



## River Basin Processes and Management Cluster News: January 2010

### 11/01/2010

#### News

**Pippa Chapman** was invited to take part in NERC's Catchment Change Network CCN: A professional development platform for decision-making for adaptation and mitigation and uncertain environmental change at Lancaster in December.

#### New Publications

**Milner, A.M.**, Brittain, J.E., **Brown, L.E.** and Hannah, D.M. (2010) Water sources and habitat of alpine streams. In: (eds) Bundi, U., Peter, A., Robinson, C., Schädler, B., Truffer, B., Wehrli, B., Weingartner, R. *Alpine Waters*. Springer, Berlin. p175-191

Reed, M.S., Bonn, A., Slee, W., Beharry-Borg, N., Birch, J., Brown, I., Burt, T.P., Chapman, D., **Chapman, P.J.**, Clay, G., Cornell, S., Fraser, E.D.G., **Holden, J.**, Hodgson, J., Hubacek, K., **Irvine, B.**, Jin, N., **Kirkby, M.J.**, Kunin, W., Moore, O., Moseley, D., Prell, C., Quinn, C., Redpath, S., Reid, C., Stagl, S., Stringer, L.C., Termansen, M., Thorp, S., Towers, W., Worrall, F. (2009). The future of the uplands. *Land Use Policy* 26S S204–S216.

### 18/01/2010

#### News

**Andy Baird, Joseph Holden, Sheila Palmer, Lee Brown and Rebecca Slack** have been awarded a framework agreement via [water@leeds](mailto:water@leeds) to deliver Countryside Council for Wales projects 2010 - 2014.

**Chris Keylock** has received £800 from the British Council to extend his collaboration with CEMAGREF in Grenoble on avalanche risk estimation in a changing climate.

**Chris** also presented his recent work on the use of Hölder regularity for characterising environmental turbulence at the AGU in San Francisco in December.

On Monday, **Jonathan Carrivick, Daniel Carrivick and Chris Williams** took the opportunity for some cross country ski practice on the Moors north of Skipton. This was in preparation for forthcoming winter fieldwork in arctic Sweden and the Austrian Alps, where Chris will be making measurements of winter snow accumulation as part of his PhD project. As the photos show (attached), the weather was less than pleasant, but an entertaining time was had by all!

### 25/01/2010

#### News

**Lee Brown** and **Katie Aspray** ventured up to Moor House last Tuesday 19 January to continue Katie's monthly sampling regime for her PhD. It took only 1 hour 30 minutes to walk the track up to Moss Burn, although the fog meant visibility was poor, hampering the photographic record. However, some shots were taken and can be viewed here:

[http://www.flickr.com/photos/leebrown/\\_sets/72157623135846593/](http://www.flickr.com/photos/leebrown/_sets/72157623135846593/)

Particularly impressive was the river icing along Trout Beck making it look more like a valley glacier than a stream. At the field site we managed to collect samples for macroinvertebrates (in between the ice), install decomposition packs and tiles for primary production, and download several dataloggers. All in all, a thoroughly enjoyable sub-Arctic field trip which we would recommend to all! (Lee and Katie)

**Clare Woulds** and **Stephen Sitch** have secured a place each at the NERC Changing Water Cycle workshop in London on Wednesday



## River Basin Processes and Management Cluster News: February 2010

### 01/02/2010

#### *News*

**Katherine Arrell** has passed the Postgraduate Certificate of Learning and Teaching in Higher Education.

#### *New publication*

**Gupta, A.** (2009) Geology and landforms of the Mekong Basin, In: The Mekong: Biophysical environment of an international river basin (I.C. Campbell, Ed.), Elsevier, Amsterdam, 29-51.

### 08/02/2010

#### *News*

**Pippa Chapman** and **Andy Baird** have been awarded a NERC CASE studentship with partners at Natural England. The project will investigate how peatland restoration affects the carbon sink function of ombrotrophic bogs.

**Joseph Holden** provided the guest seminar last week in the School of Geography, University of Nottingham

**Pippa Chapman** and **Joseph Holden** have been awarded a research grant from the Joint Nature Conservation Committee (JNCC) with colleagues from the Universities of Durham and Aberdeen, CEH Bangor and the Macaulay Institute to design a programme to address evidence gaps in greenhouse gas and carbon flux from UK peatlands.

**Stephen Sitch**, **Clare Woulds** and **Joseph Holden** attended the NERC changing water cycle workshop last week with a view to leading a large grant proposal.

