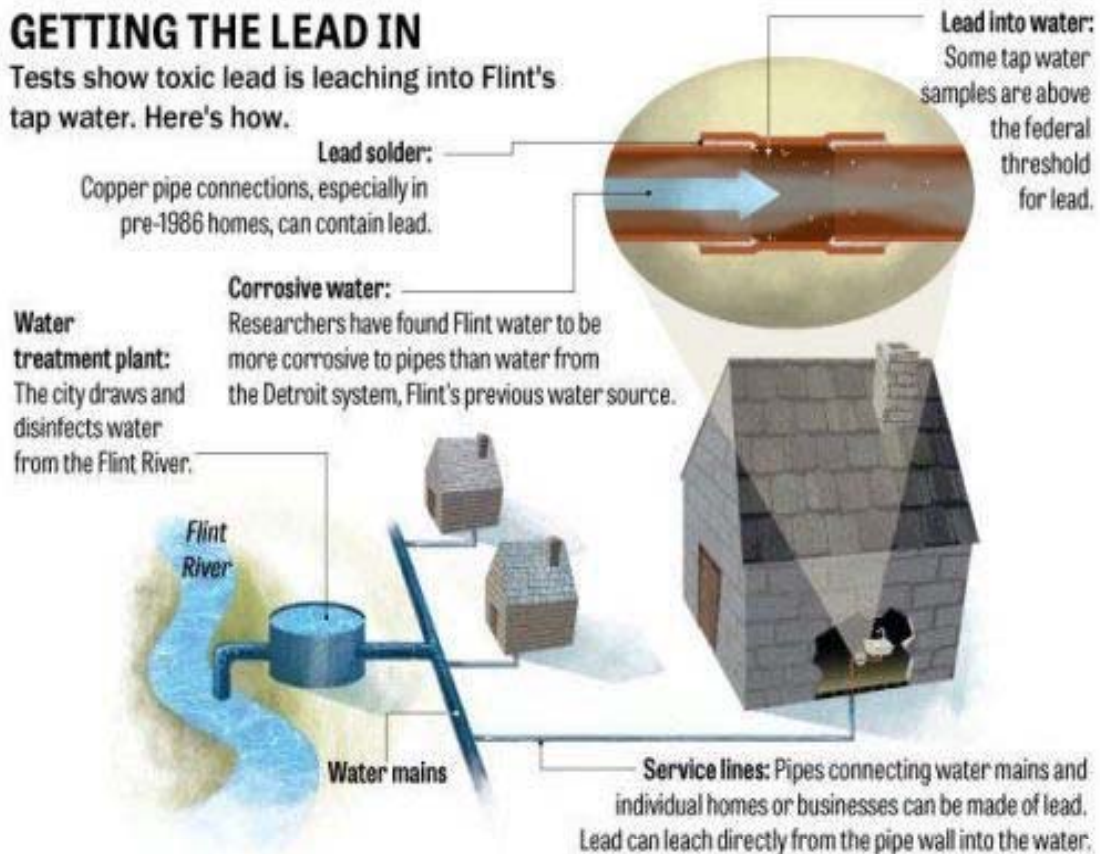
Flint, Michigan



Lead in the Service Lines

GETTING THE LEAD IN

Tests show toxic lead is leaching into Flint's tap water. Here's how.



Source of Problem

Flint River:

- High levels of Chlorides
- Result of industrial pollution and road salts



Water Treatment:

- No anti-corrosion treatment process
- Fear that phosphates would increase bacteria growth



Communication Problem

- Michigan Department of Environmental Quality misreads EPA requirement
- Michigan officials report Flint water is safe after only testing treatment plant
- State's Emergency Manager refused to allow Flint to re-connect with Detroit Water
- Some Flint residents never heard the status of the recovery plan and did not know about filters and bottled water



Questions?





Disaster Preparedness And Emergency Response For Taiwan Water Corporation(TWC)

Nan-Tzer Hu
Chairman
Chinese Taiwan Water Works Association
2016/11/10

MOEA

Outline

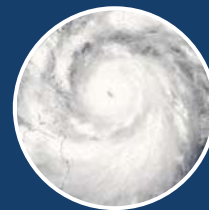
Preparedness And Emergency Response



Drought



Earthquake



Typhoon



Drought

• Digital subscription

WATER WOES

Drought in Taiwan forces water rationing in northern areas

April 8, 2015



In Taiwan, more than 1 million households will have their water cut off for two days a week in order to ration dwindling supplies.



BBC News Asia
@BBCNewsAsia

Follow

Taiwan begins water rationing amid worsening drought
bbc.in/1H3jiuD
11:29 AM - 8 Apr 2015

2

How did the drought happen?



1. Mountains lies north to south

2. Rivers are short and fast-flowing

The rainfall recorded from Oct 2014 to Feb 2015 hit its minimum extent in history

3

Drought fighting measures, preparations and execution.

Water Supply Situation Map

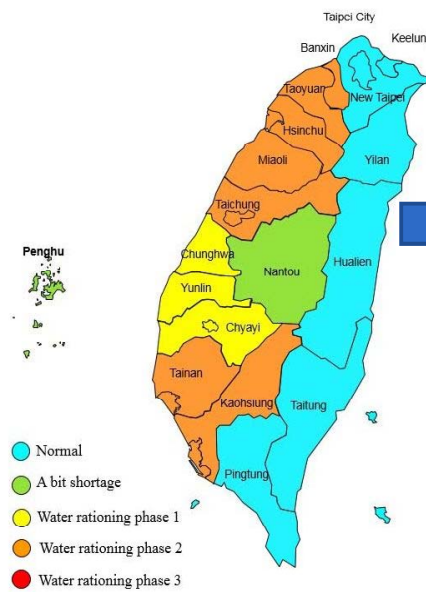
Date : 2014/11



2014/11

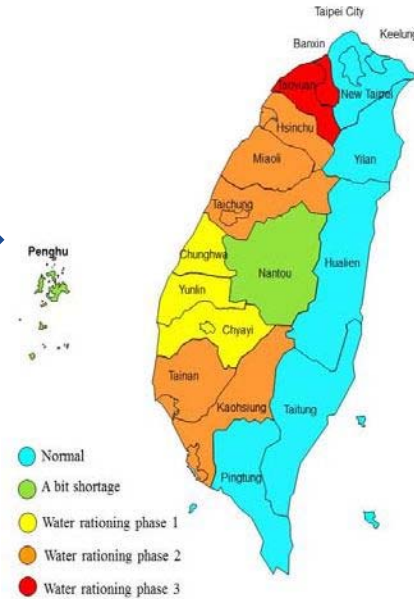
Water Supply Situation Map

Date : 2015/2



2015/2

Water Supply Situation Map



2015/4

Water rationing phase 1

Reduce water pressure (23:00~5:00)

News:
Linkou & Taoyuan started first stage of water rationing on Nov.27 2014

Rationing Poster

桃園林口 27日第一階段限水

2014年11月21日 04:10 記者劉朱松 / 台中報導

點閱 470

2/10 我要評比

分享至Facebook 分享至Google+ 分享至Twitter 分享至Weibo

面對石門水庫集水區降雨不佳，造成當地水庫蓄水量拉警報！經濟部水利署北區水資源局昨（20）日開會檢討後宣布，將自27日起，針對桃園縣（含新北市林口區）實施第一階段的夜間減壓供水措施，且當地水情燈號同時也轉為代表第一階段限水的「黃燈」。



Water rationing phase 2

Cut off water supply or Reduce water supply



Preparation :

Stage 2 rationing seminar for users in industrial zone



Execution :

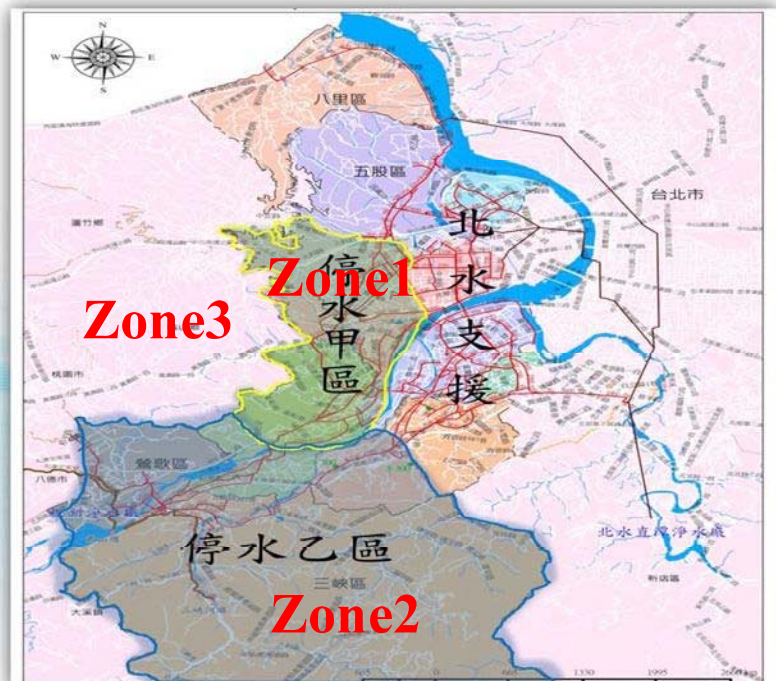
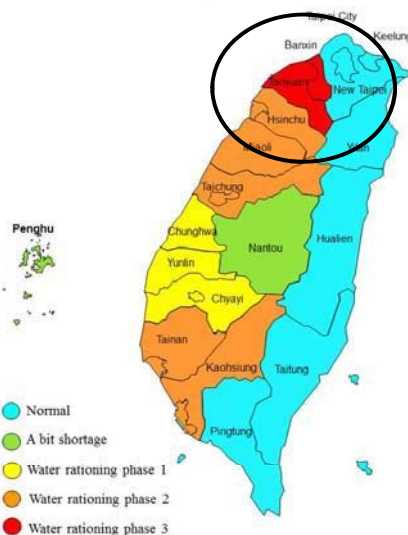
- (1) Cut off water supply to unnecessary needs.
- (2) Reduce water supply:
 - a. Monthly consumption greater than 1000 m³ :
 - Non- industrial use → cut 20%
 - industrial use → cut 5-10%
 - b. Swimming pools ,car wash, and SPA services: cut 20%.



