

WINTER 2019-2020 NEWSLETTER – ISSUE #4

Message from the Sullied Sediments Project Lead

In October 2019, our project beneficiaries attended a meeting in Manchester, UK, to discuss how the partnership is going to deliver the project on time, on budget and with the best possible impact. This meeting was held in between reporting rounds and ahead of a major change process that we are currently completing. The issue of Britain's exit from the European Union was inevitably on people's minds; however, I am pleased report that it is 'business as usual' for our project despite the fast-changing political landscape.

Towards the end of the meeting, we had a round-table discussion about the added value, quick wins and potential legacy of our project. Many of our partners' comments focused on the strength and resilience of the partnership and the camaraderie that they have experienced through working on the project. These are indeed some of the key reasons why being involved in Interreg projects is so valuable. Not only are we solving problems shared across the North Sea Region and helping to improve the management of our region's waterways, we are also forging academic and organisational relationships and good communication within the sector, which will continue to benefit us all in the months, and hopefully, years to come.

-- **Professor Jeanette Rotchell, University of Hull**



Third (and Final) Annual Partnership Meeting

The Sullied Sediments project partnership will meet for the third and final time in Belgium this month. On 14-15 January 2020, project beneficiaries and our Advisory Group partners will gather in Antwerp to discuss and share the key developments and findings that are coming out of the project.



The work package leads, along with contributing partners and our PhD students, will present how their research is allowing for the better assessment and treatment of sediments in our inland waterways and how their work is helping to prevent further contamination from selected Watch List chemicals. Many of our Advisory Group partners are in fact end-users so it is critical that they understand the innovations coming out of our project so they can help us to increase their uptake across the water sector. Innovations so far include a first-of-its kind database which provides information about the presence and levels of Watch List chemicals and other potentially hazardous substances in the North Sea Region, pollen grains that can be adapted to strip chemicals from waste water, and an easy-to-use dipstick that enables volunteers to test their local waterways for phosphate.

All of this work has been carried out over the past three years and we are looking forward to discussing as a partnership how the benefits of our research can be shared transnationally. A full report on the annual meeting will be published in our next newsletter.

Roll-out and Dissemination Events

Prior to the annual meeting, **on the afternoon of Monday, 13 January 2020**, the Universities of Antwerp and Hull will host a workshop in Ghent to demonstrate how a simple paper analytic device can be used by volunteers to measure phosphate levels in river water samples. This is the first time that this workshop will be offered in the Scheldt catchment after our successful pilot in the Humber catchment. We are looking forward to equipping the workshop participants with the tools and knowledge that will enable them to take measurements in watercourses across the catchment and share with this new sampling practice with other willing volunteers.



In addition to this workshop, our **first dissemination event** will take place after our annual meeting from 11:30-12:30 in the NH Collection Hotel on Wednesday, 15 January 2020. Led by Radboud University, this event will focus on the application of the OMEGA framework to inform a transnational, harmonized strategy for sediment risk assessment. The workshop is free and can be attended by anyone interested in finding out more about this important application.

For more information about either of the events mentioned above, please contact Annabel Hanson, Project Coordinator, by email at annabel.hanson@eastriding.gov.uk.



Profile on Professor Jan Hendriks, Radboud University

Jan is a Professor of Environmental Science at Radboud University Nijmegen and his research is in the area of environmental toxicology, specifically modelling the fate, accumulation and toxicity of chemicals. In addition to Sullied Sediments, other current projects include the waste water treatment of oil and pharmaceuticals, the distribution and subsequent effects of persistent pollutants in Northern and Eastern Europe, and the cumulative effects of toxic and non-toxic stressors.

Previously, Jan was affiliated as a researcher, consultant, advisor and lecturer at various organisations working on water management, environmental assessment and ecology. He has supervised 35 PhD students and postdocs and is currently leading the Department of Environmental Science at Radboud. As data are often incomplete and incompatible, he develops cross-disciplinary models requiring minimal input to answer questions from stakeholders without millions and decades of empirical research.



Jan is married to Marian and his hobbies are his three children and sports, preferably both at the same time.

Radboud University is an active partner within Work Package 3, which focuses on sediment assessment. Jan and his team will be leading the first dissemination event, which will take place on Wednesday, 15 January 2020, in Antwerp (please see above). Our next newsletter include a profile on the lead for our 'Changing Citizens' Behaviour work package, Professor Mark Lorch of the University of Hull.