**Sarah Buckmaster** and **Joseph Holden** are attending a meeting of the Scottish Executive today in Edinburgh where they will be outlining results from the Sustainable Uplands project and launching their latest policy and practice note.

### 15/02/2010

#### *News*

**Joseph Holden** attended a meeting with academics, stakeholders and government staff in Dundee to discuss initiatives to fund research work in the Flow Country which is one of the world's largest areas of blanket peat on one site.

**Joseph Holden** was asked to provide a quote for the Nidderdale AONB resident's newsletter on land management and flooding.

**Andy Baird**, **Joseph Holden** and **Pippa Chapman** have been awarded £1.1 M from Defra to lead a five-year project (with colleagues from the Centre for Ecology and Hydrology and the Open University), to look at how the restoration of blanket peatlands affects their global warming potential. The project will result in practical management advice on how to block peatland ditches or grips in such a way that methane emissions are minimised. All of the project money comes through Leeds and there will be £615k of SoG based research expenditure.

**Katherine Arrell**, **Ian Lawson**, **Katy Roucoux** and others have been awarded a £36,000 WUN Research Development Fund grant, entitled 'Arctic Environments: Vulnerabilities and Opportunities (AEVO)' with colleagues from Birmingham, Sheffield, Southampton, Alberta, Madison and Bergen. This will involve the establishment of an international research network and allow us to address some challenging questions about changes in the Arctic. If you are interested in being involved in this network please contact **Katherine Arrell** ([k.arrell@leeds.ac.uk](mailto:k.arrell@leeds.ac.uk)). More details will follow shortly.

**22/02/2010**

***News***

**Adrian McDonald** attended and chaired the NERC Catchment Change Network meeting on Water Scarcity held in Birmingham Medical School on Wednesday 10 February. The meeting was attended by academics, industry regulators and consultants. The key theme concerned the uncertainty approach taken in UKCP09 and how this might be incorporated in planning for water resource requirements over the next 30 years.

Following a successful sand pit in late November, the leadership of the proposed Virtual Observatory, submitted the £2 million (£1.6m from NERC) pilot VO. This has 18 investigators from 13 institutions and because of its national capability will run through CEH. The three leaders are Bridget Emmett (CEH), Robert Gurney (Reading) and **Adrian McDonald** (Leeds).

**Adrian McDonald** has been invited and funded to attend meetings with National Science Foundation and other US agencies in Washington DC later this month (snows permitting). The key focus is on exchanges with the Critical Zone Observatory.

***New papers***

**Brown, L.E.**, Milner, A.M. & Hannah, D.M. (in press) Predicting river ecosystem response to glacial meltwater dynamics: a comparative case study of quantitative water sourcing and glaciality index approaches. *Aquatic Sciences*

**Holden, J.** and Rose, R. (in press) Temperature and surface lapse rate change: a study of the UK's longest upland instrumental record. *International Journal of Climatology*.



## River Basin Processes and Management Cluster News: March 2010

### 01/03/2010

#### *News*

**Paul Kay** gave the keynote speech at the fourth Symposium on Management of the Kasumigaura Basin: Eco-friendly Rural Management, held at Ibaraki University, Japan. He also presented work on agricultural stewardship at a further conference organised by the Japanese Association of Rural Planning held at Kyoto University.

In this week's cluster meeting, **Stephen Sitch** will discuss the NERC Changing Water Cycle call. Friday 05 March, 12 - 1 pm in Room 1.36. All welcome.

### 08/03/2010

#### *News*

**Lee Brown** was an invited attendee at a workshop on the subject of Ecological Networks held at the Centre for Population Biology, Imperial College Silwood Park campus on 22 and 23 February. The group spent a day finalising a review paper which will shortly be submitted to *Global Change Biology*, and discussed opportunities for developing a pan-Arctic research project comparing food webs, host-parasitoid and pollination networks responses to climate change.

**Stephen Sitch** is involved in two small ESPA bids:

A tool to optimise multiple ecosystem services & poverty alleviation. **Alan Grainger\***, **Gabrielle Lynch\*\***, **Lionel Cliffe\***, **Musambayi Katumanga\*\*\***, **Timothy Baker\***, **Stephen Carver\***, **Simon Lewis\***, and **Stephen Sitch**.