Water rationing phase 3

- ◆ Cut off water supply to different zones in turn.
- ◆ Supply 5 days a week, and cut off water 2 days a week.
- ◆ Implement four round in phase 3

Water Supply Situation Map



Outcomes of water rationing

In unit of million tons

	Water supply (per day)	Days	Total saving(m ³)	Saving rate
Phase 1	7.59	189	39.23	3.18%
Phase 2	7.59	88	29.36	5.53%
Phase 3	1.86	28	+ 4.93	9.45%

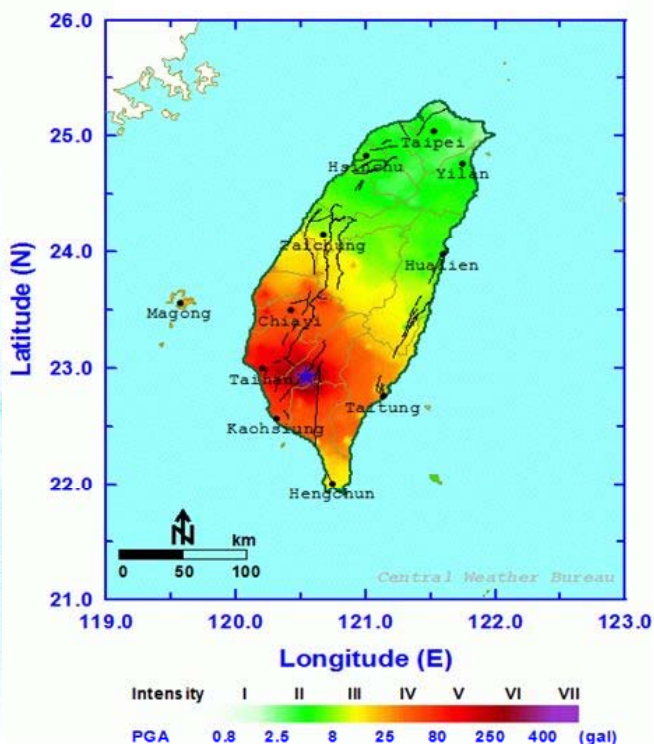
1.15 million household

= 73.52

8

Earthquake

Origin Time: 2016/02/06 03:57:27 (GMT+08:00)
 Lat:22.93N Lon:120.54E Mag:6.4 Depth:16.7km



The 17-story Weiguan residential building in Tainan lies in ruins after it collapsed in the earthquake.

9



More than 50 breaks found on the pipe bigger than 300 mm.

Install 1350mm pipe on the ground on Kun-Da Road

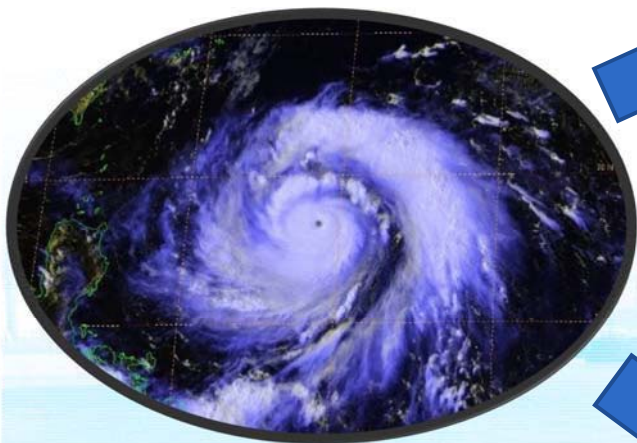


Provide water to citizens in temporary



Typhoon

Two main reasons led to water outage



High water turbidity



Power Cut

台灣自來水公司
TAIWAN WATER CORPORATION

公告資訊 機關簡介 企業社會責任 公司治理

災害專輯

0926梅姬颱風災情統計：截至105年9月27日17時00分，全國停水戶數約35,100戶，主要地區為新北市(淡水、深坑、石碇、新莊、土城、板橋、蘆洲、中和地區)受北水廠安穩之直接供水戶25,100戶，港口地區因新埔居民配水池加壓站跳電，致停水16,400戶。

高雄地區截至9月27日下午16時30分停水情形
 卓蘭內溝深井，因颶風影響機電漏電，已請廠商協助復電中。
 【4G105_00124】
 因后里、外埔部份區域台電停電致供水量減少造成高地區水壓降低(待台電修復後再行陸續供水)【4Z105_00043】

Water shortage information
Posted on TWC's website :

- Water outage areas and number of household.
- Addresses of water supply station.

Besides, every branch establishes mobile contacting groups with local government, representatives and head of borough.

The typhoon in 2016

Typhoon	Date	Intensity	Number of households without water
Meranti	9/12-9/19	Strong	722,699
Malakas	9/16-9/18	Moderate	0
Megi	9/26-9/29	Moderate	72,560



In order to prevent water outage caused by power cut



1. Large water purification plant have already set generator.
2. Generator can't be set in some plants because of narrow space.
3. 112 generators will be purchased in 4 years, which will cost about 10 millions US dollars.



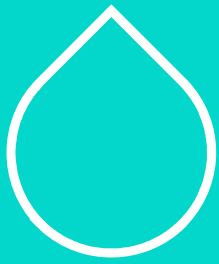
Conclusions

Disaster is usually compound and unforeseeable. Learning from every disaster and continually improving our response measure is important.

To overcome the challenge of disaster, preparation and emergency response require the government's fast action and peoples' cooperation.

Thank you for your attention



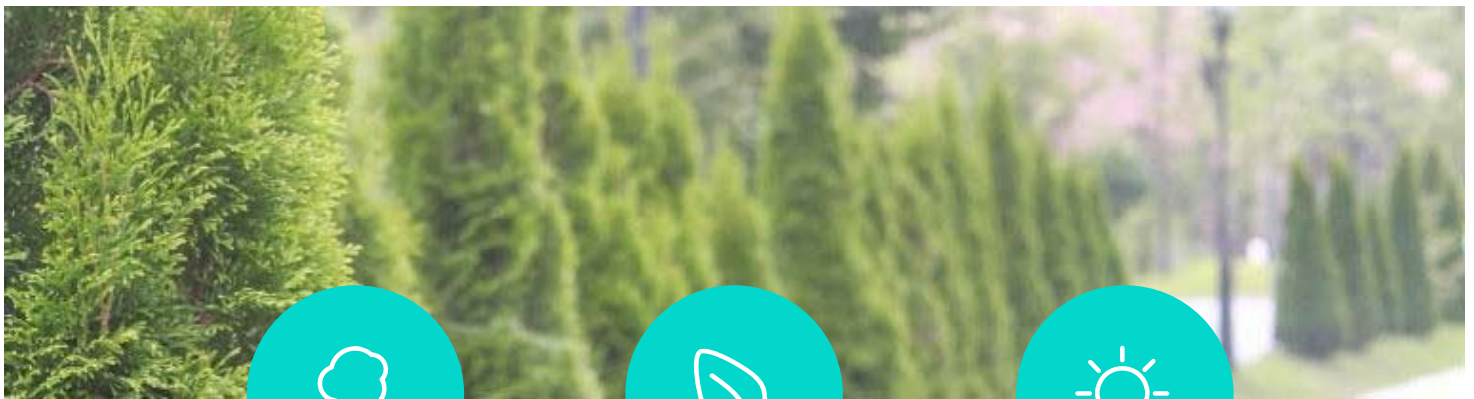


KOREA'S CHALLENGES FOR WATER INDUSTRY FOSTERAGE

KOREA
WATER AND
WASTEWATER WORKS
ASSOCIATION

November 10, 2016

CONTENTS



BACKGROUN
D



VISION
&
CHALLENGE
S



ABOVE ALL...

