



# Meeting the Sustainable Water Research Needs of Diverse Stakeholders

Prof. Chad Staddon

University of the West of England (UWE  
Bristol)

- Introduction
- Preliminary results of stakeholder feedback to survey questions
  - Stakeholders water related challenges
  - How they are addressing the challenges
  - Role of academia in solving the challenges
  - How academia and industry can work together to solve these challenges
- SWAN team involvement in the survey

# Purpose of the Stakeholder Survey

*“This survey is part of an on-going monitoring and evaluation effort designed to ensure that university-based water sustainability and security research is responsive to both changing topical needs and also changing needs related to engagement and dissemination mechanisms. Thus we are seeking to consult with a cross-section of the people and organisations with whom we work and with whom we would like to work (our “stakeholders”) to ensure that we are topically “on-target” and also as efficient and impactful as possible.”*

# Analytical Objectives

- A comparison of stakeholder challenges across Europe and America.
- Identify similarities and challenges
- Sharing of best practice or researching solutions together through a transatlantic dialogue.
- Developing a Network for a Transatlantic Dialogue on Water at a global level in addressing water challenges.

# Subsections in the Survey Document

- *About You & Your Organisation*
- *Identifying Key Issues for Sustainable and Secure Water Management*
- *Challenges of Working Collaboratively*

# *Key Issues for Sustainable and Secure Water Management*

- Associated with the supply, demand and management of public water at a cost effective price, whilst also sustainably planning for the future.

*“ensuring there is a consistent and effective delivery of drinking water and waste water for the public. The other challenge that relates to drinking and waste water is the management and delivery of a public water utility to ensure there is available resources, infrastructure whilst also planning for 20-50 years in the future.”* (Hydro Nation Manager)

# *Key Issues for Sustainable and Secure Water Management*

We have been active in two different areas - first the problem with hydropower plant construction and destruction of natural rivers; second - the restoration of wetland which can bring food and energy resources. The academic organizations could be very useful with their scientific knowledge.

*Bulgarian Stakeholder*

# *Key Issues for Sustainable and Secure Water Management*

Water governance, multilevel safety approach, building with nature, innovation, early contractor involvement, stakeholder consultation etc. Cooperation with private sector and knowledge institutes.

*Dutch Stakeholder*

# *Key Issues for Sustainable and Secure Water Management*

Discrepancy in the legislation that leads to a tangible **lack of a relationship between the water related units** (e.g., the Ministry of Energetics, Ministry of Agriculture and Food, and Ministry of the regional planning and the development are all in charge of the stewardship of several dams) ..... The society faces a serious need of **education about the activity of the dams**. Dams have regulatory functions, and don't cause floods.

*Bulgarian Stakeholder*

# *Key Issues for Sustainable and Secure Water Management*

In terms of energy and water, we see water availability as another constraint on future thermal power generation, including on waste incinerators. Academic organisations could usefully undertake further research on the problem of 'locking in' not only low levels of recycling but high rates of water use where waste to energy plant are developed. Many such facilities are now (in our view ill-advisedly) being developed in India, China and south eastern Europe. Research is urgently needed to explore whether such capital intensive investments really are the most appropriate approach from a societal perspective.

*UK Environmental Consultancy*

# How stakeholders are addressing these challenges?

- Difficulty in addressing the challenges and balancing sustainability to ensure the public have a cost effective but high quality water supply.

*“Our role in addressing the above is to drive down the costs to customers whilst maximising our value on water resources (sufficient water resource, value of the industry, and development of products that will improve service and cost to customers). (Hydro Nation Manager)*

# Role of academia in solving challenges

*All stakeholders value the role academia plays in addressing the water industry's challenges especially in attaining baseline data, undertaking independent research that provides evidence to influence communications and decision making, assisting industry in obtaining better technical solutions to problems across the water sector, and influencing the direction of the future water industry.*

# How academia and industry can work together to solve these challenges

- By investing time in communicating with each other, finding common objectives, and sharing of best practice to improve efficiency and success in building long term working partnerships.
- Suggestion that postgraduate degrees need to be balanced between academia and the water industry
- A successful example of this type of partnership research is being used by the UK Government's Centre of Expertise for Water with a strategic aim to connect academic research and policy.

# How academia and industry can work together to solve these challenges

In some countries universities have well developed water research centres; in other countries universities pay more attention to the educational activities, and the main water research work is implemented at scientific institutes outside the universities. In both cases there are/might be failures in engaging with “research users” in the above two aspects for reasons not necessarily with the research institution but with the “research users”.

*Bulgarian Stakeholder*

# How academia and industry can work together to solve these challenges

Open platform for offline and online discussion, state support.....but there are few incentives for collaboration.....stronger state support needed.

*Bulgarian Stakeholder*

# How academia and industry can work together to solve these challenges

“Research has a huge role in contributing to organisations by gathering base line information/data, and research supporting communications to relevant parties. Research is at the heart of managing the approach of water. Research has a valuable place in finding better technical solutions.”