Policy Development for Improved Regional Climate and Food Security in South Asia. **Lisa Emberson**, **Stephen Sitch**, **Narendra Singh Raghuwanshi**, **Sudhir Chella Rajan**, **David R. Purkey**, **Professor Madhoolika Agrawal**, **Harry William Vallack**.

**Mike Kirkby** has received approval to hold a small two-day workshop funded (£3,000) by ACES, Department of Geosciences, University of Aberdeen on the topic of "Integration of biophysical and socio-economic models". The workshop will be held in Aberdeen during October, dates to be confirmed.

**Joseph Holden** featured in the *Yorkshire Post*, the *Scotsman*, and the *Press and Journal* newspapers last week outlining results from the Sustainable Uplands project. He has also been invited by the *Yorkshire Post* to write an opinion piece for the newspaper. Knowledge exchange in action!

**Sarah Buckmaster**, **Pippa Chapman** and **Joseph Holden** were out filming last week in the Peak District with a professional film crew as they produced materials for some new DVDs for stakeholders and policy makers on the impact of upland science. More knowledge exchange in action!

#### *New publication*

**Gupta, A.** (2010) The hazardousness of high-magnitude floods, In : "Geomorphological Hazards and Disaster Prevention" (I. Alcántara-Ayala and A. Goudie, Eds.) Cambridge University Press, 97-109.

**15/03/2010**

**News**

**Jonathan Carrivick, Chris Williams,** Dave Rippin and Daniel Carrivick have returned from Abisko, arctic Sweden. They were predominantly on Karsaglaciaren making measurements of the winter snow surface, depth of snow to the summer ice surface, depth of ice to bedrock and other mass balance observations such as snow density, for example. (See attached pictures). The manual work went very well, but the extremely low temperatures meant that using and recharging batteries for electronic equipment was troublesome. Jonathan and Chris also spent a few days at Stockholm University mining the library, archives and book shelves of colleagues for historical data and this was highly successful.

Dave Rippin and **Jonathan Carrivick** have been awarded £9,000 from the Royal Geographical Society (Peter Fleming Award) for their proposed research on Karsaglaciaren, arctic Sweden. The project is to analyse the changing dynamical regime of the glacier. A particular emphasis is on the historical evolution of the glacier thermal regime and the use of GPR to identify and characterise contemporary glacier thermal structure.

**New publication**

**Brown, L.E.** (accepted/in press) Podcasting and vodcasting to BSc Geography students. *Planet*

**Gupta, A.** and Bravard, J.-P. (2010) Introduction to management of large European rivers, *Geomorphology*, 117, 217-218.

*This is from a special issue of Geomorphology on management of large rivers, edited by Jean-Paul Bravard (University Lumiere-Lyon 2 and Avijit Gupta. The published papers are from a 2007 conference of International Association of Geomorphologists in Lyon on management of large rivers and a subsequent field trip on the Rhone.*

**22/03/2010**

**News**

**Richard Grayson** and **Pippa Chapman** attended a field visit to the Yorkshire Peat Partnership restoration site at Stean Moor, Nidderdale, on Friday 12 March. The event was attended by representatives from Natural England, Environment Agency, Yorkshire Water, Yorkshire Wildlife Trust, Yorkshire Dales National Park and the landowner. All of these organisations are working together to improve the ecosystem services provided by peatlands. We presented a review of the monitoring programme we have set up, with funding from YW, NE and EA, to evaluate the impact that peatland restoration has on flood mitigation and water quality.

**Joseph Holden** has had an article he wrote published in the Yorkshire Post:

<http://www.yorkshirepost.co.uk/opinion/Joseph-Holden-Sharing-ideas-will.6146525.jp>

**New publication**

Friedlingstein, P., Cadule, P., Piao, S. L., Ciais, P. and **Sitch, S.** (2010) The African contribution to the global climate-carbon cycle feedback of the 21st century. *BIOGEOSCIENCES* 7(2).

**New paper submitted**

Collins, W. J., **Sitch, S.** and Boucher, O. How vegetation impacts affect climate metrics for ozone precursors. *Journal of Geophysical Research - atmospheres.*

**New grant**

**Johnson, K.L.** and **Brown, L.E.** Catchment management influences on moorland stream biodiversity. The Yorkshire Peat Partnership and Moors for the Future Partnership Moorland Research Fund. £2000.

**29/03/2010**

**News**

**Joseph Holden** represented the School of Geography at a major business and academic interfacing conference last week headed by Rosie Winterton MP and attended by 260 delegates from the region.