BACKGROUND

The present of Korea's Water Environment & Water Industry

Water Stress

Korea is under the "sever water stress" by high water usage

Vulnerable to Drought

74% of water resource in Korea is "Dam Water"

Stagnant Domestic Market

Low profit structure cause of price war

Uncompetitive companies

Price competition market structure makes water companies not to concentrate on R&D

Aging Facilities

Aging pipe networks and WTPs make "690billion ton of water loss" a year



3

VISION & CHALLENGES



Manpower



Field



Global Market

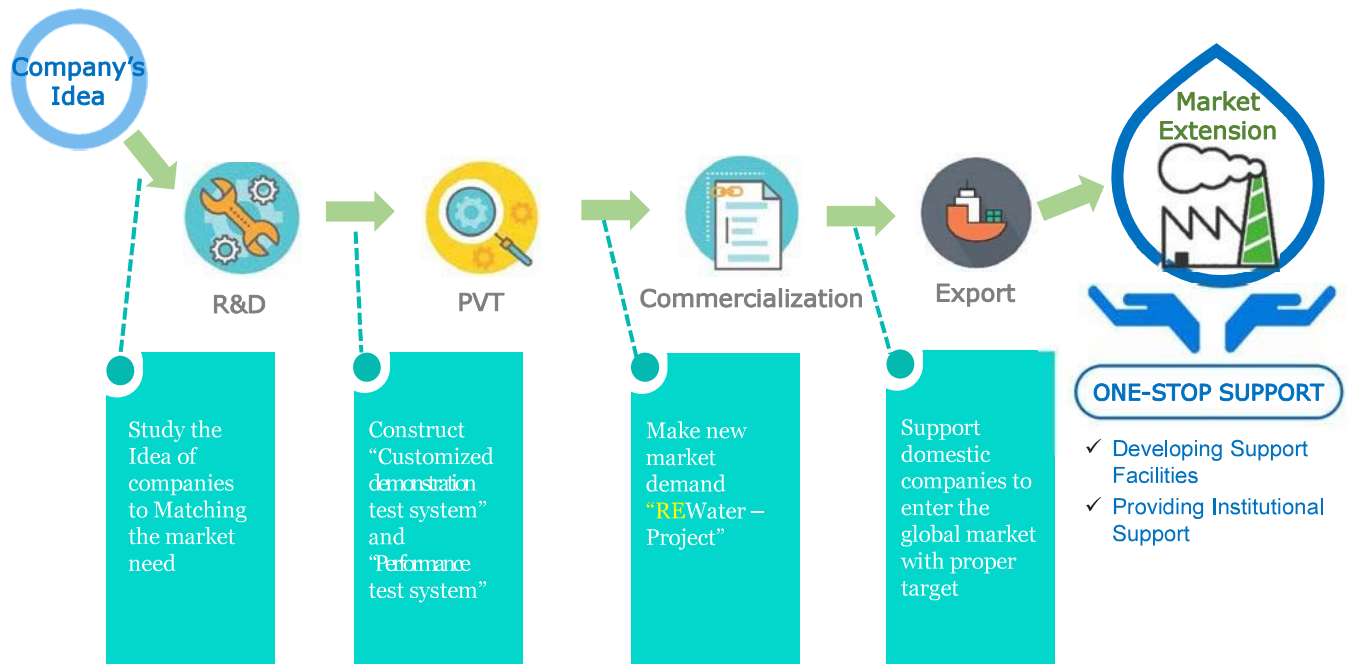


Profit Structure

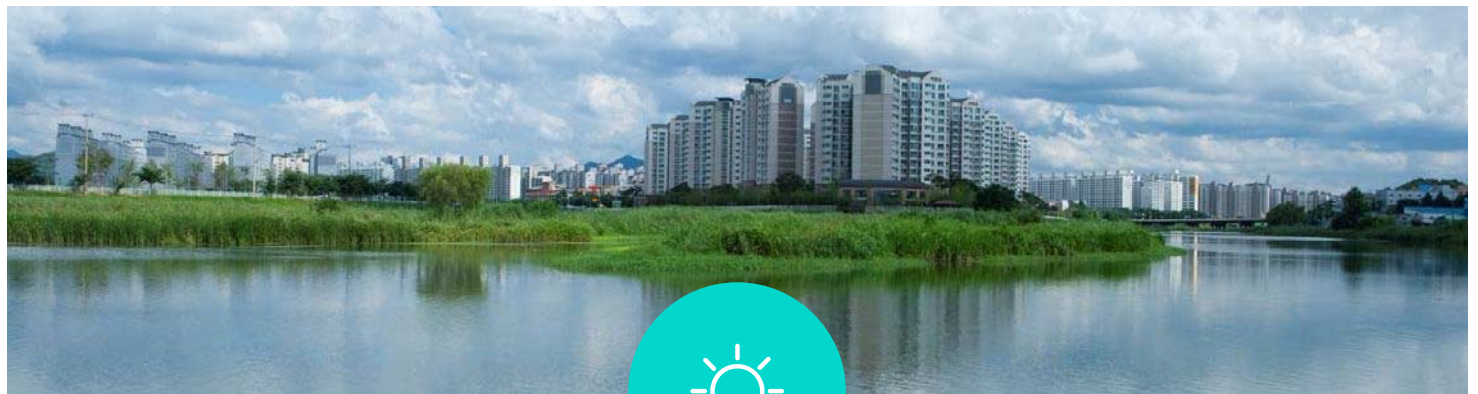
4

STRATEGY & ROLE

From Idea to Market Creation, and the Role of Government



5

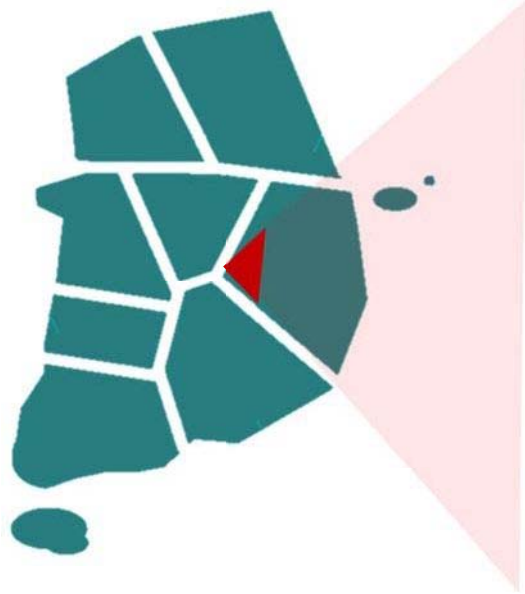


For One-Stop Support Service,

6

Korea Water Industry Cluster Project

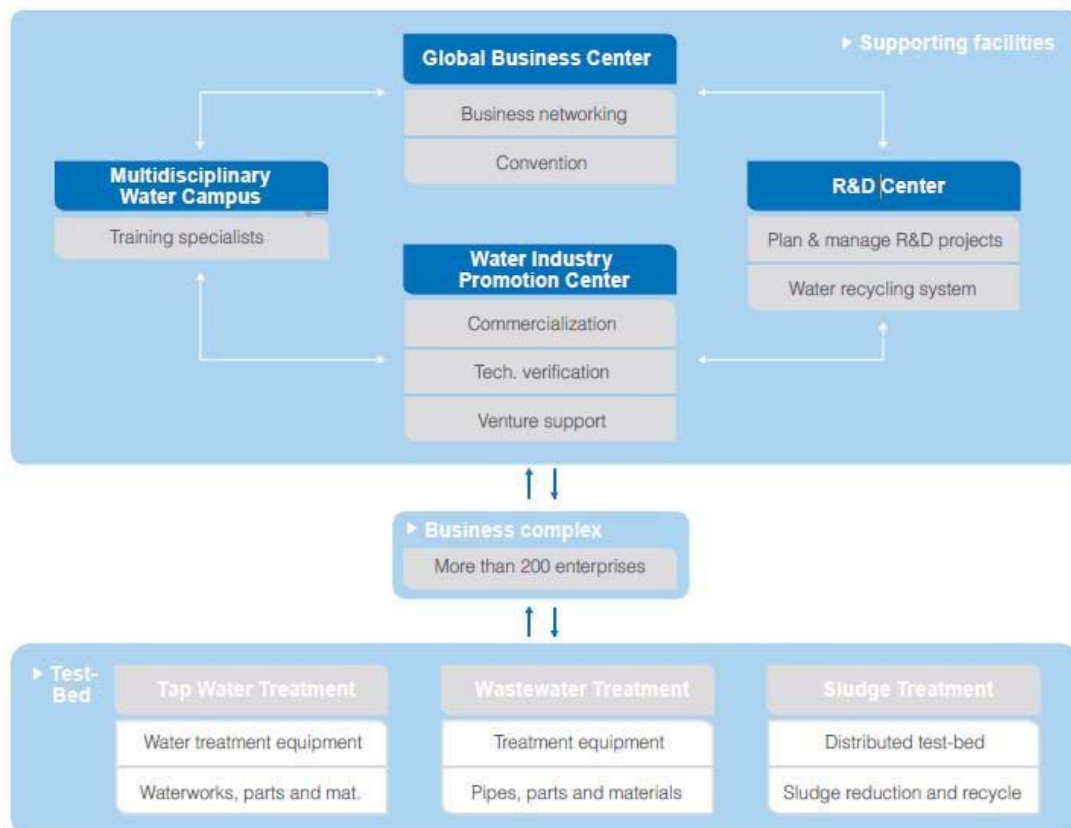
Water Industry Hub



Location	Within Daegu National Industrial Park
Period	2016~2018 (3 years or more)
Gross area	645thousand m ²
Budget	313.7 billion won
Developed by	Ministry of Environment

