

# WATER STEWARDSHIP

## - A global framework for sustainable water management



*Michael Spencer, Chair, Alliance for Water Stewardship (AWS)*

*Living Lakes Webinar: Environmental Services and Water Stewardship*

*2 July 2014*



# Water stewardship: Definition



*The use of water that is socially equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that involves site and catchment-based actions.*

# AWS Founding Partners



# Why is industry concerned about water?



Scarcity



Quality



Ecosystem health



Social Equity



Physical Risk



Reputational Risk



Regulatory Risk



Financial Risk

# A world of growing water risks



By 2030, 47% of the world's population will be living in areas of high water stress.



Without changes in business practices, the demand for fresh water could be 40% higher than supply by 2030



Risk of water crises 3<sup>rd</sup> in a list of 31 potential risks after risk of financial crises (1<sup>st</sup>)



Supply chains water risks (regulatory , drought and precipitation extremes) due for elevation.



The most significant environmental environmental concern and in the top 10 of all concerns

# Private interest alone drives over-exploitation



## Herder's Dilemma

Each herder adds more and more animals because he receives direct benefit but bears only a share of the costs of overgrazing.

“Each man is locked into a system that compels him to increase his herd without limit – in a world that is limited.”

“Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons”

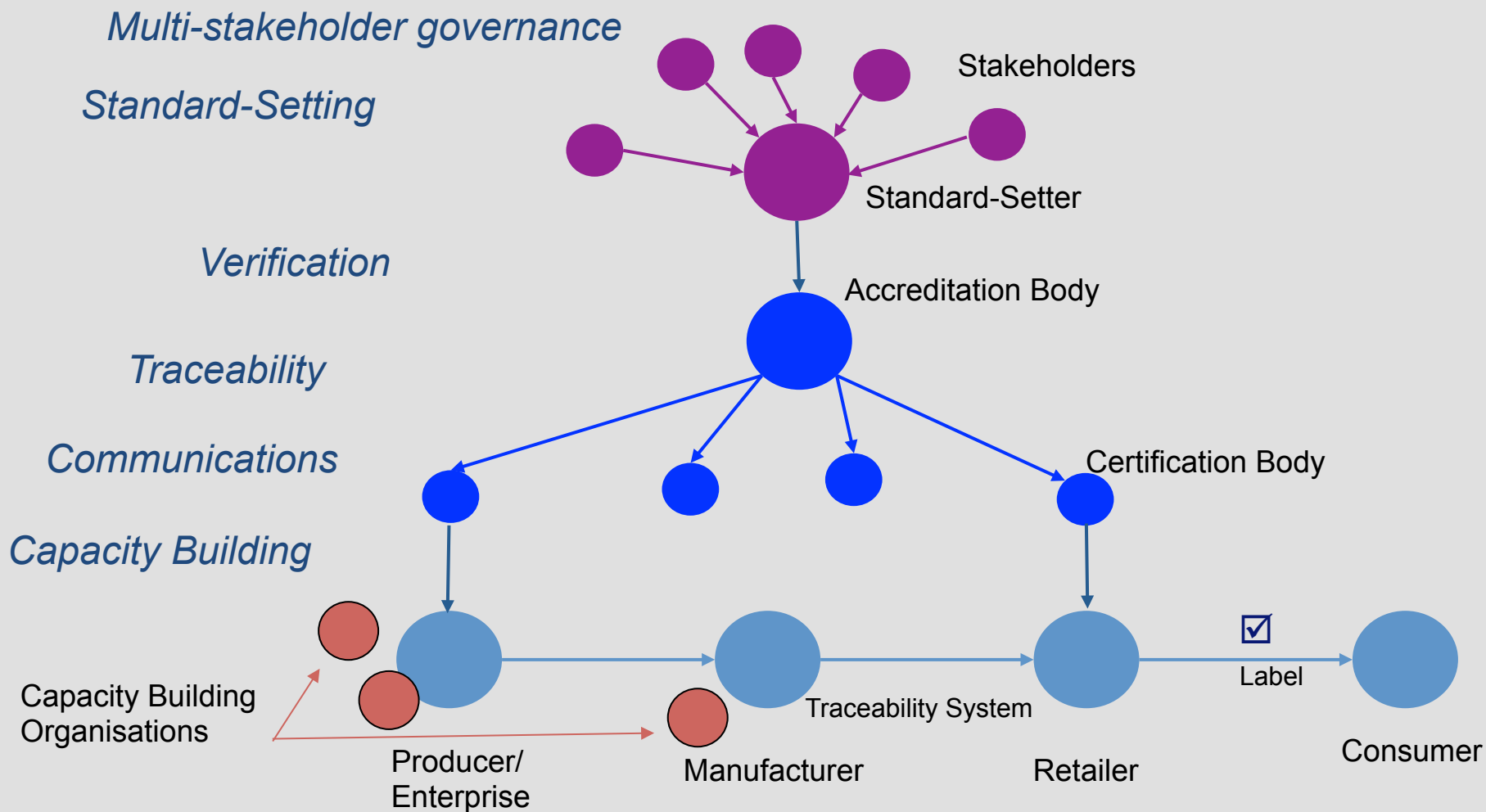
Garret Hardin *Tragedy of the Commons*, 1968