**Joseph Holden** has recently had one of his finest citations - he was quoted on peatland habitats in a Canadian primary school learning aid and colouring in book!

**Chris Keylock** gave talks to year 9 and year 12 students on Friday 19 March on avalanches and steepland geomorphology, respectively. Chris is also involved (with Maths, Bristol; Maths, Manchester; Oceanography, Southampton) in a bid to host an international symposium on particle-laden flows, following on from the 2003 Newton Institute Meeting he helped to organise.

**Paul Kay** examined a PhD at Imperial College London on modelling of priority pollutant fate in sewage treatment works.

**Alexandra Savage** has received an award from the British Society for Geomorphology for £370 to attend the EGU conference in Vienna where she will present a talk on "Understanding the Impact of Land Management on Carbon Losses from Peatlands" and a poster on "Assessing the Impact of Land Management on Organic Matter Composition in Peat Soils"



## River Basin Processes and Management Cluster News: April 2010

### 12/04/2010

**Paul Kay** presented a poster at the SAC/SEPA Biennial Conference on Agriculture and the Environment held at Edinburgh University.

**Joseph Holden** appeared on Radio Teesdale discussing the Sustainable Uplands project.

**Joseph Holden, Alan Grainger, Mike Kirkby** and **Brian Irvine** contributed to the UNCCD Working Group 3 White Paper on Monitoring and Assessment of Desertification, Land Degradation and Drought: Knowledge Management, Institutions and Economics which can be found here: <http://dsd-consortium.jrc.ec.europa.eu/php/index.php?action=view&id=79>

Impact: The government's Foresight Land Use Futures report ([http://www.foresight.gov.uk/Land%20Use/luf\\_report/8507-BIS-Land\\_Use\\_Futures-WEB.pdf](http://www.foresight.gov.uk/Land%20Use/luf_report/8507-BIS-Land_Use_Futures-WEB.pdf)) contains a section on the Sustainable Uplands project which involves **Sarah Buckmaster, Brian Irvine, Pippa Chapman, Joseph Holden** and **Mike Kirkby**. The report is also scattered with citations to papers from the project.

### 19/04/2010

#### **News**

The two EU proposals in which **Brian Irvine** and **Mike Kirkby** were involved, submitted in January, have now been rated by reviewers. WAHARA (Water Harvesting in Africa) received 14.5/15, which is pretty good! Particular thanks to Luuk Fleskens (SRI, Earth and Environment) for burning the midnight oil. TOPOMAN (Toolbox for resource management in Africa) received 13.5/15 - still respectable. We will hold our breath about final outcomes.

Last week, **Paula Micou** attended the 11th UK National Young Water Professional Conference organized by IWA in Cranfield University, where she presented a poster on "The Code for Sustainable Homes: A methodology for assessing its implication for regional water demand". The poster showed the progress on the development of the methodology for her research project.

#### **New paper accepted**

**Brown, L.E., Cooper, L., Holden, J. & Ramchunder, S.** (accepted; in press) A comparison of stream water temperature regimes from open and afforested moorland, Yorkshire Dales, northern England. Hydrological Processes.

Some of you may remember the second author Luke Cooper who was one our BSc undergraduates a few years ago. The project from which this paper developed was initiated by Luke for his dissertation, and he did such a good job that we then continued it for two years to get a publishable dataset. Luke is currently finishing an MRes at Cambridge and will then be starting a PhD at the University of California. Quite a good success story for us and a nice R->T link.

#### **New grant**

**Adrian McDonald**, (2010-2012) Co-leadership of the NERC Virtual Observatory, £334,519

**26/04/2010**

**News**

**Lee Brown, Katie Aspray and Stephen Hughes** attended the Freshwater Biological Association summit on Achieving Ecological Outcomes: Aquatic Ecological Responses to Catchment Management (<http://www.fba.org.uk/index/events/summit.html>) held last week at the FBA headquarters at Windermere. Katie presented a poster entitled 'Stream ecosystem response to UK moorland management' which covered work by herself, **Sorain Ramchunder** and the EMBER project

**Jonathan Carrivick and Chris Williams** have completed another set of measurements to calculate the winter mass balance of a glacier; after arctic Sweden in early March. This time they were in central Austria, and again with Daniel Carrivick very competently supporting. Measurements included snow surface elevation using dGPS, snow depth to ice surface using a snow probe, ice depth to bedrock using GPR, and snow density with depth via digging pits! They also downloaded the continuously-recording weather station and hydrological apparatus. After some very long and arduous days in rather inclement weather and upon a lot of recent snowfall, the team then managed to enjoy a day skiing under blue skies! A few pictures of the field work are attached.