7

Structure of Korea Water Industry Cluster



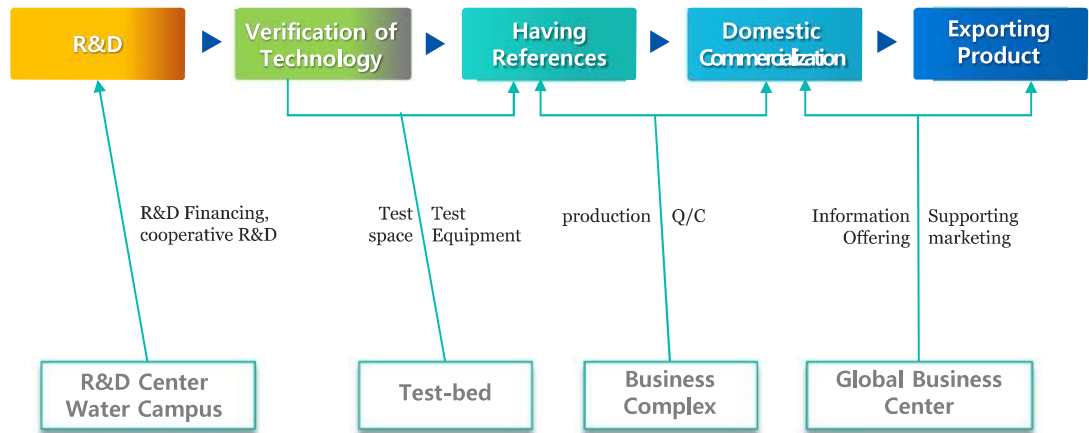
8

Purpose of Project

Sustainable supporting infrastructures



Water Industry Cluster



Components of Water Industry Cluster

Make one-stop service possible

Test-bed
(80,000m²)

Supporting Facilities
(64,000m²)

Business complex
(503,870m²)

- Comprehensive water treatment TB (water, wastewater, pipeline)
- Water Industry Promotion Center
- Water firms are clustered
 - 100 big and middle sized firms
 - added value 280 billion won
- Global Business Center
- R&D Center
- 2,800 creation of employment (KDI, 2014)
- Water Campus

Components of Water Industry Cluster

Test-bed
(80,000m²)

Supporting
Facilities
(64,000m²)

Business
complex
(503,870m²)

Overview

- Developing new technology and securing references
- Building and advanced water and wastewater treatment base
 - ➔ Test-Bed(TB) : water, wastewater, reuse
- Verification of domestic technology
 - ➔ Supporting from the government
- Cooperation with National Industrial Park
 - ➔ Flexibility of operation and security of water quality

11

Components of Water Industry Cluster

Test-bed
(80,000m²)

**Supporting
Facilities**
(64,000m²)

Business
complex
(503,870m²)

Overview

- Operation of cluster and supporting system
- Handling whole mechanism of cluster(Control Tower)

R&D Center

- Management of R&D
- Managing and supporting facilities

Water Industry Promotion Center

- Cluster Operation
- Based on need analysis

Water Campus

- Nurturing field-centered human resource
- Supporting R&DB environment

Global Business Center

- Overseas Cooperation, Networking
- Exhibition, Advertisement, Marketing
- International meeting, Business Support

12



Overview

Play a role as a circulation circle of water in cluster

- Organic supporting system with integrated firms
- Self-contained System(Developed technology → product → business)
- Responsible for part of BWC(Blue Water Circle)

Complex Introduction

Target Field of Business

- Purification, water related firms
- Wastewater treatment related firms
- Industrial waste water treatment related firms
- Sludge treatment and recycling firms
- Other water-related firms

THANK YOU

WATER ASSOCIATION MEETING

“Mission, Vision, Challenge, Priority”

COUNTRY ASSOCIATION PRESENTATION

Spearheading Competent Workforce in Malaysia

Date : 10 November 2016 (Thursday)

Time : 9.30am - 12.00 pm

Location : Kyoto International Community House



JAPAN WATER WORKS ASSOCIATION



MALAYSIAN WATER ASSOCIATION

CONTENT

- Introduction
- Proposed Institutional Set-up
- Industry Workforce
- Organisational Framework
- Certification Flowchart
- Conclusion

INTRODUCTION

- ❑ Malaysian Water Association had formed a company to undertake training and competency certification, Malaysian Water Academy (MyWA)
- ❑ This program is intended to be undertaken by MyWA
- ❑ MyWa has been doing training and certification recognised by National Water Services Commission (SPAN), the Regulator for the water industry.
- ❑ MWA as a non-Governmental organisation (NGO) is active in collaborating with the Government and industry to embrace best practices in the industry
- ❑ MWA has been active in the restructuring of the Water Industry as it has taken active role in the formulation of the two new water acts , Act 654 SPAN dan Act 655 WSIA.
- ❑ MWA is anticipating to be appointed by Malaysian Department of Skills Development as the Industry Lead Body (ILB) for the water industry this year

INTRODUCTION

❑ Malaysia Water Academy (MyWA) Board of Directors

Government representatives (KeTTHA):

- ❑ Hj Sutekno Ahmadbelon
- ❑ Ir Noor Azhari Zainal Abidin
- ❑ Dato' Ir Mohd Akhir Mohd Jiwa

MWA representatives:

- ❑ Ir Syed Mohamad Adnan Al Habsyi
- ❑ Dato' Ir Abdul Kadir Mohd Din
- ❑ Ir V Subramaniam

- ❑ **MyWA address** – Level 2 & 3, No 24, Jalan Sri Hartamas 8, Taman Sri Hartamas, KL
- ❑ **CEO** – Ir Lee Koon Yew (Group ED)
- ❑ **No of staffs** - 7

INTRODUCTION

- ❑ The new WSIA (Act 655) stipulated the requirement of competent personnel in the water industry
- ❑ Training in water industry had been quiet for some time after the privatisation of national training institute of Public Utilities Department (IKRAM) in 1995. IKRAM is today an institution of higher learning, known as KLIUC
- ❑ Training are mostly in-house by operators except limited training done by MWA (thorough MyWA), PWSA, CIDB and other small private HR training providers
- ❑ Enforcement of training requirement has not been in place and has affected on the demand for training
- ❑ With the appointment of MWA as ILB by Department of Skill Development and concurrent regulation by SPAN, the demand for competency training and competency certification is expected to increase steeply

PROPOSED INSTITUTIONAL SET-UP



INDUSTRY WORKFORCE

Water Operators

- Management 741
- Executive 1,893
- Non exec 15,075
- Meter Reading 1,708
- Total 19,419

Sewerage Operator (IWK)

- STP 1,433
- Network 279
- Desludging 423
- Ops & Planning 989
- Lab 282
- Total 3,406

Govt/Contractors/Consultants/Other operators *

- Estimate 15,000

* Estimate of workforce that needed training/competency

GROSS TOTAL 38,000

INDUSTRY WORKFORCE

Targeted Competency Certification of Skilled Workers

3 year target 2017 - 2019 : 3,000

2017 : 700

2018 : 1,000

2019 : 1,300

Strategy to adopt :

