

# The Demonstration Test Catchments Project

*Newsletter: June 2012*

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## Demonstration Test Catchments

### What's happening across the Demonstration Catchments?

Welcome to the second edition of the DTC Newsletter. It's designed to update you on developments across the Eden, Hampshire Avon and Wensum catchments. You may also visit our [website](#) where you can exchange knowledge with the scientists, farmers, policymakers, water managers and policy makers involved in the sustainable use and management of river catchment areas.



## Data monitoring goes live

All three Demonstration Test Catchments – the Eden, Avon and Wensum – now have monitoring kits installed and are sampling water flows. Visit their websites to see the latest data:

<http://www.edendtc.org.uk/>

<http://www.avondtc.org.uk/>

<http://www.wensumalliance.org.uk/>



## Not so slimy under the microscope

Diatoms may not look very pretty to the naked eye – they generally resemble a slimy brown film – but they can be useful indicators of water quality. And under a microscope it is possible to see that they create surprisingly ornate silica shells. Colonies of these algae are found covering rocks in fresh water and they reflect the local environment within the stream. Field sampling of diatoms has taken place on the Eden, along with recording of factors such as water depth, velocity and turbidity, and chemical measurements such as pH and dissolved oxygen in order to try and understand what determines the

diatom communities found within the river. Few studies have been carried out in such detail and the team hopes the results will assist their [biomonitoring programme](#). In the Avon DTC catchment, diatom samples are being collected using the [DARES](#) (Diatom Assessment of River Ecology Status) methodology at the downstream end of the monitored sites, the same position as the other biological quality monitoring. The Environment Agency teams in Blandford (Mitch Perkins) and Bodmin (Adrian Brown) are processing the samples from the Avon and Tamar respectively. Samples are collected in spring, summer and autumn. Although the recent drought has affected winterbourne sites (streams which normally dry up in the summer) initial results indicate some potential for improvement if levels of nutrients going into the water can be reduced.



## Crowds flood in for water day

A World Water Day event in Norwich seemed tinged with irony during the recent drought but monitoring data from the Wensum DTC and a Google Earth display of the project area provoked a lot of interest. The data can now be accessed on the project website. [Read more about it.](#)



## Restoration good news for fish

Restoration work carried out on the river [Wensum at Great Ryburgh](#) has increased both the numbers of fish and chalk stream plant species. It is more than a year since the Environment Agency team reinstated the meander loop at Great Ryburgh Common and the results are clear: vegetation is well established and nearly 400 fish were captured in electric fishing surveys, compared with 31 before the restoration. This included good numbers of native brown trout and target species such as bullhead and brook lamprey.

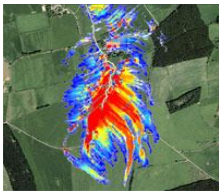


## Eden team takes to the air

In the Eden the research team is using the [latest airborne technology](#) to monitor changes in vegetation over the course of the year. Their remote control helicopter is taking photographs of around 30 fields which have been selected because of their potential importance in producing diffuse pollution. The results will then be matched up with water samples from the river to see how the variations in vegetation cover affect pollution levels. This will give a much more accurate picture of diffuse pollution risk for specific areas

## New tools help map diffuse pollution risk

DTC teams are trying out different software packages that could assist in mapping pollution risk and deciding on the most effective measures.



## Eden team reach for the SCIMAP

The Eden DTC project is using a new tool called [SCIMAP](#) to map diffuse pollution risk in the catchment. This helps to identify the most likely sources of pollution and where they are, and calculates where these are going to pose the greatest risk. The level of risk depends on factors such as landscape features and how much water is flowing through the landscape and diluting the pollution. SCIMAP can help land managers to decide where they might apply measures to address diffuse pollution to best effect. SCIMAP is a joint project between Durham and Lancaster Universities and is supported by the U.K.'s Natural Environment Research Council, the Eden Rivers Trust, the Department of the Environment, Food and Rural Affairs and the Environment Agency.