**Ulrika Aberg** presented a paper at the 11th annual River Restoration Centre conference in York, entitled: "Ten years of social benefits?: public perception of the River Skerne rehabilitation project".

**Sarah Buckmaster and Joseph Holden** attended the first of three final dissemination workshops for their Sustainable Uplands project in Moffat, Scotland, where two films that the Sustainable Uplands team have produced were given their premiere.

On 13 April the School of Geography hosted a Joint Nature Conservation Committee workshop on carbon and greenhouse gas fluxes from peatlands which formed part of a project funded by JNCC to **Pippa Chapman, Joseph Holden** and others from Durham and Aberdeen Universities, CEH and Macaulay Institute.

**New paper**

Clark, J. M., Bottrell, S. H., Evans, C. D., Monteith, D. T., Bartlett, B., Rose, R., Newton, R. J., and **Chapman, P. J.** (2010) The importance of the relationship between scale and process in understanding long-term DOC dynamics. *Science of the Total Environment*, online early. [doi:10.1016/j.scitotenv.2010.02.046](https://doi.org/10.1016/j.scitotenv.2010.02.046)

**New paper accepted**

**Johnston, K.**, Robson, B.J. and Fairweather, P.G. (accepted; in press) Positions of omnivores are not always flexible: evidence from a guild of freshwater crayfish. *Austral Ecology*



## River Basin Processes and Management Cluster News: May 2010

### 04/05/2010

#### *News*

**Clare Woulds** and **Pippa Chapman** attended a NERC workshop in London on 22 and 23 of April, designed to inform the design of the forthcoming Macronutrients Cycles research programme. Pippa co-chaired one of the breakout groups, and Clare served as a rapporteur for another.

#### *New paper*

Rushton, L., Bagga, S., Bevan, R., Brown, T. P., Cherrie, J. W., Holmes, P., Fortunato, L., **Slack, R.**, Van Tongeren, M., Young, C. and Hutchings, S. J. Occupation and cancer in Britain. *British Journal of Cancer* 102: 1428-1437; doi:10.1038/sj.bjc.6605637.

### 10/05/2010

#### *News*

**Chris Keylock** is involved with a successful £10k bid by Maths at Bristol (together with Maths at Manchester and Oceanography at Southampton) for a WUN symposium on the dynamics of earth surface processes.

**Alexandra Savage** gave a presentation at the EGU 2010 conference in Vienna on "The Role of Land Management on Carbon Cycling in Peatlands" and also presented a poster on "Assessing the Impact of Land Management on Organic Matter Composition in Peat Soils".

**Paula Micou** attended the Water and Environment CIWEM's Annual conference in London and gave a presentation on the Code for Sustainable Homes and how to develop a methodology for assessing influence on regional water demand.

### 17/05/2010

#### *News*

**Clare Woulds** has been awarded an Antarctic Science Bursary (£4700) which will allow her to participate in a Southern Ocean research cruise next year.

**Catherine Wearing** will be presenting for this week's cluster meeting (topic to be confirmed later in the week). The meeting will take place on Friday 21 May, 12 - 1 pm in Room 1.36. All welcome.

### 24/05/2010

#### *News*

**Jonathan Carrivick** and Andy Russell (Newcastle University) last week completed a series of equipment installations and survey measurements on an ice-dammed lake near Kangerlussuaq, west Greenland. The lake has recently started to drain after 20 years of inactivity, as the ice margin reacts to seasonal cycles of melt and freezing. The equipment and measurements have calculated the changes since the last drainage that occurred over just 17 hours; (49 m lake level drop; 39 Million m<sup>3</sup> of water drained!), and will set the base level for the next event, perhaps this summer. Jonathan and Andy were based from a remote tent camp for 8 days. They saw no-one else during this time but plenty of musk ox, caribou, arctic fox and arctic hare. Generally the weather was spectacularly good and the views at over 160 km to distant mountains were incredible. A few pictures are attached.

#### *New paper*

**Carrivick, J.**, Manville, V., Graettinger, A. and Cronin, S. (2010) Coupled fluid dynamics-sediment transport modelling of a Crater Lake break-out lahar: Mt. Ruapehu, New Zealand. *Journal of Hydrology*.



