

# Wetskills-NL 2015: overview of study cases

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## Case 1: Water board Groot Salland

### *Creating awareness to reduce drug residues in water*

Controlling drug residues in the water systems is a hot topic in Dutch national and European water policy agendas. Most studies into this topic have focused on finding solutions in the treatment of wastewater, be it centralized and/or decentralized actions. More and more, however, measures regarding other stakeholders are being explored as well, although these solution paths have received less attention. Until now! Water board Groot Salland is interested if you and your team can come up with innovative ways in which the general public can become more aware of the impact of medicinal use on the water environment. This will be the first step towards a shared sense of urgency and societal pressure, of which we believe will lead to a broadly supported approach to the pressing problem of drug residues in surface waters.

## Case 2: World Waternet

### *Design of the (waste) water infrastructure for IJburg Centrumeiland*

IJburg is a residential neighborhood in the east of Amsterdam, which is under construction since 2013. It is situated in the IJ Lake and is being built on artificial islands which have been raised from the lake. Before the construction of the ~1200 houses can start, a plan needs to be made for the (waste) water infrastructure, which satisfies both current and future needs for the area. You can imagine that designing this (waste) water infrastructure on the inhospitable sand bar that now forms the main island is not an easy task. We ask you to come up with a creative concept of design, which is flexible, adaptable and which boasts high efficiency in recovery of energy and resources.

## Case 3: VP Delta

### *Railwaytracks and Climate adaptation in the city of Rotterdam*

The ZomerhofKwartier is a project area in the city of Rotterdam where several solutions for climate adaptation are being developed, in collaboration with all the stakeholders in the area. Alongside the ZomerhofKwartier lies a former railway line. Since it is not in use anymore, many alternative uses have been proposed, such as the creation of a green corridor through the city on the former track path. But can't we do more than that? In the light of our Urban Water Resilience project, we thought of the tracks as a possible Aquaduct that transports rainwater, with underneath it various 'studios' for entrepreneurs which may use the rainwater (e.g. carwash, beer brewery, laundry shops, household buffering etc). VP Delta asks you to give some more thought to these ideas, and come up with creative ideas and feasible business plans for the further and future development of 'Blue Entrepreneurs' using 'Blue Infrastructure'.

## Case 4: WML

### *From solar to salt – durable energy solutions for WML*

WML, the drinking water company in the province of Limburg, has grand ambitions. By 2020, they want to operate on a 'climate neutral' basis when it comes to carbon emissions. WML currently has an internal carbon footprint of 35 million kg CO<sub>2</sub> per year, the lion's share of which consists of energy used for the production and distribution of water. WML already is in the process of implementing various more conventional measures. Moreover, they have identified the use of temperature gradients in our surface water retention reservoir and the use of the fresh-saline gradient that is present in some of our (brackish) groundwater wells as possible innovative solutions for you to dive into. But can you help them find the potential of these or other 'out of the box' options for reducing WML's carbon footprint / production of renewable energy?

## Case 5: University of Twente

### *A case for freshwater sustainable cheese*

When water demand exceeds water supply, scarcity lures. Many parts of the world already face water scarcity on a regular or permanent basis. Even the World Economic Forum identified water crises as the number one risk for the world this year. The University of Twente (UT) researches global water scarcity and tries to shed a light on the way we humans appropriate the Earth's finite freshwater resources. This is no easy task, since in our globalized world of today, products are internationally traded and supply chains are interwoven in many ways. So who is accountable for what amount of freshwater consumed when and where? And if a product proves freshwater unsustainable, how can this be reversed?

Taking typical Dutch cheese as an exemplary case, we want you and your team to first get yourselves acquainted with the scientific concepts of freshwater sustainability, broader sustainability issues, trade-offs, the supply chain of cheese and the actors involved. But where the UT research ends (i.e. by quantifying the problems), we ask you to think of solutions on how to make Dutch cheese freshwater sustainable. Which player (consumer, farmer, factory, other) should act and how? Drawing from your diverse backgrounds and creativity, come up with new and inspiring recommendations for those actors you think should lead the change.