## Avon team scopes out ADAS tool

The Avon DTC team is working with farmers and ADAS representatives to investigate the potential of using [Farmscoper](#), a software package designed by ADAS to limit the impact of diffuse pollution. The package may be used to assess diffuse losses of pollutants, to analyse the impacts of mitigation methods and help land managers to select the best options. At an event in December farmers were asked to take part in interactive demonstrations and discussions to help refine the software. A key point was the importance of linking mitigation to farm profitability and these comments will be taken into

account in future versions. Meanwhile, a further demonstration session will take place with a group of farm advisers in order to canvass their comments.



## Wensum looks at costs for farmers

Researchers in the Wensum catchment are also modelling with Farmscoper and looking specifically at the costs angle. They are feeding in data from field management records on crop types, fertilizer applications and yields from their Blackwater experimental area. Their aim is to develop aids for selection of mitigation measures for specific areas and provide an analysis of their cost effectiveness.



## Farmers monitoring water quality

Three farmers in the Wensum catchment are playing an important role in the research and testing out some ideas about “active learning”. They are currently using nitrate test strips to carry out regular tests on the water quality on their land and recording the results, together with field activities, in log books. These will be extremely helpful for the team when they begin interpreting the data. This kind of involvement also provides the farmers with an opportunity to engage directly with the research and its potential implications for their own land management regime.



## Researchers link with CSFOs

At a meeting in January the three Demonstration Test Catchment teams and the Environment Agency, Catchment Sensitive Farming Officers came up with clear ideas about the data and evidence that they would like to see flowing from the research. As well as the first [policy and practice note in the DTC series](#) this has resulted in better defined pathways for disseminating information, and plans for regular

meetings and workshops that will feed research results to these key professionals. Further policy and practice notes which should be of interest to CSF Officers and wider audiences are also in the pipeline.



## Scottish experts team up

The James Hutton Institute and University of Stirling have teamed up to research diffuse pollution management in the Scottish Priority Catchments. Funded by the Scottish Government Centre of Expertise for Water (CREW), the programme combines a series of Knowledge Exchange workshops, farmer focus group meetings and field excursions looking at catchment mitigation and management options. The team is working with stakeholders to identify appropriate strategies for monitoring in the Scottish Diffuse Pollution Monitored Catchments. More information about this project and upcoming events is available on the [CREW](#) webpages and at <http://www.programme3.net/water/water345pollution.php>



## Support for better water quality

A survey published by the European Commission shows that a large majority of Europeans support more stringent actions to protect water quality and reduce water consumption. The Commission has also published conclusions of its stakeholder consultation on updating EU water legislation, showing a division between non governmental organisations who want changes to plug gaps and weaknesses in current laws, and other stakeholders who consider existing legislation adequate but that more expert guidance is required to implement it. The European public opinion survey 'Eurobarometer' interviewed over 25 000 EU citizens. Respondents supported policies such as better information on the environmental consequences of consumption, incentives for efficiency and fines for polluters. <http://www.ceep-phosphates.org/Files/Newsletter/ScopeNewsletter86.pdf>

## Forthcoming events:

- Thursday 21 June: The Arable Group (TAG) Open Day, Morley: The researchers from the Wensum DTC will again be attending this event for members of NIAB (National Institute of Agricultural Botany) TAG which will include information to help manage farm businesses. More information will be available on the NIAB website <http://www.niab.com> .

- Tuesday 17 July: The Third Annual Wensum DTC Conference will be held at [UEA Sportspark](#) and will provide an opportunity for members of the Wensum Alliance to hear about how the project is progressing. For information contact Sarah Clarke, email [sarah.m.clarke@uea.ac.uk](mailto:sarah.m.clarke@uea.ac.uk))
- Eden Rivers Trust will be holding their Wild Trout Trust Annual get-together on 2 and 3 June at Tufon Arms, Appleby see <http://trust.edenriverstrust.org.uk/events.html> for details.

For all the latest news from the Demonstration Test Catchments visit their websites:

<http://www.edendtc.org.uk/>

<http://www.avondtc.org.uk/>

<http://www.wensumalliance.org.uk/>

<http://www.demonstratingcatchmentmanagement.net/>

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