# Government alone can't fix the problems



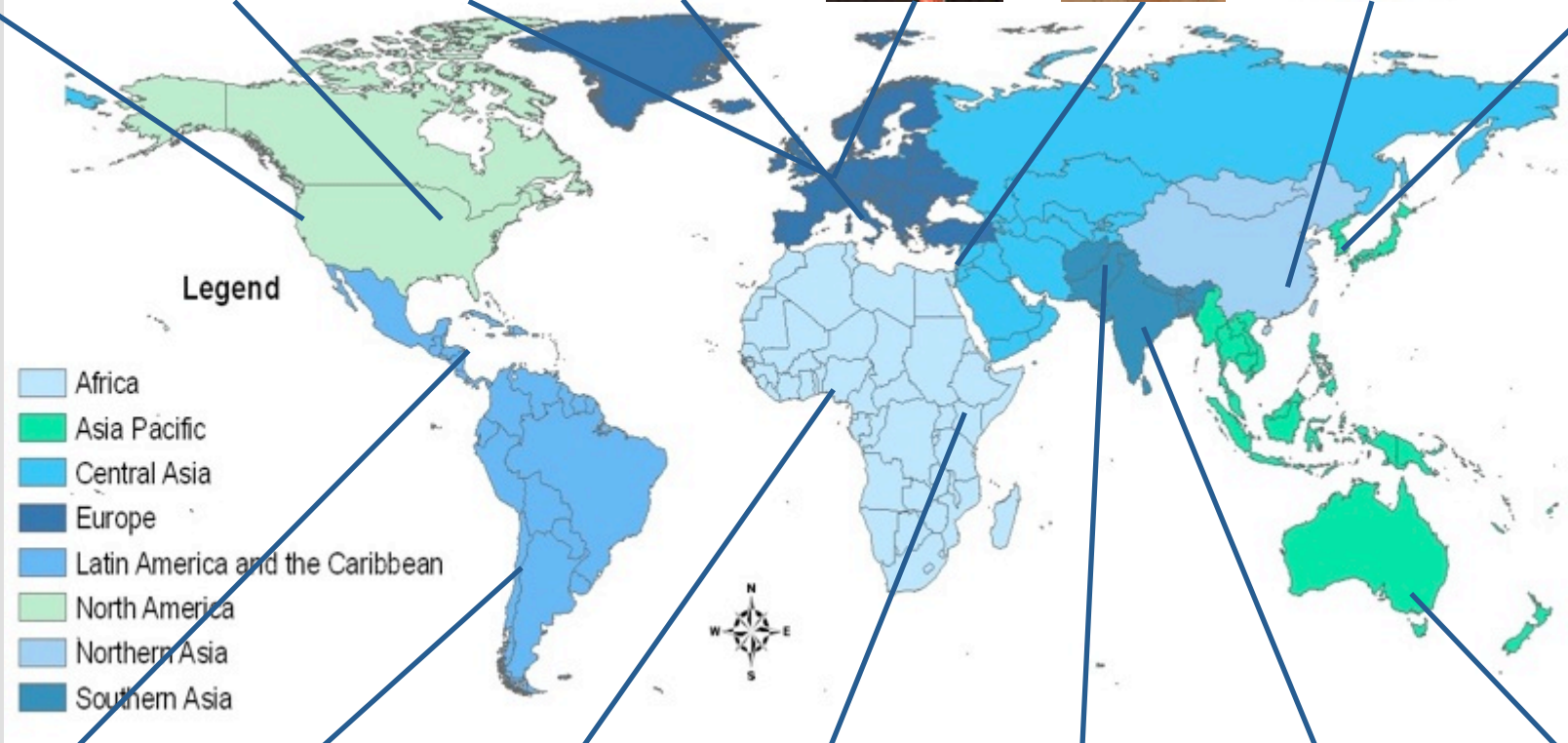
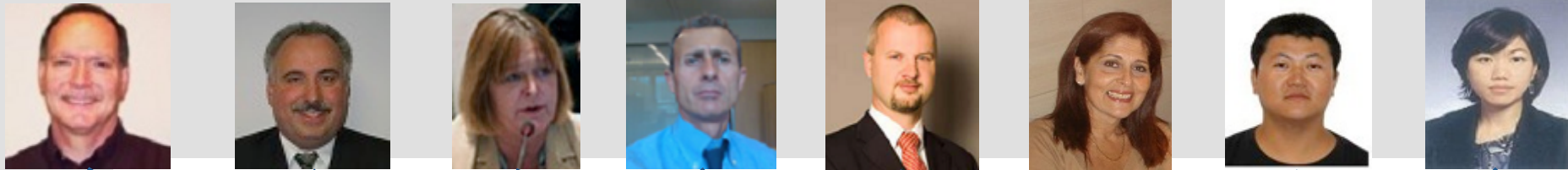
- “It is the job of the NWC to address ourselves to the water stewardship role of government. But we recognise acutely that what actually happens depends on the daily actions of all those individuals and entities that are in the business of using water.”
- “Their choices may be constrained or incentivised by the policy environment. Within those guardrails, there is enormous discretion to be prudent or profligate with the resource, to be considerate or careless of the interests of others.”
- “And this is where the objectives of ... the Alliance for Water Stewardship] are so complementary to our own.”
- **Chloe Munro, Chair National Water Commission 1 February 2012**