- Fast track
- Single Tier
- Using regulatory framework

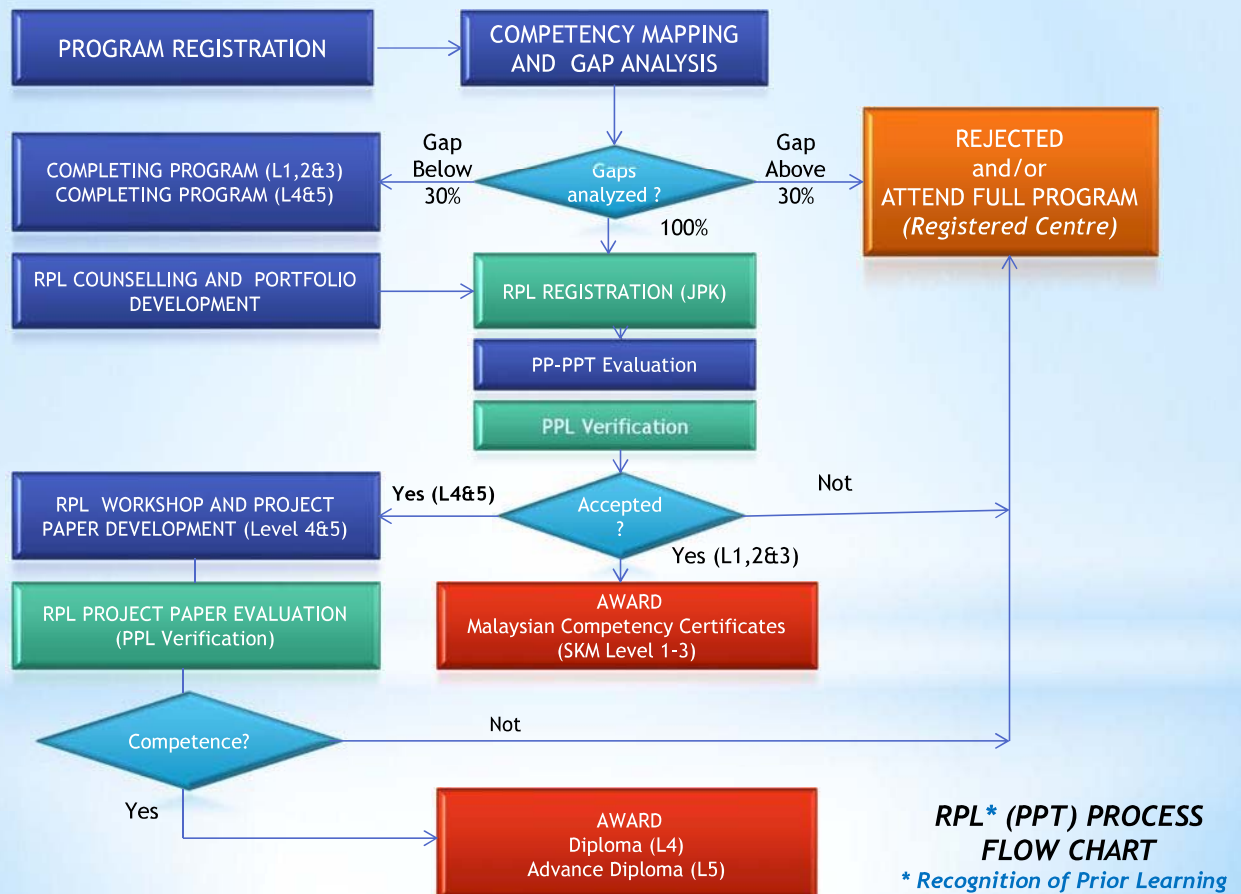
OCCUPATIONAL FRAMEWORK

SECTOR	WATER SERVICES (42)					
SUB SECTOR	WATER SUPPLY (25)					
Job Area	Water Resource	Water Treatment			Water Distribution	
Sub Job Area		Maintenance	Operator	Laboratory	Instrumentation	Operation
Level 5	Water Resource Manager	Water Treatment Plant Manager			Water Distribution Manager	
Level 4	Water Resource Executive	Facility Executive	Water Treatment Plant Executive	Chemist	Water Distribution Instrumentation Executive	Water Distribution Executive
Level 3	Water Resource Senior Technician	Facility Senior Technician	Water Treatment Plant Senior Technician	Quality Assurance Senior Technician	Water Distribution Instrumentation Senior Technician	Water Distribution Operation Senior Technician
Level 2	Water Resource Technician	Facility Technician	Water Treatment Plant Technician	Lab Assistant Technician	Water Distribution Instrumentation Technician	Water Distribution Technician
Level 1	-	Handyman	Water Treatment Plant Operator	Water Sampler	-	Fitter

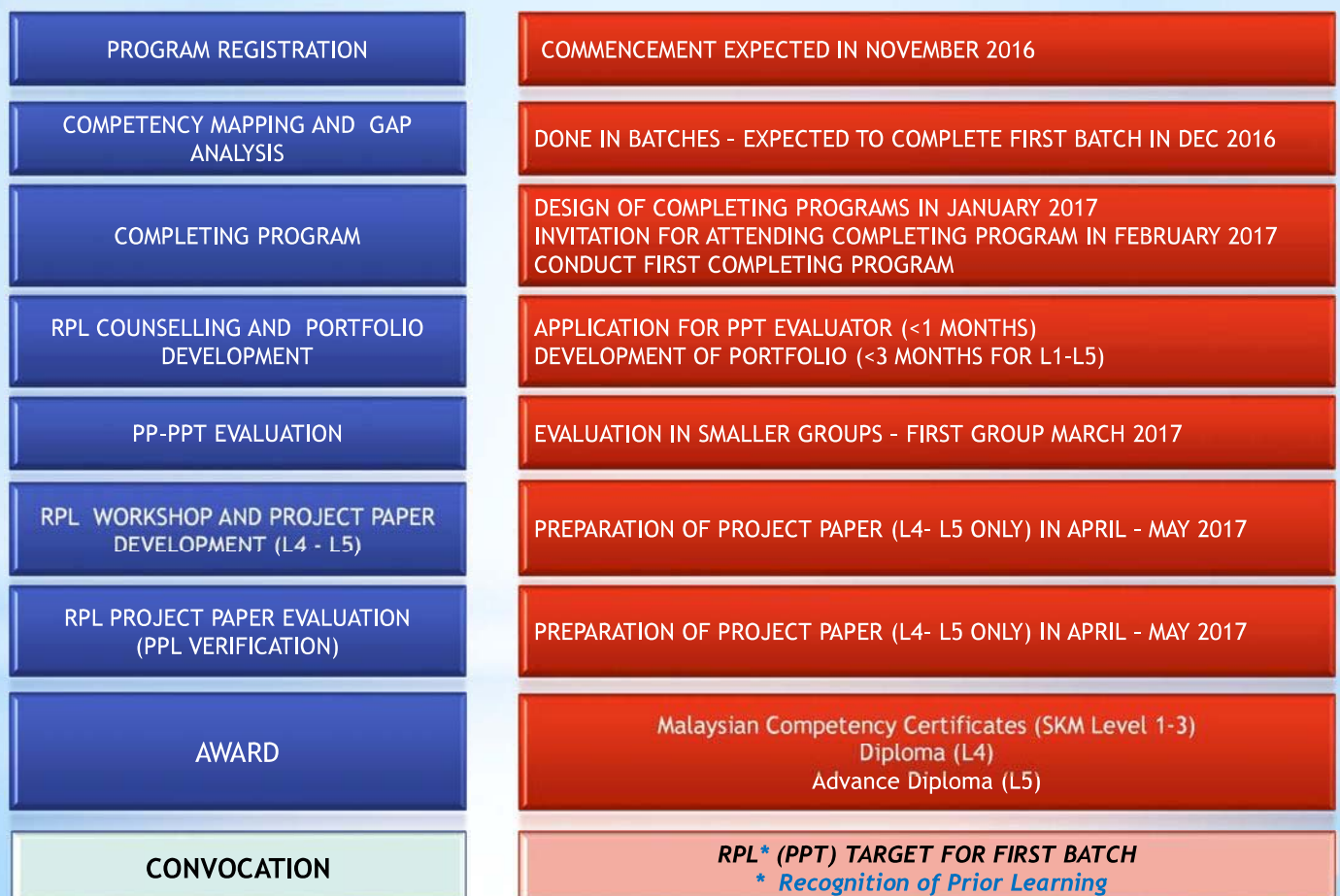
OCCUPATIONAL FRAMEWORK

SECTOR	WATER SERVICES (42)					
SUB SECTOR	SEWERAGE (17)					
JOB AREA	PLANNING AND DESIGN			OPERATION AND MAINTENANCE		
	TREATMENT	NETWORK	DESLUDGING	TREATMENT	NETWORK	DESLUDGING
LEVEL 5	Planning And Design Manager			Treatment Manager	Network Manager	Desludging Manager
LEVEL 4	Planning And Design Engineer			Treatment Engineer	Network Engineer	Desludging Executive
LEVEL 3	Not Applicable			Treatment Supervisor	Network Supervisor	Desludging Supervisor
LEVEL 2				Treatment Technician	Network Technician	Desludging Surveyor
LEVEL 1				Treatment Operator	Network Operator	Desludging Operator

CERTIFICATION FLOWCHART



CERTIFICATION FLOWCHART



CONCLUSION

- ❑ MWA will undertake to focus on both competency training and competency certification for the water industry
- ❑ MWA is ready to take the role of industry lead body for competency certification
- ❑ MWA to continue providing the platform for promoting best practices and technology advancement in the industry
- ❑ MWA will promote competency certification based on the Malaysian Occupational Skill Standards in the industry
- ❑ MWA will produce first batch of Competent Personnel in June 2017
- ❑ MWA target to certify 3,000 workers in next three years

THANK YOU



JAPAN WATER WORKS ASSOCIATION

MALAYSIAN WATER ASSOCIATION

Break
(15 min)

INDONESIA'S 10 MILLION NEW CONNECTIONS

A WATER UTILITY READINESS OVERVIEW



10 MILLION NEW CONNECTIONS

The Government of Indonesia has set a target of 10 million new pipeline connections to accelerate the provision of water services for the people by the end of 2019.



- ▶ The target was first declared by Vice President (VP) Jusuf Kalla in 2008 at President SBY's administration.
- ▶ Redeclared by VP Jusuf Kalla in 2016 at President Jokowi's administration.

