

ARREAU - Accelerating Resource Recovery from the Water Cycle

- 1 To develop market plans for viable and profitable value chains for resources from the water cycle
- 2 Value chains for drinking water residuals, phosphorus, cellulose and cross-cutting issues

Overall Objective

The overall objective of the ARREAU Action Group is to use innovative concepts to develop market plans to exploit and commercialise opportunities for resources recovered from the water cycle and for the enabling technologies. The ARREAU Action Group will initially use technologies and data from its own members and their related networks. We will first focus on the current state-of-the-art resource recovery, such as:

- 1 Iron sludge from drinking water in the Netherlands. In this case a value chain has been developed that produces granular iron hydroxide that can be used as a filter material, for example in biogas purification (H₂S removal). This case is partly funded by the Dutch government within its WaterTop Sector initiative.
- 2 Phosphorus from wastewater in Belgium, Germany, Switzerland and the Netherlands. Several routes for P-recovery are being explored, as are ways to produce high-value fertilisers from these resources. Demonstrations of the recovery and the end-use of these products will be established. This case will build on the results of national initiatives and on FP7-projects such as "P-REX".
- 3 Cellulose from wastewater in France, Germany and the Netherlands. Cellulose will be harvested at full-scale at wastewater treatment plants. Value chains will be developed for cellulose as a resource, for example as building blocks for bioplastics.



Struvite production from wastewater is one way to recover phosphorus from wastewater.

Lime pellets from softening of drinking water are being dried during transport using heat from the engine.

First meeting of the ARREAU Action Group at IWA Lisbon, 23 september 2014.

Initiators



laptop