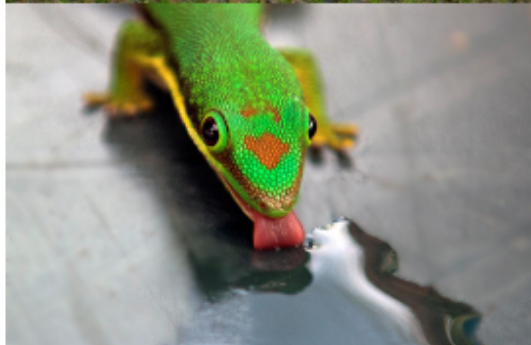
# Building a stewardship system





# Standard Development Committee





All photos: © Alan V. Morgan / AWS

## The AWS International Water Stewardship Standard

Version 1.0

Date: April 8th, 2014

**International Standard Development Committee (ISDC):** Imane Abdel Al, Shahid Ahmad, Maureen Ballesterro, Sanjib Bezbaroa, Peter Cookey, Axel Dourojeanni, Carlo Galli, John Langford, Marco Mensink, Gerphas Opondo, Jiseon Matilda Park, Ed Pinero, Peter Ruffier, Lasha Witmer, Hao Xin

**Former members:** Ma Jun and Chandry Riaz Khan

© 2014 Alliance for Water Stewardship

Released 8 April 2014 at the United Nations Global Compact CEO Water Mandate Meeting Lima, Peru