## River Basin Processes and Management Cluster News: June 2010

**07/06/2010**

### **News**

**Jonathan Carrivick** is part of a team of researchers who have been awarded a NERC Urgency grant (£65,000 FEC) to examine the 'impacts and dynamics of volcanically generated jökulhlaups, Eyafjalljökull, Iceland'. The work will comprise a combination of intensive fieldwork and numerical modelling and will progress over the next 12 months.

**Joseph Holden** represented the school at a major WUN workshop in Penn State last week. The topic of the workshop was on adapting to climate change and his paper was about global research questions and expertise within SoG and [water@leeds](http://water@leeds). He also presented on the new ACCWA project and participatory approaches to defining research agendas, modelling and understanding of knowledge and adaptation.

**Sergey Venevsky** also attended and presented a poster on landscape - climate interactions and wildfire.

### **New publications**

Woodward, G., Perkins, D. & **Brown, L. E.** (2010) Climate change and freshwater ecosystems: impacts across multiple levels of organisation. *Philosophical Transactions of the Royal Society B* 365: 2093-2106

**Brown, L. E.**, Milner, A. M. & Hannah, D. M. (2010) Predicting river ecosystem response to glacial meltwater dynamics: a case study of quantitative water sourcing and glaciality index approaches. *Aquatic Sciences* **72**: 325-334

### **Funding**

**Lee Brown** has obtained £30,000 from the Freshwater Biological Association. This will fund 50% of a three year PhD examining the development of invertebrate communities in restored reed swamps on lake Windermere. The studentship is expected to begin in October 2010.

**14/06/2010**

### **News**

A two page article in the Yorkshire Evening Post last Thursday 10 June featured **Joseph Holden** and the [water@leeds](http://water@leeds) team. The article focused on the impacts of applied work being done by [water@leeds](http://water@leeds) and Africa college and highlighted a number of projects being done within SoG. This was very timely since [water@leeds](http://water@leeds) and Africa college held a very successful workshop that day to discuss interdisciplinary collaborations to answer major questions about feeding the world's growing population.

**Nadine Heck** will attend the International Congress for Conservation Biology (ICCB) on 03 - 07 July and give a talk on: "Defining MPA success: stakeholders' opinions in two MPA sites on Canada's west coast".

**Andy Baird** has been invited to attend a workshop on peatland modelling at the University of Wageningen in October. The event is being hosted and paid for by the Soil Physics, Ecohydrology and Groundwater Management Group at Wageningen, and will involve Dutch, Estonian and British researchers.

On 01 May, **Richard Smart** started as a postdoctoral researcher on the £1.1 M Defra project: 'Investigation of peatland restoration (grip blocking) techniques to achieve best outcomes for methane and greenhouse gas emissions/balance'. Richard will be working on the project for 55 months and is currently busy setting up an experimental site in the Upper Conwy catchment in N Wales.

**Sarah Buckmaster, Pippa Chapman, Brian Irvine** and **Joseph Holden** hosted end-user workshops in the Peak District and Nidderdale for their ESRC funded Sustainable Uplands follow-on project. These were extremely well received, with excellent feedback and contained a showing of their new films on future scenarios demonstrating excellence in pathways to impact through participatory approaches.

The School of Geography also hosted a two day JULES (Joint UK Land Environment Simulator) open science meeting last week, led by **Dr Stephen Sitch** which was attended by over 50 delegates.

The June issue of Progress in Physical Geography is a special issue on the Future of Geomorphology edited by **Chris Keylock**. There are papers on the history of the discipline, fluvial, glacial and tectonic geomorphology and the interaction between geomorphology and earth system science. <http://ppg.sagepub.com/current.dtl>.

### **New papers**

**Chapman, P. J., McDonald, A. T.,** Tyson, R., **Palmer, S. J., Mitchell, G. and Irvine, B.** (2010) Changes in water colour between 1986 and 2006 in the headwaters of the River Nidd, Yorkshire, UK. Biogeochemistry - online early.

Thouret, J.-C., **Gupta, A.,** Lube, G., Liew, S. C., Cronin, S. J. and Surono. (2010) The 2006 pyroclastic deposits of Merapi Volcano, Java, Indonesia: High-spatial resolution IKONOS images and complementary ground based observations, Remote Sensing of Environment, doi:10.1016/j.rse.2010.03.016.