PERPAMSI's MEMBERSHIP

387

Public water utilities (PDAMs)

26

Private companies PT
15 public service units (BLU/UPTD)

Total national customers

Number of connections (2015)

10,6 million

16 PDAM over 100 thousands connections
215 PDAM less than 10 thousands connections

PERFORMANCE OF PDAMs (2015)

HEALTHY

LESS HEALTHY

UNHEALTHY

197

103

64

Source: BPPSPAM

Total workers

53,906 people

PERPAMSI's INITIATIVE

- ▶ VP asked PERPAMSI about what supports government can give to water utilities
- ▶ As a response, PERPAMSI took an initiative to conduct a mapping and data verification from water utility members with regards to the readiness in expanding service coverage.
- ▶ The project (mapping and data verification) was in collaboration with IUWASH-USAID and the Ministry of Public Works and Housing.
- ▶ PERPAMSI will submit a report with recommendations to VP.

MAPPING of WATER UTILITY READINESS



1. Existing data
 - a. Number of connections
 - b. Idle Capacity
 - c. Consumption/customer/month
 - d. Average tariff
2. Potential
 - a. Raw water sources
 - b. New connections
 - c. Investment needs
3. Readiness
 - a. Production unit development
 - b. Main distribution network dev.
 - c. Distribution unit
4. Target
 - a. NRW reduction
 - b. Service coverage development

STATISTICS NATIONAL AVERAGE

No. of utility targeted 421

No. of utilities verified 381

1
DATA

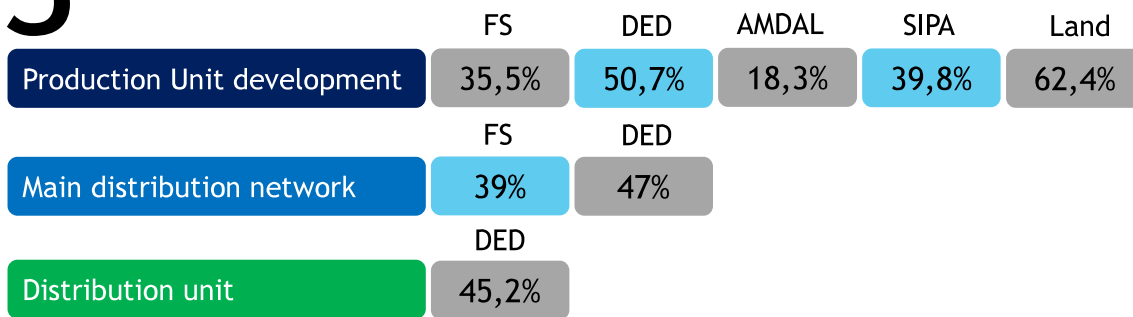
Number of customers	9.909.055	connections
Idle capacity	39.190	l/s
Consumption/cust./month	17,54	m ³
Average tariff	Rp 3.617	/m ³

2
POTENTIAL

Raw water sources potential	50.020.473	l/s
New connection potential	8.318.102	units
Investment needs	Rp 81,471	trillion

3

READINESS (320 UTILITIES)



4

TARGET

2015 - 2019



FS = Feasibility Study
DED = Detailed Engineering Design
AMDAL = Analysis of environmental impact
SIPA = License to extract raw water
Land = Availability of land

WHAT WE CAN CONCLUDE

- ▶ Opportunities to increase number of connections from idle capacity, consumption, tariff, raw water availability, and NRW reduction.
- ▶ Big gaps between the existing condition and what required in the development of production unit and distribution network.
- ▶ Process of FS, DED, Amdal, SIPA, and land provision should be speeded up.
- ▶ The absence of quality control and assurance of the system, equipments and materials. These should be done along with targeted facility development.

WHAT TO DO

- ▶ Focusing on identification and resolving the constraints and barriers in the process of FS, DED, Amdal, SIPA and land provision.
- ▶ Mobilizing investment from new and existing different sources.
- ▶ Facilitating supports from government and development partners (JICA, JISCOWAPINDO, USAID, World Bank, INDII, etc.)
- ▶ Starting a new capacity building program related to quality control, assurance of the system, equipments and materials in collaboration with JICA and JWVA.

Terima kasih

THAI WATERWORKS ASSOCIATION (TWA)



Presented by
Mrs. Saowapa Deotrakul
Secretary, Thai Waterworks Association

Present for : JWVA - 2016



TWA

Outline

Background

Vision

Mission

Achievements

Challenges

Priority



Background



- TWA was established in 1971 by a group of engineers who worked in water supply services.
- A non-profit organization and not to involve in politics.
- Executive Committee is elected by its members to run TWA on a two - years term basis.



Background



- Most of TWA executive committee work for :
 - Metropolitan Waterworks Authority
 - Provincial Waterworks Authority
 - Wastewater Management Authority
- TWA executive committee is on voluntary basis with no-pay.



Membership

- TWWA has 1,032 members.

		Lifetime Fee (USD)
Individual member	1,007	28.5
Corporate member	25	143.0



Vision

The leading provider of waterworks knowledge management in Thailand





Provide training to those who engaged in water supply occupation.

Center for promoting water supply occupation in Thailand

Mission

Exchange know-how and experiences among members.

Conduct research and disseminate water supply information and technology for safety and welfare of the public

Support and provide consultation in determination of water supply material and equipment standard.



Achievements

- Establish the waterworks Guidelines & Handbooks
 - Piping Water Quality
 - Pipe & fittings
 - Pipe Laying and fittings installation





Achievements

- Organized Annual Workshops (10 times in 2016)



Achievements

- Integrated water Management Training Course for Top Executive Batch 1 - 3



- Integrated Water Management Training Course for Middle Executive





Challenges

Local Administrative must be convinced to use TWA guideline and Handbook.

Expand members by recruiting more corporate member.

Recruit members from ASEAN Economic Countries (AEC) in order to upgrade TWA to be recognized as International body.

To do all possible to have waterworks network covering 100% country wide. (As only 67% Thai people can access to clean water through waterworks)



Priority

Local Administrative must be convinced to use TWA guideline and Handbook.

Introduce multidisciplinary committee board of management from both private and government.

Increase member and fund to enable TWA to actively organize various useful events to the public and its member towards security and sustainability to TWA.



Thank you





WATER SERVICES
ASSOCIATION OF AUSTRALIA



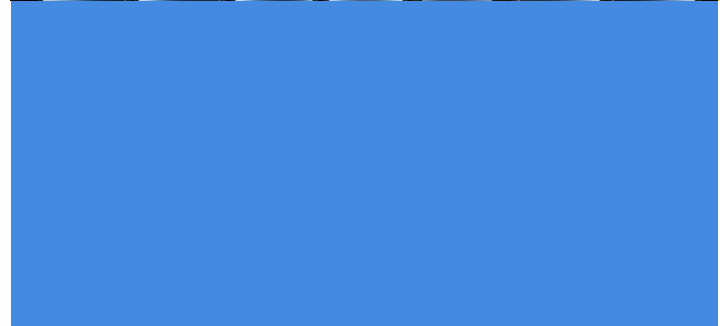
Water Associations Meeting

Adam Lovell, Water Services Association of Australia
10 November 2016



What is WSAA?

- Peak body for water utilities
- Members provide services to over 20 million Australians (around 80-90% of population)
- Members have annual revenue over \$15 billion
- Members manage over \$150 billion in assets



WSAA Members



WSAA'S central functions



1. Collaboration

- Between members information sharing and problem solving
- On projects that are too big or expensive to do alone



