Water Footprint Assessment in Support of Sustainable Development

Session report, 14 January 2015

Session Structure

This seminar convened by Water Footprint Network focussed on how Water Footprint Assessment contributes to sustainable development through fair allocation at local, regional and global scales; how it stimulates IWRM and reduction in water scarcity and pollution through integrated regulations; and how companies can support meeting social, economic and environmental goals engagement in water stewardship. Speakers from government, business, academia and NGO's presented the latest WFA applications to demonstrate how WFA is a tool for sustainable development. The session began with an overview presentation by Ruth Mathews, Executive Director, Water Footprint Network, the session convener together with Arjen Hoekstra, University of Twente, introducing Water Footprint Assessment and fair allocation of fresh water resources locally and globally. The presentations where followed by a lively discussion on using Water Footprint Assessment in a multi-sectoral engagement in meeting the SDGs.

Facing the world's water crisis: how Water Footprint Assessment can help us achieve sustainable development goals

Main conclusions:
Water footprint as an indicator can:
  ➢ integrate water quantity and water quality
  ➢ elaborate water use across the entire value chain
  ➢ demonstrate relationships between producers and consumers through virtual water
  ➢ compare the allocation of water footprint between users and between consumers
  ➢ elucidate the interactions between water management for quantity and quality, surface and groundwater
  ➢ measure the cumulative impact of water consumption and pollution

Water Footprint Assessment can help us achieve sustainable development goals by setting:
  1) **Maximum sustainable limits for Environmental Sustainability**; Water footprint allocation amongst all users and measuring what is the cumulative impact of water use?
  2) **Equitable allocation for Social Sustainability**; Water footprint allocation between users/ consumers and measuring who is using water/ consuming products?
  3) **Resource efficient benchmarks for Economic Sustainability**; Water footprint allocation for specific users and measuring how efficiently water is being used?

Addressing fair allocation of fresh water resources locally and globally

Questioning Water allocation
- how much can we use?
- to which purposes?
- what are reasonable amounts?
- who finally benefits?
- what are Global dependences?

Main conclusions:
The target for environmental sustainability ► Water footprint caps by river basin
- Keep WF in catchments to maximum sustainable levels
- WF caps by river basin (based on available runoff, environmental water needs & waste assimilation capacity)

Economic efficiency ► Water footprint benchmarks by product
- Keep WF of products to reasonable levels
- WF benchmarks by product (based on best available technology)

Social equity ► Fair water footprint shares by nation
- Keep WF of communities to reasonable levels   Fair WF shares by nation

Political security ► Water security by region
- Reduce risks related to water use in supply chains
- Max. degree of import dependency (external / total WF) per region

Reducing water scarcity and water pollution through integrated regulatory reform
Case Water Footprint Assessment Environment Agency - Hertfordshire North London Area
UK Environment Agency

Case Hertfordshire North London Area
- 3,500 km sq
- Over 6 Million population
- Urban: London north of Thames river
- Rural: Hertfordshire, parts of Essex, Bedfordshire, Buckinghamshire w. larger towns
- over 500,000 ML/yr, mainly Public Water Supply
- Chalk Aquifer and Chalk Rivers

Cause to Water Footprint Assessment:
- Effluent discharge
- Abstraction
- Water available
- Regulations / Management
- Water use and contamination

Key Learnings Water Footprint Assessment:
1) WFA unifies both quantity and quality aspects in water resources assessment, planning and management.

2) WFA finds the links between water use, water management and water scarcity and pollution levels, thus helping better identify cause-effect relationships among these elements.

3) WFA looks at the water quality issue from the pollution load perspective rather than only the pollutant concentration using the waste assimilation approach. This highlights where the assimilation capacity has been exceeded even when the pollutant concentrations meet quality standards.

4) WFA is an innovative approach able to support in reforming the current regulatory system for water abstraction license and discharge permit, and therefore useful for formulating effective response strategies to mitigate blue water scarcity and water pollution levels.

Reaching social, economic and environmental development goals through private sector engagement
Alliance for Water Stewardship - Engaging business in delivering SDGs

Conclusions:
Goal of Water Stewardship Standard: Address catchment impacts through site action

Scope of Water Stewardship Standard
- Water using site
- Group of similar sites

Intent of Water Stewardship Standard
- Understand catchment
- Tailored site action plan
- Encourage collaboration
- Transparency

Address impacts
- Site/catchment indicators

Step-wise approach to engagement
1) Information
2) Training
3) Self Assessment
4) Verification
5) Certification

Corporate water sustainability through Water Footprint Assessment
CETAQUA-AENOR

Water Footprint Assessment and Why it is important for business?
1.Measurable objectives to reduce the footprint
2.Set up measurable targets to reduce water footprint
3.Make products' water use transparent
4. Make reducing WF part of the business sustainability strategy
5.Water Footprint assessments is complementary to carbon footprint and other environmental indicators, in order to contribute to a sustainable development
How?
6. Corporate water footprint includes both operational and supply-chain elements

Benefits for organizations

Economic
- Process Optimization
- OPEX reduction
- Anticipating Legislative
- requirements
- Monetary savings opportunities

Reputational
- Corporate Social Responsability
- Brand Value
- Positioning
- Leadership
- Added Value

Environmental
- Hotspots identification
- Quality improvement in discharge
- Foreseing floods and drought
- Reduction in Water consumption
- Improvement of water efficiency and WF supply chain

Financial and Politics
- Raising of Capital
- Capital Investors
- Water management politics and continious improvement objectives

Cross-Sector Panel discussion. Panel includes speakers and representatives from: government, business, academia, civil society:
Alberto Garrido, CEIGRAM & Botin Foundation , Lesha Witmer, World Wide Fund for Nature, Arjen Hoekstra, University of Twente, Michael Spencer, Water Stewardship Initiative, Maria José Amores, CETAQUA and Antonio Carretero, AENOR

Considering the growing multiple water demands, ensuring sustainable, efficient and equitable water use is more than ever a challenge. New tools and methods are therefore required to inspire, inform and broaden cooperation in river basins, across sectors and between countries. Water Footprint Assessment (WFA) provides a common language which builds a shared understanding for informed decision making and strategic action at local, regional and global scales. WFA opens up new insight and contributes to successful action.

Session Photos

Panel discussion, from left to right: Lesha Witmer, World Wide Fund for Nature, Michael Spencer, Alliance for Water Stewardship, Alberto Garrido, CEIGRAM & Botin Foundation , Antonio Carretero, AENOR, Maria José Amores, CETAQUA and Arjen Hoekstra, University of Twente