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water@leeds is a growing interdisciplinary centre on climate and water research at the University of Leeds. Professor Joseph Holden, director of the centre, and crossdiscipline expert Dr Dabo Guan, talk to Nature Climate Change about the project.

What was the impetus behind establishing water@leeds?

About four years ago, a member of staff in a water company asked us to outline the full water research capacity at the University of Leeds and actually we couldn't answer the question. There were already many water researchers at the University but they were working within different faculties and on different subject areas without cross fertilization between those areas. Therefore, we started to gather everyone interested in water research together to share resources and tackle big global research questions in an interdisciplinary way. Our goal is to understand how climate change will impact the global water cycle and how to develop effective mitigation and adaptation strategies. We want to make a difference to people's lives, especially the most vulnerable populations that are already suffering from limited access to water. And also, we aim to offer a single point of contact to anyone who wants to know about water research or even initiate water research.

When was the centre launched? How big is it now?

The centre was launched in November 2009. At that time about 100 experts gathered together to start water@leeds. We now have a core base of 150 experts who have been recruited from all over the world to the physical base in Leeds..Since the launch, the number of international collaborations has increased significantly and we now have around 40 international partners working on water research projects.

How difficult was it to pull together the group of researchers?

The integration of the many water research groups has been challenging as research disciplines range from art and humanities, economics, policy and then engineering, earth sciences, environment, biology, geography and so on. Their languages and ambitions are actually very different. As part of our strategic approach to discipline integration, we have appointed experts and co-ordinators with the specific aim of bridging the gap between disciplines such as Dabo Guan whose main role is to enable the integration between the natural sciences and the social sciences.

Do you have partners from outside academia?

Yes, we do. Private companies from the water sector such as Arup, Yorkshire Water, Hydro-Logic and GNS Science (New Zealand) are active members of our research projects. We have also appointed people such as Martin Tillotson and Viki Hirst who have spent most of their career within industry or other non-academic organisations. We believe in the importance of reaching out to industry and other users of water research and this is a key differentiator for water@leeds with respect to other university-based water research institutes.

How does water@leeds operate?

The executive board where all disciplines are represented is based in Leeds and overseas our strategy. In addition, we do have some steering from the private sector too. In terms of our research activities, we are an open network attracting the right people from all over the world. We advertise positions but we have found that often people try to secure fellowships to come and do their research here. Even well established professors with their own research funding approach us as they recognize that water@leeds is a fast-developing centre offering a truly interdisciplinary environment.

What has been achieved since the launch?

We're generating new research and we certainly have a more integrated approach to project ideas and proposals on water issues: the majority of our proposals now cross disciplines. We have a much better awareness of the needs of those outside of academia working in the water sector and we are helping academic researchers to engage with these organisations more successfully. Through PhD studentships, training and a very active water@leeds postgraduate forum we are actually creating the next generation of interdisciplinary water researchers.

What are the most important projects at water@leeds?

Approaching Climate Change for Water Resource Adaptation (ACCWA) is one of our most interesting projects involving 13 universities from Australia, China, Norway, The Netherlands, South Africa, UK and US. It integrates disciplines to evaluate the effects of climate change on water resources in upper, middle and low income countries. We use local information from each of our partners to learn about the key problems facing practitioners, industry and the water policy community. African Monsoon Multidisciplinary Analysis (AMMA) is another important project with 140 partners in 30 countries. It is the biggest and most comprehensive investigation of African climate ever attempted.

Where is the financial support coming from?

The University of Leeds awarded us £1 million of funding initially. Since then we have been awarded an additional £10 million for new research from a wide range of funders including research councils (50%), industry (25%), charitable foundations (5%), and government organisations (20%). We have diversified our sources of income and there are 27 separate primary sponsors for new research initiated within the last two years including international foundations and NGOs. Getting financial support for research is always challenging and that's why we try to innovate. If, for example, we know of a few organizations sharing a similar research need, we try to bring them together to share resources to fund research projects.

How do you expect the centre to develop in the future?

We aim to grow sustainably and keep developing our relationships with industry and other users of water research to be able to drive forward water practice and policy. We intend to develop a new institute within water@leeds on water footprinting and also initiate new interdisciplinary work on climate change and water scarcity through major new five year fellowships.

INTERVIEW BY MONICA CONTESTABILE