RUNNING OUT OF WATER

Engaging Industry In Sustainable Water Management Through Water Stewardship
The world is facing a water crisis. Water is a precious resource and one of the greatest global risks to economic progress, poverty eradication, peace and security, and sustainable development.

An inclusive approach will be necessary, drawing in sectors such as agriculture and leaders such as city mayors and CEOs. New partnerships and ways of working will be crucial. Governments, communities, the private sector and researchers will need to collaborate.
Today

• Running out of water
• Who is the Alliance for Water Stewardship?
• What is water stewardship?
• Who practices water stewardship?
• A preliminary model for industrial cluster water stewardship projects in China
Running Out of Water

The World Economic Forum (WEF) has reported water crises among the top five global risks for each of the past nine years.
A Global Multi-Stakeholder Membership Alliance
A Global Multi-Stakeholder Membership Alliance
What is water stewardship?

INTERNATIONAL WATER STEWARDSHIP STANDARD

VERSION 2.0
22.03.2019
Water Stewardship Defined

“Water stewardship is the use of water that is socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder inclusive process that involves site- and catchment-based actions.”
THE AWS STANDARD V2.0

THE AWS STANDARD FRAMEWORK IS BUILT AROUND FIVE STEPS:

1. GATHER & UNDERSTAND
   - Data on shared water challenges
   - Performance against the plan
   - The site’s water stewardship plan
   - Develop a water stewardship plan

2. COMMIT & PLAN
   - The site’s stewardship efforts

3. IMPLEMENT
   - Communication & Disclose

4. EVALUATE

5. COMMUNICATE & DISCLOSE

GOOD WATER GOVERNANCE
SUSTAINABLE WATER BALANCE
GOOD WATER QUALITY STATUS
IMPORTANT WATER-RELATED AREAS
SAFE WATER, SANITATION AND HYGIENE FOR ALL (WASH)
The global body for environmental and social sustainability standards
HEADLINE RECOMMENDATION
Motivate all water use sectors to embrace water stewardship, strengthen their collaboration, and participate in integrated water resource management.

DETAILED RECOMMENDATIONS
- Motivate sectors, such as agriculture, environment, energy, industry, and urban architecture to embrace water stewardship and strengthen their collaboration.
- Promote the Water Partnership Catalogue—a repository of information and an open database to register water partnerships around the world.
Who’s practicing water stewardship?

>40 certified  >80 registered
VICTORIA, AUSTRALIA

Ingham’s

- Reduced water consumption and waste water by 70%
- Rehabilitated drainage line and creek
- Founding partner in Western Port Water Stewardship Program
Scaling-up: Western Port Biosphere

BUILDING A WATER STEWARDSHIP COMMUNITY IN WESTERN PORT
South Australia
Renmark Irrigation Trust

- 98% delivery efficiency
- 337 ML delivered to environment
- **SEE Renmark 2024**: vision with local government and community
Scaling-up: Renmark Irrigation Trust
How to Get Involved

**KEEP INFORMED**
- Read local & global news
- Subscribe to AWS newsletter
- Follow @WaterStewardAus

**JOIN THE ALLIANCE**
- Attend AWS events
- Become AWS member

**DEVELOP SKILLS**
- Host an AWS facilitated workshop
- Attend AWS Training
- Gain AWS Professional Credentialing

**IMPLEMENT**
- Practice water stewardship
- Self-assess
- Get AWS certified
- Maintain certification

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A preliminary model for industrial cluster water stewardship projects in China

Michael Spencer
Today’s Presentation

- Water issues in China
- Study regions and goals
- Draft model based on literature
- Empirical testing of model
- Revised model
- Provisional program model
- Conclusions
PM Wen Jiabao said water shortages threaten “the very survival of the Chinese nation” (The Economist, 2013)

Renewable freshwater per capita less than a third of the global average (The World Bank, 2019)

Two-thirds of cities suffer shortages, >40% of rivers severely polluted, 80% of lakes suffer eutrophication and 300 million rural lack safe drinking water (Liu and Yang, 2012)

China, India and Pakistan, “simply do not have sufficient water to ensure food and energy security plus develop under the current export-led economic growth model (Hu and Tan 2018)
The 2015 Water Ten plan and law to clean-up water quality, reduce proportion of severely polluted water bodies and improve drinking water quality

Penalties were increased ten-fold to one million RMB

National two-year enforcement inspections resulting in factory closures, suspensions, charges, arrests and hundreds of imprisonments (including party officials)
CENTRAL ENVIRONMENTAL INSPECTOR GROUP

From 2016, Central Environmental Inspection Groups planned to take 2 years to inspect all provinces and cities in China.