Stakeholder A - Hydro Nation Manager

“Academic organisations could assist in helping to develop the evidence base in respect of the effectiveness of water fountains in bringing about behaviour change. Research is urgently needed to explore whether capital intensive investments (in India, China and South Eastern Europe) really are the most appropriate approach from a societal perspective.”

Stakeholder C - Principal Consultant

# How academia and industry can work together to solve these challenges

Universities and research institutes being local and foreign partners. No need for newly established research institutions. **Flexible research focal points based on project collaboration would achieve the same goals.**

*Bulgarian Stakeholder*

# How academia and industry can work together to solve these challenges

## Bulgarian Stakeholders

- |   |   |
|---|---|
| 1 | Participation in an external advisory body for a water research programme   |
| 3 | Participation in public events, workshops, etc.   |
| 3 | Participation in water research, through steering groups, etc.  |
| 1 | Participation in a virtual platform for water research and action   |
| 2 | Participation in postgraduate water education, through hosting placements, offering guest lectures (in-person or virtual), etc. |
| 1 | <b>Participation of journalists</b> and teams to accomplish explanatory work when reporting events.                             |

# How academia and industry can work together to solve these challenges

## UK Stakeholders

2	Participation in an external advisory body for a water research programme
3	Participation in public events, workshops, etc.
4	Participation in water research, through steering groups, etc.
2	Participation in a virtual platform for water research and action
2	Participation in postgraduate water education, through hosting placements, offering guest lectures (in-person or virtual), etc.

# How academia and industry can work together to solve these challenges

“The key success factors is in having a dialogue, making time to get to know each other and understating each other’s respective motivations/objectives. Finding common ground is hugely challenging from a resource point view, and finding the time to develop those relationships.” (Stakeholder A - Hydro Nation Manager)

“Long-term partnerships lies in the ambition of the partnership itself. Bringing together various agencies and organisations, albeit to work towards the same goal, means aligning a range of ambitions, organisational cultures, and ways of working.” (Stakeholder E –Independent)

“Sharing of best practice across academia and industry around successful student engagement and education could help improve effectiveness in this area.” (Stakeholder D – Energy and Environment Manager)

## Spanish Stakeholders

**Given the wide array of international water related research-centers that exist today, how could a new scientific organization for a Transatlantic Dialog between Europe and the USA help improve water-related research?**

0	By creating a permanent research center
3	By creating an international scientific network involved in policy debates on water governance
2	By creating a virtual platform for easy access to international research centers
3	By developing an international exchange program of researchers and students
2	By developing a database on water research project outcomes
3	By organizing regular interdisciplinary workshops on water issues
3	By creating an information hub that systematically organizes information and links to the work of already existing centers and initiatives.
0	Other (please, specify):

## Spanish Stakeholders

Which water-related research topics require a multidisciplinary approach that could be the focus for a Transatlantic Water Dialogue?

2	Water quality
2	Water ecosystems (ecosystem services, ecological health, etc.)
2	Risk management (climate change, droughts, floods)
1	Water engineering
2	Integrated assessment tools for water socio-ecosystems
2	Water data and information generation and management technologies
2	Economic instruments for water management (prices, connection fees, etc.)
2	Water governance (laws, institutions, administration)
1	Conflict resolution
2	Democratization and transparency of decision making processes
	Other (please, specify):

## **Spanish Stakeholders**

**How do you think that a new research organization might impact international and national water policies?**

- In my opinion the creation of such an organization should be conceived as an open process, starting as a scientific network and evolving to "harder" institutional designs if necessary.
- I would not suggest that new research organization should be created. I prefer soft collaborations, networks and joint projects

**How do you think that a new research organization might impact international and national water policies?**

- Counterbalancing the present corporation biased research and policy agenda.
- Through cutting-edge publications and workshops

# Key themes for future work

- To develop a climate change services market, there is a need to strengthen the provider-user interface.
- Stakeholders recommended to maintain and expand observation and monitoring systems....including crowd source and citizen science
- moving from wastewater treatment to resource recovery; esp. energy, carbon compounds, nutrients and, of course, water.
- Eco-design was also seen by several stakeholders as a critical element to make eco-innovative products attractive and re-usable.
- Blue-green cities
- Resilience of hydrosocial cycle to chronic stresses and acute shocks
- Better, more embedded public participation and stakeholder engagement

# Next Steps

## Survey

- Follow-on survey waves (internal governance of SWAN and related projects, plus informing new work)
- Specific targeting of educational establishment (statement of standards in “sustainable water education”?)
- Capturing engagement as “impact”

## Mechanisms

- Embedding in new projects (e.g. IWSN)
- Newly submitted bids – e.g. WaVES, KEWA
- New H2020 Work Programme