# Addressing issues with actions

## IMPACTS

Human Health

Ecosystems &  
Biodiversity

Social & Cultural  
Life

Economic  
Activity

## INFLUENCES

Water Flow  
Regime

Water Quality

Important Sites  
& Values

Catchment  
Governance

## ACTIONS

Management Of  
Flow Regime

Management Of  
Water Quality

Management Of  
Sites & Values

Governance  
Engagement

# Manage catchment health through site-based action

## Site-based change strategy

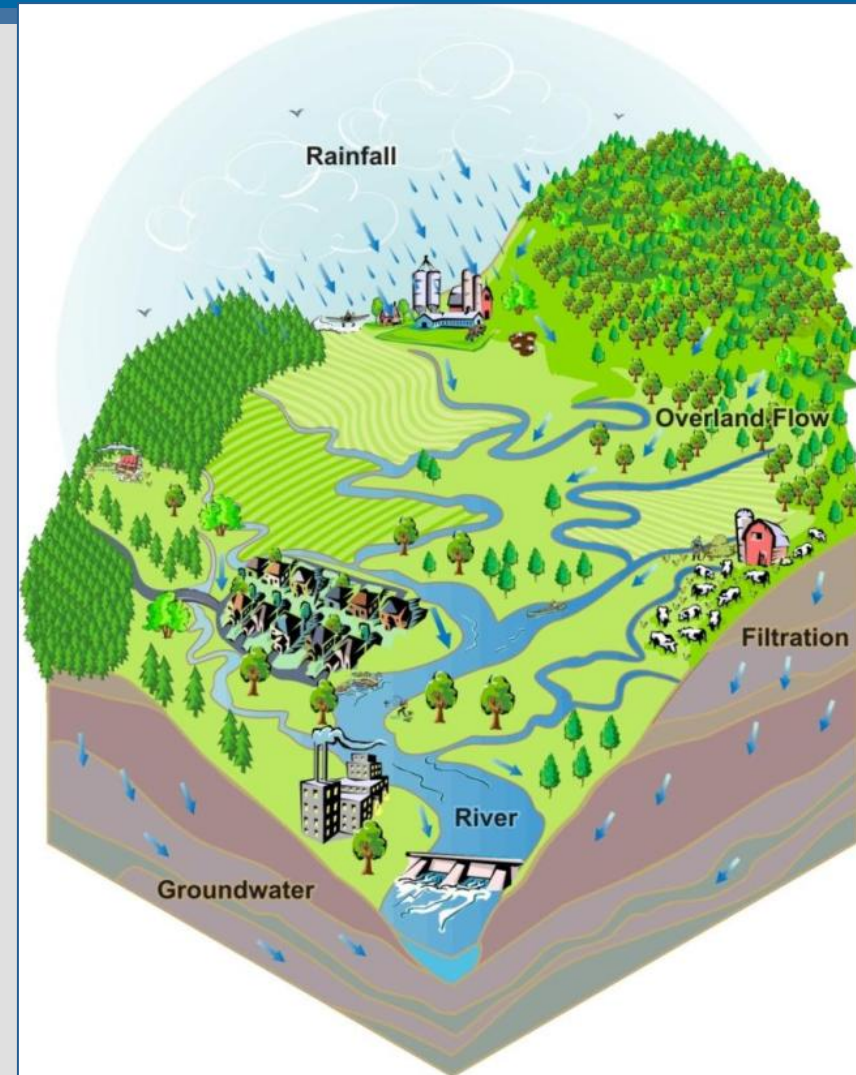
- Major water using site or facility

## Cooperative local action with

- Other water users