2. Advocacy

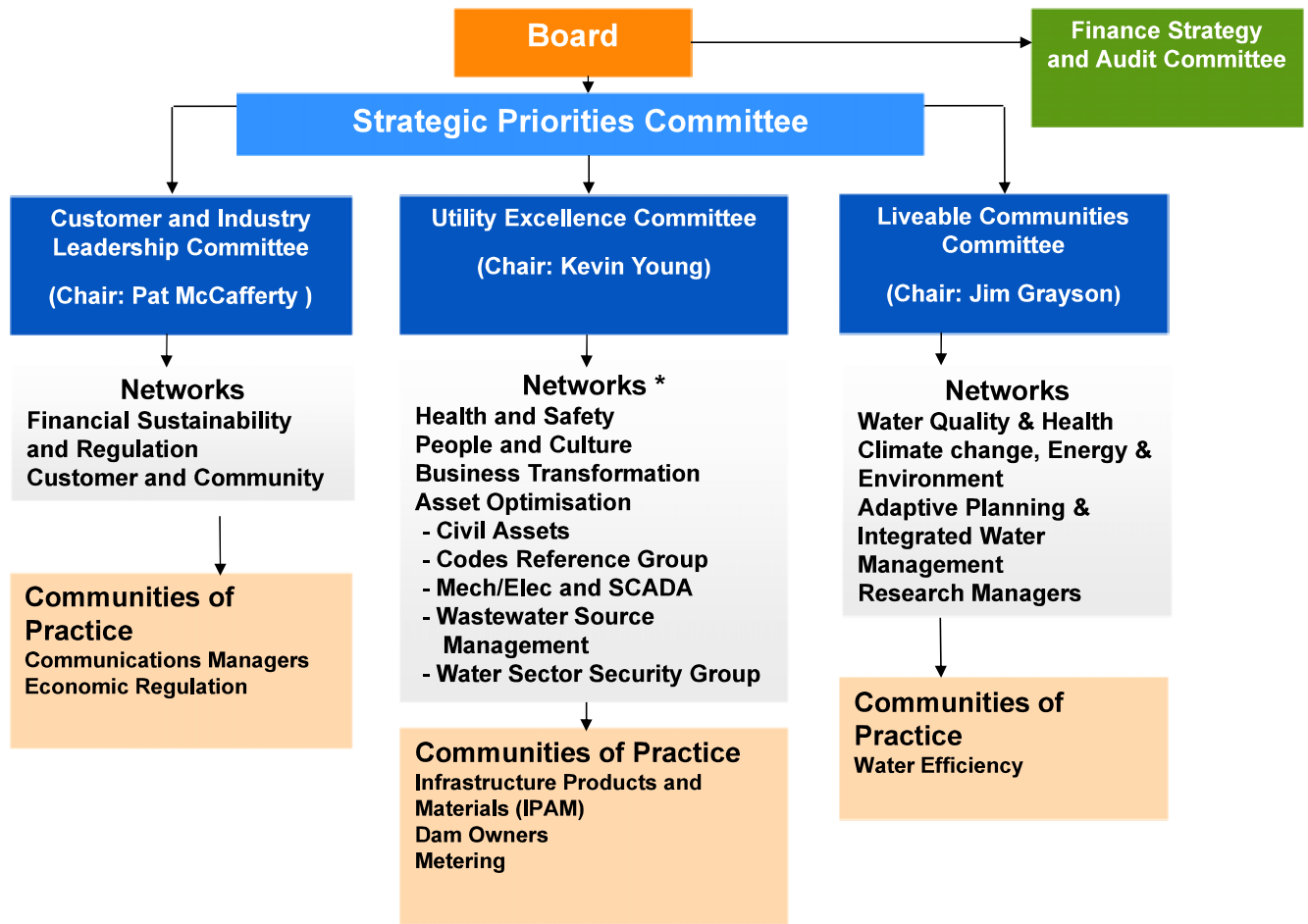
- Representing industry interests in Canberra
- Influencing policy
- International representation



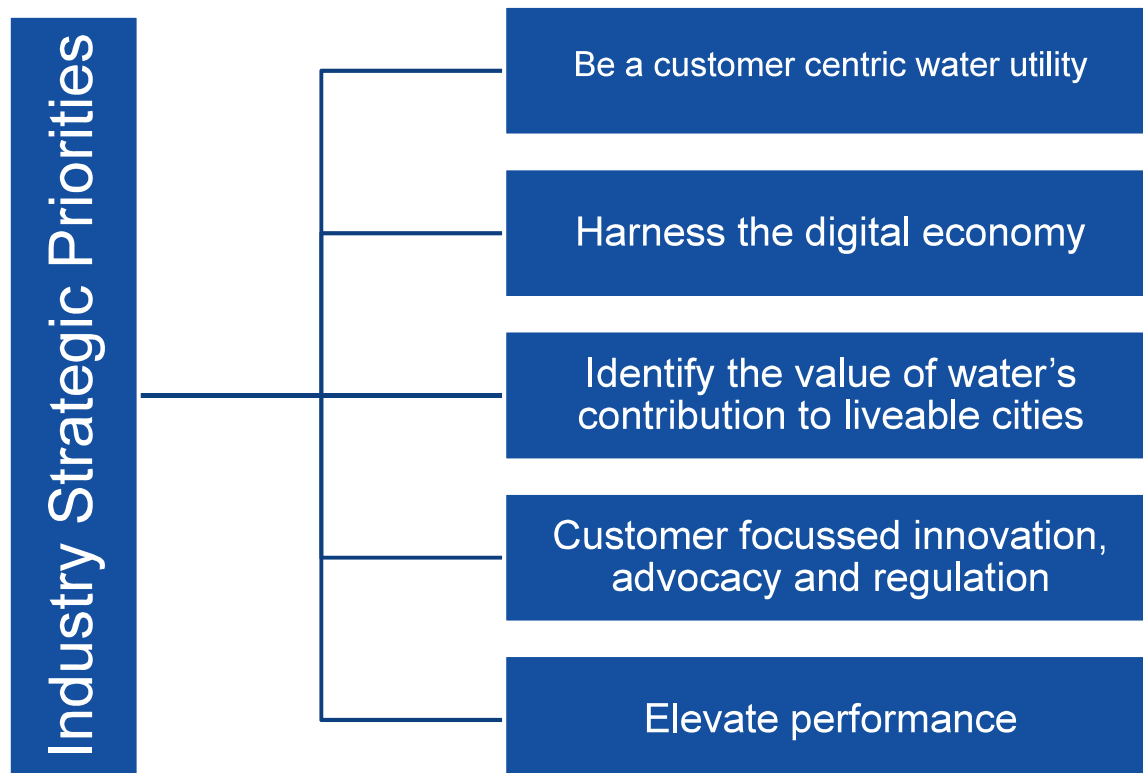
3. Innovation

- A filtering point for latest technology
- Introducing new ideas from Australia and overseas
- Benchmarking

WSAA Committee and Network Structure



Strategic priorities



Strategic priorities

Be a customer centric water utility

- Customer indicators paper
- Customer perceptions survey



Customer survey

- Less than half of respondents thought that their water utility had responsibility for sewerage



Strategic priorities

Harness the digital economy

- Internet of everything
- Digital citizens
- Big data



Strategic priorities

Identify the value of water's contribution to liveable cities

- Broadening the water industry's value (value capture)
- Climate change adaption guidelines
- Liveability indicators



Strategic priorities

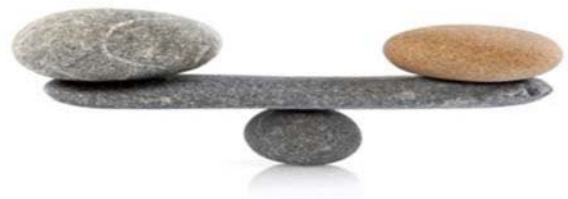
Customer focussed innovation, advocacy and regulation

- Urban water reform paper with IPA launched by Treasurer
- Engaging with regulators
- Co-digestion and resource recovery

Strategic priorities

Elevate performance

- Benchmarking
- Asset Management
Customer Value
Project



Asset Management Customer Value Project

Enabling Business and Customer Value through Asset Management

Worlds largest AM process benchmarking project, mapping to
ISO55001

The project will deliver:

- An asset management development assessment
- Peer networks with other AM organisations internationally
- Understanding of leading edge AM practice across the lifecycle

AMCV Project
Asset Management Customer Value

The next generation of asset management

AMCV: Participant Locations



Leading Practices Workshops

- **US conference hosted by LA Water and Sanitation**
 - 29/30th November 20 presentations + Site tours
- **Melbourne – 525 Collins Street**
 - 5/6th December – 40 presentations
 - Study tours on 6th and 7th December
 - NAB Social media centre
 - Wonthaggi Desalination Plant
 - Lang Lang WWTP

Efficiency benchmarking

The study's Australian (18) and New Zealand (1) participants supply water and wastewater services to circa 79%¹ and 30% of their respective national populations and cover all Australian regulatory jurisdictions.

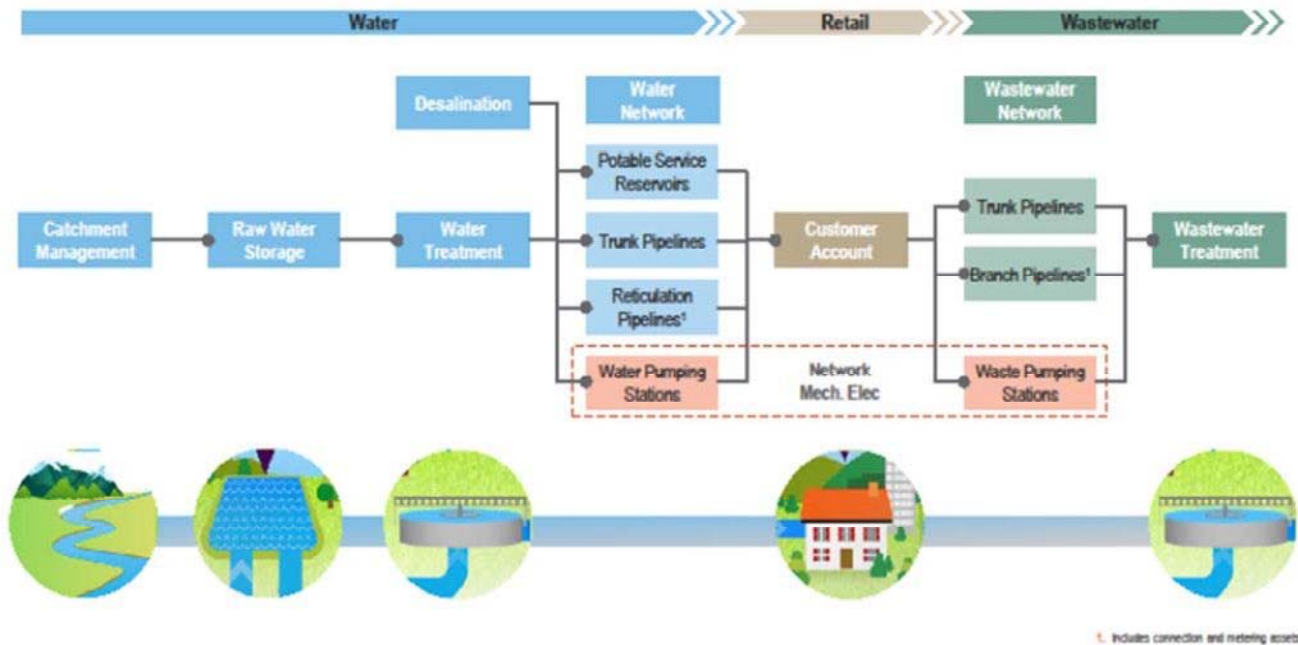
SCOPE – BREADTH OF PARTICIPATION



Efficiency benchmarking

The 'value chain' for the project has been specifically derived to allow all participants to capture and compare their costs despite having different levels of involvement due to vertical disaggregation.

