



# The Urban Water Value Chain and Circular Economy Policies

Thursday 31 January 2019, 11am – 12.30pm

## Chair

**Dr Katherine Daniell**

Fenner School of Environment  
and Society, The Australian  
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## Speaker

**Professor Irina Ribarova**

University of Architecture,  
Civil Engineering and Geodesy,  
Sofia, Bulgaria

## Location

**The Nye Hughes Room**

ANU Centre for European Studies  
The Australian National University  
Building #67C, 1 Liversidge Street  
Acton ACT 2601

## Map reference

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The circular economy has become a major direction in European Union policy aiming at reducing the use of resources and energy through shifting the paradigm of waste management. Instead, waste is no longer 'waste' but thought of as a combination of resources ready to be re-fed back into the economy. Transferring the concept of the circular economy to the urban water sector is often narrowly seen as only the opportunities presented through upgrading wastewater treatment technologies. Indeed, it is possible to apply some principles through extracting valuable resources like phosphorus, or reusing water for irrigation and sludge for agriculture or energy utilisation. However, a circular economy should be perceived from a wider perspective looking at the entire urban water chain. The questions that this applied policy research project will investigate are:

- 1) How can we adapt the water balance in catchments to reduce the need for wastewater treatment and reuse?
- 2) What is the impact of human culture and behaviour on the capacity to develop a workable circular economy (e.g. changing washing detergents or using less antibiotics and hormones to ensure reused sludge and water are safe)?
- 3) What are the new technologies for wastewater treatment that have the greatest number of environmental co-benefits and ensure safer reuse?
- 4) What are the risks and threats of reusing water and sludge for environmental and human health?

**Professor Irina Ribarova** holds a PhD from the University of Architecture, Civil Engineering and Geodesy in Sofia, Bulgaria, and has over 20 years of professional experience in university teaching, research and consultancy in the water sector. She has worked in numerous EU-funded projects as a research and project manager for removal of hazardous compounds from wastewaters and sludge; biological processes modeling (in waste water treatment plants [WWTPs] and rivers); water saving technologies (industrial and domestic); flood and drought management; nutrients (N and P) removal and recovery in WWTP; eco-efficiency of urban water systems; and the circular economy in the water sector. As a consultant, Professor Ribarova has had assignments from SHER, PM, Aecom, Ramboll, Grontmij and the World Bank. She has provided support to the Bulgarian Ministry of Environment and Water and the Ministry of Regional Development and Public Works in major project preparation and appraisal. She was a European Commission Expert evaluating and monitoring projects in the EU Commission, including water, floods, waste management, environment protection, education, SMEs, and preparation of action plans for Structural Fund absorption.



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