- Communities
- Other stakeholders

## To address shared challenges

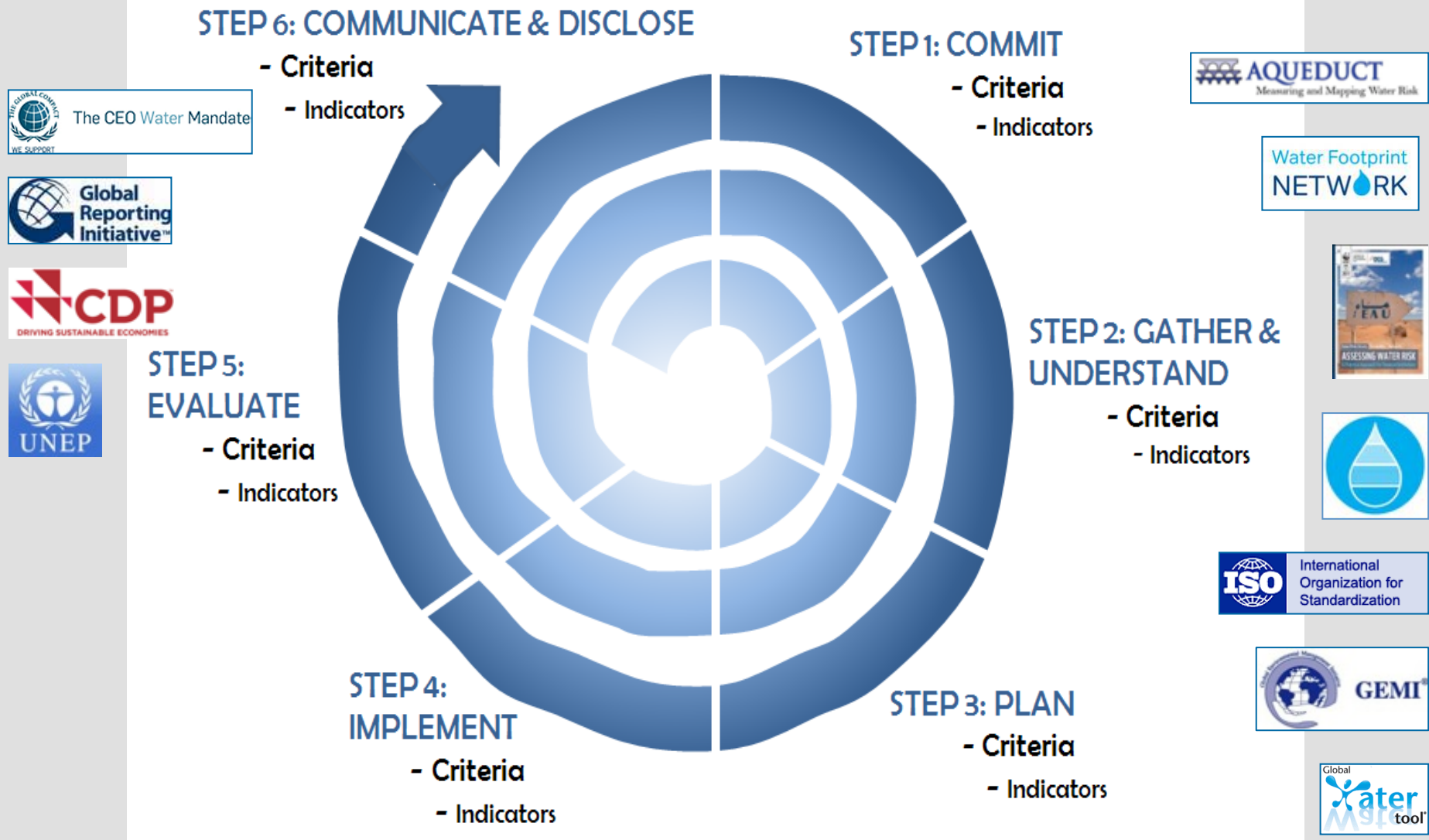
- Water Balance
- Water Quality
- Important water related areas
- Water governance



## GOOD WATER QUALITY AND WATER RELATED AREAS



# Site action based on 6 steps



# AWS Beta standard field trials

**USA / Canada:**  
Cement, power, pulp  
& paper, oil & gas

**Europe:**  
EWS certification processes

**China:**  
Chemicals &  
hospitality

**Mexico:**  
Beverage

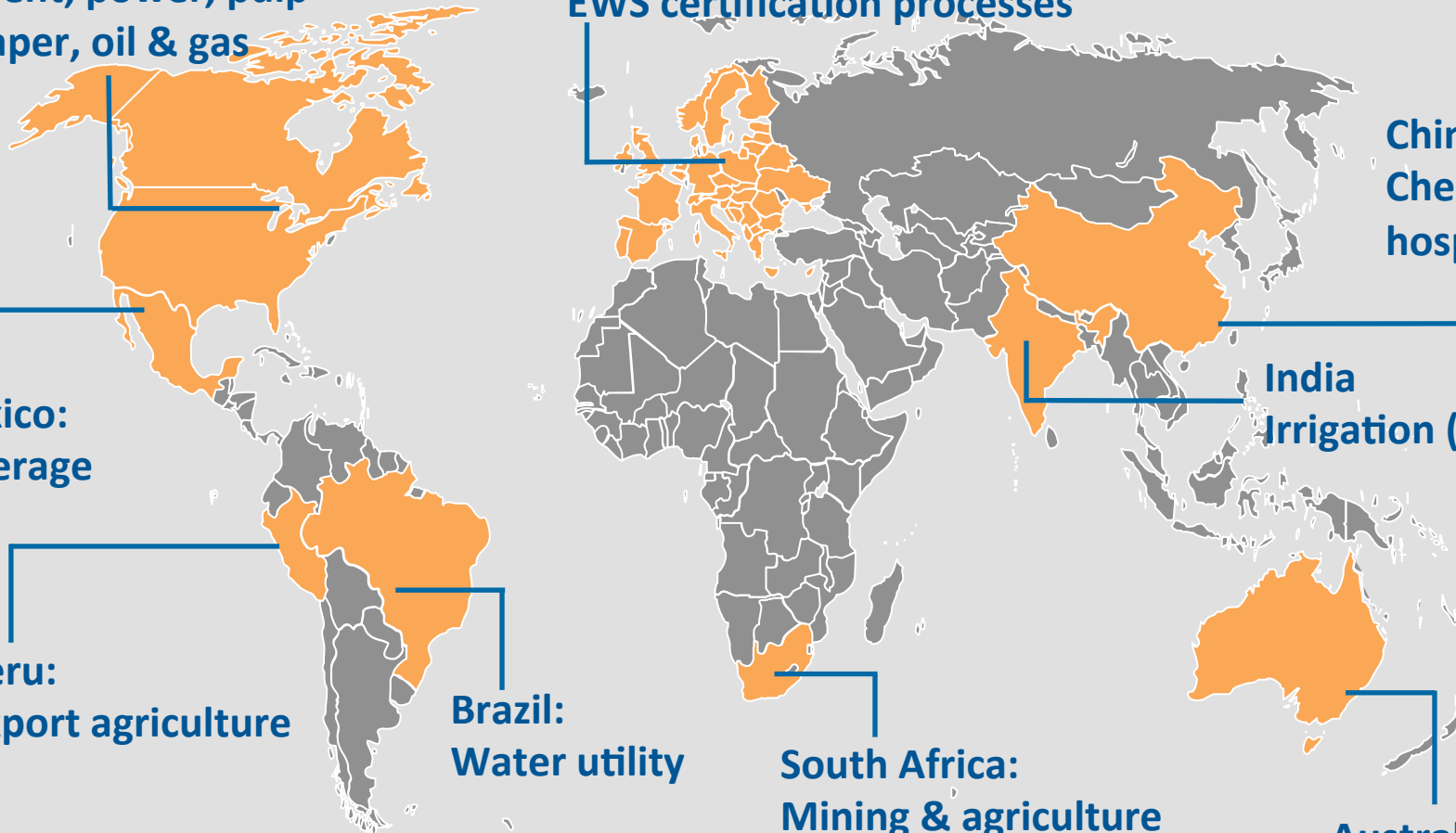
**India**  
Irrigation (PIM)