KEY ELEMENTS OF THE 'VALUE CHAIN' UNDERPINNING THE STUDY



How to find us



Twitter

@admlovell

@wsaa_water



LinkedIn

Water Services Association of Australia



Web

www.wsaa.asn.au

The International Water Association

towards a water-wise world

SUSHMITA MANDAL, IWA ASIA-PACIFIC



JWWA General Assembly: IWA UPDATE

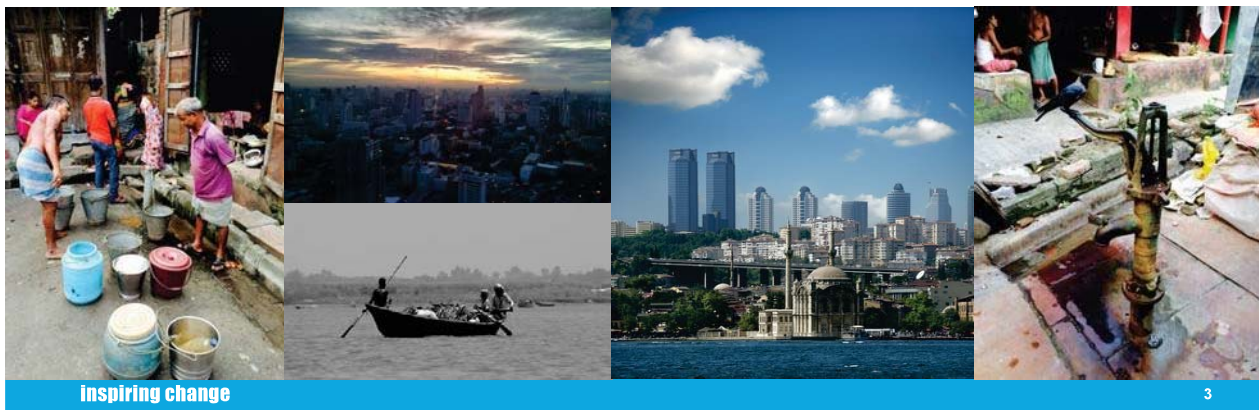
KYOTO 10 NOVEMBER 2016



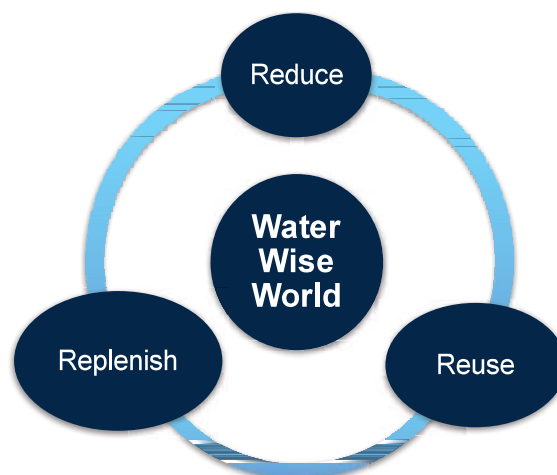
IWA VISION



A world in which water is wisely managed to satisfy the needs of human activities and ecosystems in an equitable and sustainable way.

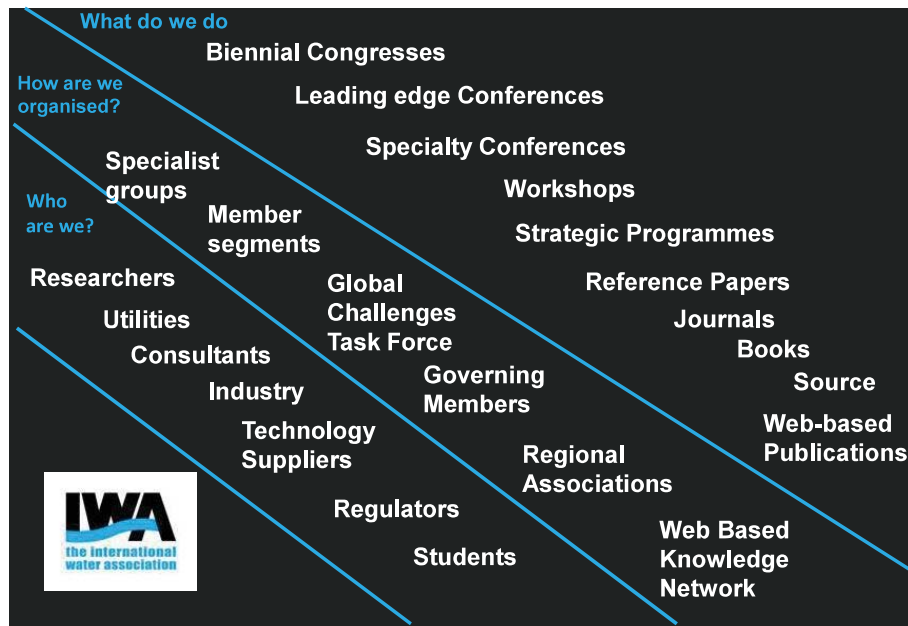


WATER WISE WORLD



Reduce, reuse and replenish are the cornerstones of IWA's water-wise world

IWA: WHAT, HOW AND WHO



IWA Publishing (IWAP)



The leading international publisher on all aspects of water, wastewater and related environmental fields:

- Journals (12)
- Books (29)
- *The Source* magazine
- Online directories



IWA IN ASIA-PACIFIC

How we organise vis-à-vis the region



- ❑ Trans Himalaya (Pakistan, India, Nepal, Bangladesh)
- ❑ India, Bangladesh, Bhutan, Sri-Lanka
- ❑ Myanmar, Thailand, Lao, Cambodia and Vietnam
- ❑ Philippines, Indonesia, Malaysia
- ❑ Japan, Korea, Singapore, New-Zealand, Australia
- ❑ Pacific islands



IWA IN ASIA-PACIFIC

working on...



- ❑ Sundarban Initiative
- ❑ Sustainable Livelihoods for Hilsa-dependent Communities across India Bangladesh Riverscapes
- ❑ WSP Asia Network
- ❑ Flood and Drought Project
- ❑ AquaRating



□ Engagement with regional and national actors

- Asian Development Bank, Asian Disaster Preparedness Centre, Asian Institute of Technology, CEGIS, Global Green Growth Institute, ICIMOD, ICLEI, IWMI, MRC, UNDP

□ Regional hubs

- Regional office in Bangkok established and operational since September 2014
- Continued presence of IWA in Singapore.
- South Asia: Bangladesh and India offices set up since June 2015

IWA IN ASIA PACIFIC, 2016

- Water Loss Conference, February 2016, Bangalore, India
- Water Safety Planning Conference, April 2016, Philippines
- South Asia Groundwater Forum, June 2016, Jaipur, India
- SIWW, Singapore
- Busan Global Water Forum 2016, Korea
- Training Programme: Water, Climate and Resilient Cities for water professionals from Bangladesh in Malaysia.



IWA CONGRESSES IN THE REGION



- Successfully executed 2016 IWA Congress & Exhibition (Brisbane)
- 2017 ASPIRE conference in Malaysia
- 2018 IWA Congress & Exhibition (Tokyo)



ROLE OF IWA IN THE REGION



- Work towards building capacities of members on SDGs
- Continue to be knowledge hub for its members on all aspects of urban water management
- Address information asymmetries through better knowledge management and reaching out to members
- Promote Human Rights to Safe Drinking Water and Sanitation
- Advocate for water-wise Cities

ASSOCIATIONS ARE ESSENTIAL TO THE WATER SECTOR



“A small body of determined spirits fired by an unquenchable faith in their mission can alter the course of history.”

- Mahatma Gandhi





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Cover : Kodai-ji Zen Temple
Back cover : Koto-in of Daitoku-ji Temple
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