Sullied Sediments helping Flanders to Better Understand Watch List Chemicals

Given that our annual meeting will be taking place in Flanders this month, we asked one of our Belgian partners, the Flanders Environment Agency (VMM), to reflect on their involvement in the project. We are grateful to Stevie Swenne, Head of Team International Cooperation, within VMM's Department for Air Quality, Environmental Reporting and Communication, for writing the article below:



Like many other countries across the North Sea Region, there is increasing concern with researchers in Flanders about the presence of chemical compounds in our waterbodies that have not yet been recognised as priority substances. These so-called Watch List Chemicals (WLCs), including diclofenac (anti-inflammatory and painkiller), triclosan (ingredient in toothpaste) and ethynylestradiol (contraceptive pill), can contaminate aquatic sediments.

For the Sullied Sediments project, VMM and the University of Antwerp are teaming up with researchers and water managers in Germany and the UK to investigate the presence of certain WLCs in the river Scheldt by setting up a joint campaign for the characterization of the aquatic soils. This is important because a proper characterisation of sediments can remove uncertainty about contamination of sediments. This should lead to a 10% reduction in the economic cost of selling dredged material.

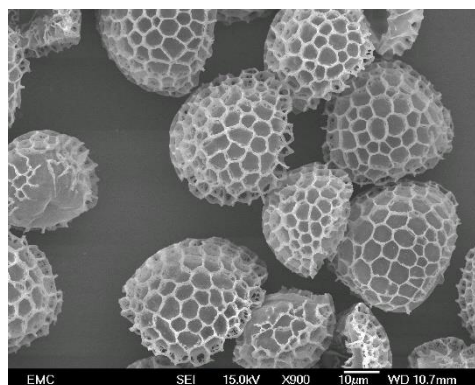


But there is another important reason for carrying out this work together with partners from other countries. Taking into account current knowledge about these potential hazardous substances is still very new and no regulations are yet in place, sampling techniques and tools are sometimes very different. Setting up a joint work plan will therefore make it possible to better exchange best-practice methodologies and allow a better comparison of the issue amongst different river basins in the North Sea Region.



In the News

In the last edition of our newsletter, we reported on the international media coverage that our 'Clean-up Pilots' work package has been receiving. As a reminder, PhD student Aimilia Meichanetzoglou presented her Sullied Sediments research at the American Chemical Society's Fall 2019 National Meeting and Exposition in San Diego (ACS). At the conference, Aimilia talked about how researchers at the University of Hull are seeking new ways to use stripped-down pollen grains to remove contaminants from water. We shared with our readers a new video, which was produced by the ACS called "Cleaning pollutants from water with pollen and spores — without the 'achoo!'":



https://youtu.be/DnC_Fdj4v2k

As a result of her participation in the ACS conference, Aimilia's research has been picked up extensively by media outlets around the world, including Forbes magazine (US), Le blob, l'extra-média (France), Devdiscourse (India); HealthNewsDigest.com (US); Technology Networks (UK); Long Room.com (US); Newswise (US); and the Virginia Engineer (US). We are delighted with this response, which shows just how much interest there is in our project and this ground-breaking research and the impact it can have transnationally.



Our Sullied Sediments Partnership

The project partnership includes public, private and voluntary sector organisations from across the North Sea Region. It is made up of our project beneficiaries, who are responsible for delivering the project, and our advisory partners (in *italics*), who provide their expertise and knowledge to assist the partnership:

Belgium

OVAM
University of Antwerp
VMM

Germany

ECOSSA
Elbe Habitat Foundation
German Federal Institute of Hydrology
Hamburg Ministry for the Environment and Energy
Hamburg Port Authority
Hamburg University of Applied Sciences
Institut Dr Nowak

The Netherlands

Foundation for Applied Water Research (STOWA)
Radboud University

UK

Canal and River Trust
East Riding of Yorkshire Council
East and North Yorkshire Waterways Partnership
Environment Agency
Northumbrian Water
Socotec UK
Thames Water
University of Hull (Project Lead)
University of Leeds
Yorkshire Water

International

Sediment European Network Steering Group (SedNet)



Project Contacts

Project Lead

Jeanette Rotchell
J.Rotchell@hull.ac.uk
+44 (0)1482 465333

Deputy Project Lead

Andrew Boa
a.n.boa@hull.ac.uk
+44 (0) 1482 465022

Funding and Technical Advisor

Claire Watts
claire.watts@eastriding.gov.uk
+44 (0)1482 391618

Project Coordinator

Annabel Hanson
sullied.sediments@eastriding.gov.uk
+44 (0)1482 391678

If you would like more information about the project, please contact the Project Coordinator via email at sullied.sediments@eastriding.gov.uk in the first instance.