**Peru:**  
Export agriculture

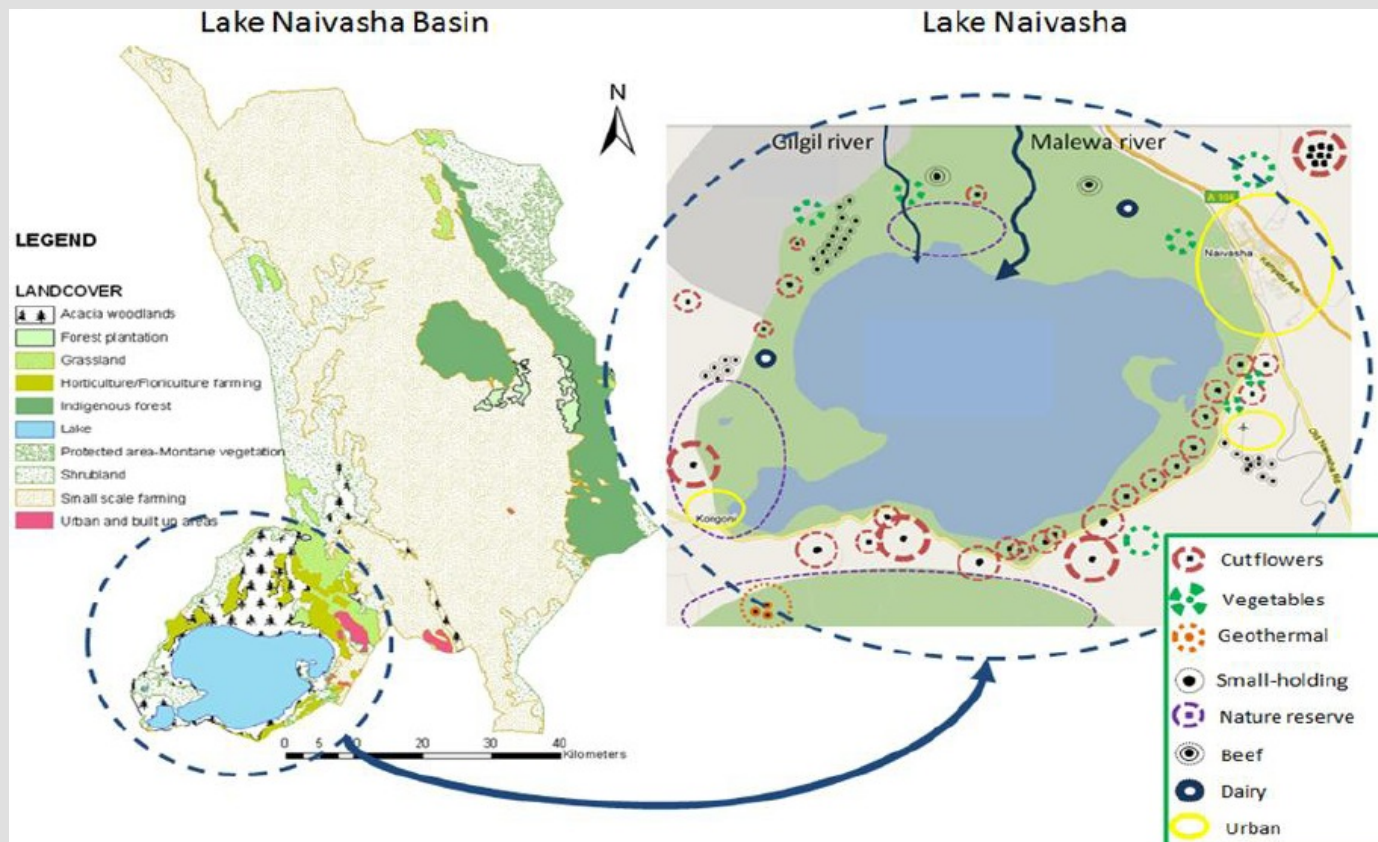
**Brazil:**  
Water utility

**South Africa:**  
Mining & agriculture

**Australia:**  
Food processing



# Case study: Lake Naivasha, Kenya





# Selection of pilot sites

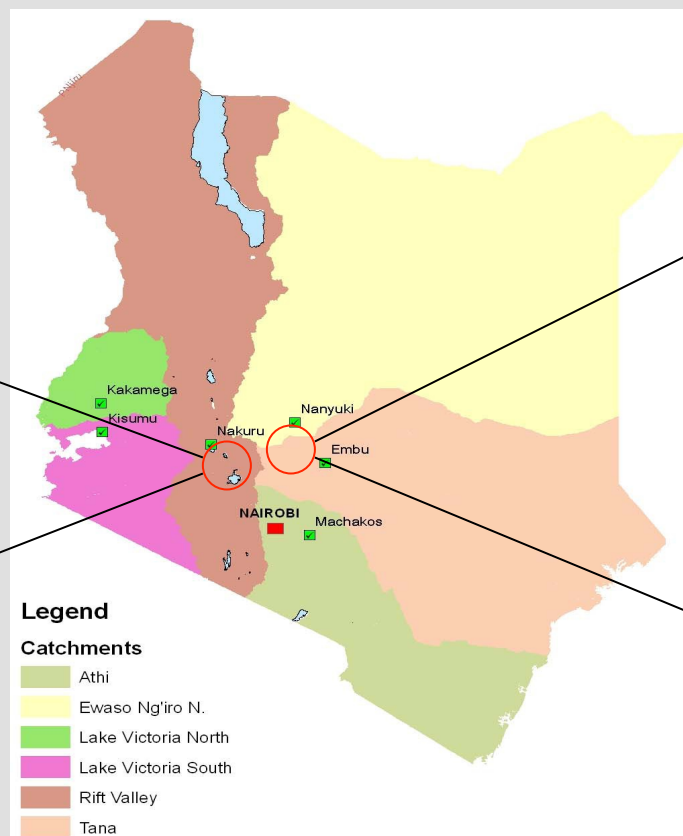
## Primary sites



Flamingo flowers



Vegpro horticulture



## Supplementary sites



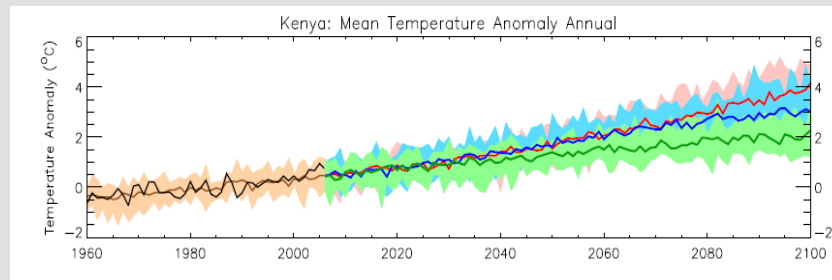
Gikanda coffee cooperative



Mana horticulture/dairy

# Key challenges

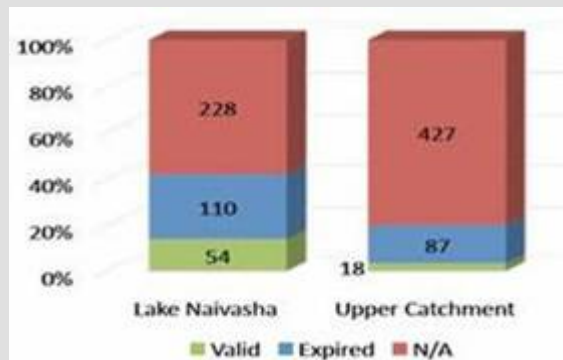
## Highly variable and changing climate



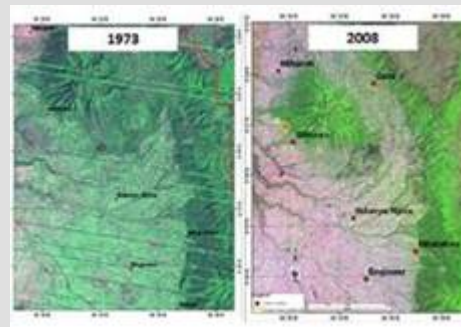
## Lake levels and over-abstraction



## Unregulated water use



## Catchment degradation, nutrients and erosion



## Threats to biodiversity and natural capital



# Kenya trial outcomes

- Water stewardship standards offer multiple benefits for site operators including:
  - *reduced costs and efficiency gains*
  - *reduced operational, regulatory and reputational risks*
  - *generation of intellectual and political capital*
  - *securing certain markets and accessing new ones*
- Water stewardship standards advance the implementation of government policy
- The case study validates the business case for water stewardship standards
  - *ensuring regulatory compliance*
  - *driving efficiencies in resource use*
  - *proactive, efficient and risk-based action on key water issues*
  - *promote effective action throughout the ‘chain of influence’*



# Case study: Cleaner production China

## CONTEXT

- Chemical production
- Taicang Industrial Estate (Yangtze River – lakes including Lake Taihu)