- the first batch (8)
  July 2016
- the second batch (7)
  November 2016
- the third batch (7)
  April 2017
- the fourth batch (8)
  August 2017
- Revisit (10)
  June 2018
CONSEQUENCES FROM THE “REVISIT” PROGRAM

1500 people held accountable in Yunnan; 162 people detained for environmental violation in Guangdong; authorities issued fines of 240 million yuan in Jiangsu.
Enforcement mechanisms starting to transform pollution problems

Change needs to be handled sensitively and Ministry was opposed to a one-size-fits-all approach (Gangie Li (MEE))

Violators should be given time to improve so that only those with no value or hope of improvement are shut down (Xu, 2017b).
North: Air pollution, water scarcity and water pollution
Yangtze: Water pollution and high levels of water use
Research methodology

- Quantitative (N=34) & qualitative research
- Questionnaire
- Interviews
HIGH LEVEL FINDINGS (1)

- Adopt/Not Adopt was not based on rational choice or perceived benefits exceeding perceived costs

- Cultural lens:
  - Non-adopters more likely to perceive government as responsible
  - Adopters focus on environment and CSR performance

- Risk lens:
  - Physical risk not sufficient without government, customer involved
  - Cost as a metaphor for risk only relevant to facilities on the edge
  - But all are interested in opportunities to improve business ops.
HIGH LEVEL FINDINGS (2)

- Reputation lens:
  - Adopters place a higher value on reputation as well as customer and government relations
  - Non-adopters more focused on regulatory compliance

- Performance lens:
  - Adopters are already more engaged in water improvements
  - Adopters are well on the way to AWS level performance, but
  - Facilities indifferent to AWS tend to be best performers
MODIFIED MODEL – BOUNDED RATIONALITY (SIMON 1982)

- Facility Risk Environment
- Water Engagement & Performance
- Benefits minus Costs
- Internal Business Culture
KUNSHAN CASE STUDY

- Support from local government official and customers
- Multi-stakeholder collaboration involving EPB, business, WWF China, AWS
- Commenced with training to introduce ideas about water management, AWS and improvement opportunities
- Deepened understanding of catchment issues
- Led to financial support from both supply chain leaders and municipal government
- Six local enterprises seeking AWS and providing leadership
Provisional model for cluster projects

Pre-Conditions

Issues
- Scarcity
- Pollution
- Ecosystems
- Equity
- Governance
- WASH

Pressure
- Regulators
- NGOs
- Customers

Firm Cluster
- Community
- Peers
- Investors

Preparatory – Build Collaboration
- Regulators/Government
- Customers/Supply chain

Shared commitment & understanding of catchment challenges, risks & opportunities
- NGOs – local international
- Early adopters
- Funders, green investors

Build Engagement
- Multi-stakeholder leadership team
- Catchment Analysis
- Legitimacy
- Technical Expertise
- Collaboration Platform


Time
FORTHCOMING PUBLICATIONS

- Spencer, M and Stanley, J (forthcoming 2019), "Business and the global water crises: an empirical study of motivations and constraints for corporate water stewardship in two industrial areas of China" (TBC)
- Spencer, M (forthcoming 2020), ‘Attitudes, obstacles and incentives: why the culture of water needs to change to build participation and implement behaviour solutions to water crises’ in *Sustainable Use of Water by Industry: Perspectives, Incentives, and Tools*, edited by Cheryl Davis and Erik Rosenblum (International Water Association)
- Spencer, M and Xu, Z (forthcoming 2020), ‘Water stewardship; engaging business, civil society and government in collaborative solutions to China’s freshwater challenges’ in *Non-State Actors and Environmental Governance in China*, edited by Oran Young, Yijia Jing and Dan Guttman (Palgrave Macmillan)
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