## CATCHMENT ISSUES

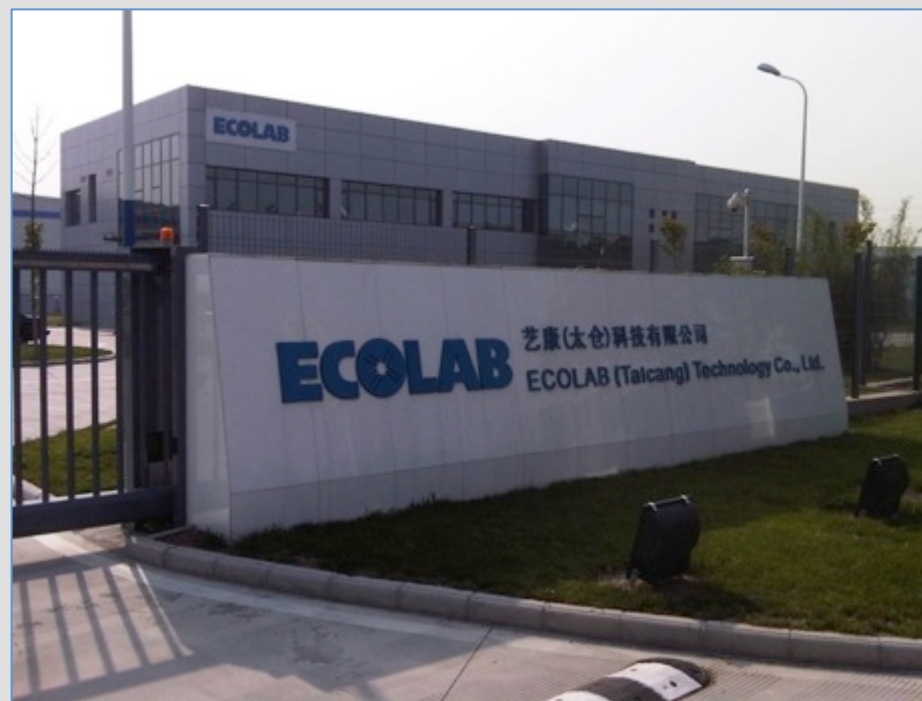
- **Water quality:** cumulative industrial impacts

## SITE CHALLENGES

- **Water balance:** Data availability
- Stakeholder relations

## EXPECTED BENEFITS

- Heightened engagement with water challenges
- Improved efficiencies in a new production facility
- Reduced reputation risk through improved stakeholder relations
- Contributions to natural infrastructure



# Case study: Agriculture in Peru

## CONTEXT

- Asparagus production in Peru's dry coastal belt
- Peru is the world's largest fresh asparagus exporter

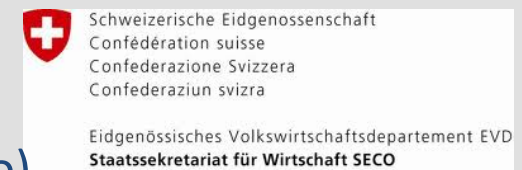
## CATCHMENT ISSUES

- Balancing demand, export earnings and catchment sustainability



## BENEFITS

- Framework for engaging water stakeholders
- Improved capacity to understand & manage water risk
- Replication amongst other growers & crops (e.g. avocado)
- Staying ahead of buyer expectations/demands (e.g. European retailers)



# Case study: Mining in South Africa

## CONTEXT

- Mining site with severe environmental degradation
- Impacts Orange & Limpopo Basins
- Urbanisation - close to Jo'burg

## SITE CHALLENGES

- **Water quality:** contaminated run-off tailings dams
- **Stakeholder relations:** Moving from conflict to cooperation in a highly contested political setting



## BENEFITS

- Framework for engaging water stakeholders
- Improved capacity to understand & manage water risk
- Replication amongst other growers & crops (e.g. avocado)
- Staying ahead of buyer expectations/demands (e.g. European retailers)

# Case study: Dairy Industry Australia



## Context

- Highly stressed catchment
- Intensive agricultural production
- Scrutiny of water performance

## Benefits

“the Standard could have considerable natural resource management (NRM) benefits for the region”

**GBCMA**

“... inform the development of targets and action plans in the industry’s sustainability framework and self-assessment tool”

**Dairy Australia**

# Case study: Poultry Industry Australia

## Context

- Leading producer of largest source of protein
- Water significant input in both production and processing
- Significant business risk

## Benefits

- **Context** for defining sustainable water use
- Framework for **stakeholder engagement**
- **Built internal capacity** to manage water risks
- Identified **cost reduction** opportunities
- Helped **communicate** sustainability ethos and credentials to customers
- **Recognised** by major customer McDonalds as global leader on water in their supply chain.





# Implementers: major water users



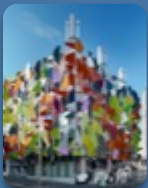
## Primary production

- Agribusiness
- Miners



## Industrial

- Processors
- Manufacturers
- Energy



## Commercial

- Retail
- Office
- Hospitality, recreation



## Institutional

- Education, Hospitals
- Public facilities
- Water, sewerage services

## Business risks:

- Physical risks
- Regulatory risks
- Financial risks
- Reputational risks

## Business opportunity:

- Enhanced license to operate
- Market access
- Brand strength

# Water Stewardship promoters



## Natural Resource Managers

- Catchment Managers
- State & Federal NRM Agencies



## Retailers

- Supply chain managers
- Brand & reputation managers



## Supply chain leaders

- Global multi-nationals (aggregators)
- Trusted brands (domestic & international)



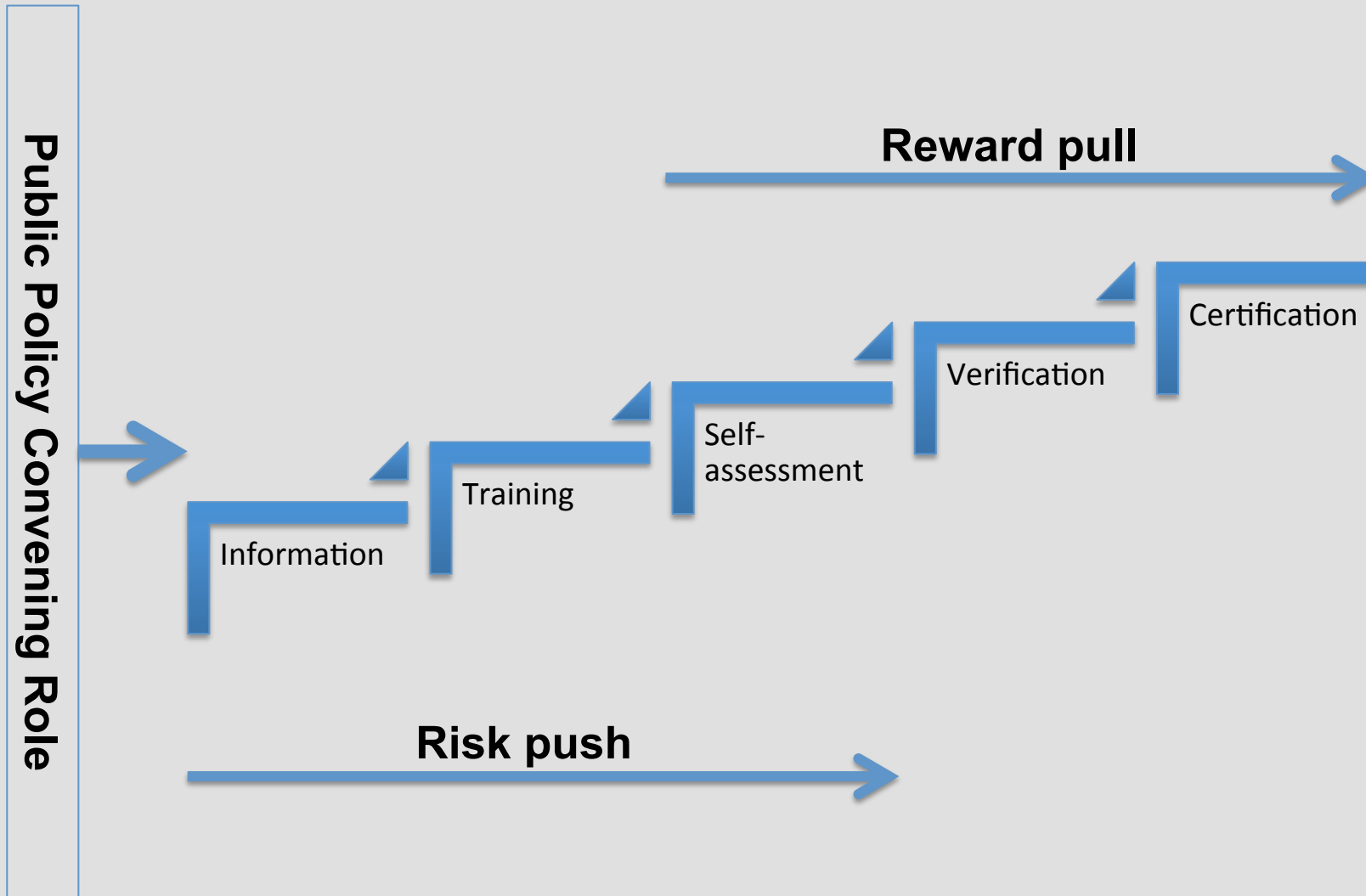
## Aid and Development Agencies

- Better water management
- Sustainable development & production

## Opportunities:

- Engage major water users
- Promote BMPs
- Bottom-up solutions
  
- Sustainable supply chain
- Protect brand
- Build market position
  
- As for retailers
  
  
- Sustainable development
- High impact solutions
- Avoid perverse impacts

# Step-wise approach to engagement



# Building a complete system

MEMBERSHIP

TRAINING

VERIFICATION

AWS STANDARD

**WATER STEWARDSHIP  
KNOWLEDGE CENTRE**

# AWS Standard: Development journey



**2006** – Formation of WSA

**2008** – Formation of AWS

**2009** – First WSA Standard

**2010** – Launch of Water Roundtable

**2011** – Formation of ISDC

**2012** – Release of first draft AWS Standard

**2013** – Release and testing of Beta AWS Standard

**2014** – Release of AWS Standard

- Water Stewardship is a framework for
  - Understanding and acting on water-related risks
  - Engaging major water users in natural resources management
  - Engaging stakeholders and building consensus on priorities
  - Linking different water-related tools and programs
  - Building bottom-up solutions to water issues and problems

Adrian Sym

Executive Director

Alliance for Water Stewardship

[adrian@allianceforwaterstewardship.org](mailto:adrian@allianceforwaterstewardship.org)

Michael Spencer

Chair

Alliance for Water Stewardship

[michael@waterstewardship.org.au](mailto:michael@waterstewardship.org.au)

Thank you