## **21/06/2010**

### **News**

**Stephen Sitch** attended the NERC Peer Review College Training Event.

The Sustainable Uplands project was one of ten selected projects from across the university which will feature in the '10 Ways to a More Sustainable World' initiative. The initiative was led by the Enterprise and Innovation office and had entrants from six faculties, two central services, students, staff and external collaborations. **Sarah Buckmaster, Joseph Holden** and **Pippa Chapman** are taking this forward.

**Lee Brown** spent last week in the French Pyrenees, revisiting sites where he undertook his PhD fieldwork in 2002/03. Working with colleagues from Birmingham he reinstalled four stream gauges and collected stream invertebrate and algae samples for comparison with archived data. Work will continue throughout until summer 2012 as part of a Birmingham PhD project. Fieldwork was mainly centred in the Taillon-Gabiétous valley near Gavarnie, where the Taillon Glacier has retreated some 60m and has shrunk by an estimated 1/3 since 2002. Many streams that were sampled in 1996/97 and 2002/03 have now ceased to flow. The team also established two new field sites: one in the Vallée d'Ossoue and one in the Vallée de Gaube, both of which drain the Vignemale, the highest of the French Pyrenean peaks. New links were made with researchers from Université Paul Sabatier (Toulouse) and the Parc National des Pyrénées. A few pictures are here: <http://www.facebook.com/album.php?aid=442180&id=878365404&l=a295e95ac4>

For the River Basins cluster meeting this week, **Neil Dickson** will discuss "Hydroecology of an Alpine stream system" and **Stephen Hughes** will discuss "The impact of pharmaceuticals on UK river ecosystems". Thursday 24 June, 12 - 1pm in Room 1.36\*. All welcome.

**\*Please note that the meeting is on Thursday this week instead of Friday. This is also the last cluster meeting we have scheduled until October. Please contact Sam Bowman if you would like to lead a meeting before then.**

Congratulations to **Paul Chatterton** and **Joseph Holden** for being awarded a joint ESRC/NERC interdisciplinary studentship for a project entitled "Carbon, communities, and contestation: ecological and social impacts of upland windfarms in the UK". This success is particularly pleasing as it brings together two diverse strands of work - from the River Basins and Cities and Social Justice clusters - into a coherent and important piece of scholarship. Well done!

## **29/06/2010**

### **News**

**Steve Carver, Clare Woulds, Jonathan Carrivick, Andy Evans** and **Lee Brown** are away in the Austrian Alps with the level 2 BSc students this week on the Alps field class.

### **New grant (a Knowledge Transfer Partnership)**

**Holden, J., Chapman, P. J.** and West, L. J. (2010 - 2013) Knowledge Transfer Partnership developing peatland survey techniques with Dinsdale Moorland Services. £170,175 NERC/TSB.

This is the first ever KTP held by SoG. If anyone would like advice on organising a KTP (which is funded two thirds by research sponsors and one third by a company) then please let **Joe Holden** know. The application process is not at all onerous

## River Basin Processes and Management Cluster News: July 2010

**05/07/2010**

### **News**

The School hosted the first water@leeds conference, Water Quality 2010, at Weetwood Hall on 23 - 24 June. The conference was a result of a WUN collaboration between the University of Leeds, the University of Illinois, USA, and Zhejiang University, China. The event attracted 57 delegates from 14 countries and seems to have been well received. Some photos from the event are attached.

**Adrian McDonald** gave a keynote talk to the international Water Quality conference at Weetwood Hall on 23-24 June. The following day Adrian gave the global context scene setting presentation to the (invitation only) Water Innovations meeting and presented on behalf of **Joe Holden**, the review of the water research strengths of water@leeds.

### **New papers**

Kay, C., Wyer, M., Stapleton, C., Edwards, A., Davies, C., Francis, C., Watkins, J., Matthews, R., Clarke, A., Davies, O., **McDonald, A.** and Kay, D. (2010) Environmental benefits and impacts of farm ponds and wetlands: some preliminary findings from Scotland and Wales. pp 111-145, In Crighton K. and Audsley R. Eds. Climate, Water and Soil: Science, Policy and Practice. Proceedings of the SAC and SEPA Biennial Conference, Edinburgh, 400p, Published by SAC, Edinburgh [www.sac.ac.uk](http://www.sac.ac.uk); ISBN 1 85482 875 4.

Stapleton, C. M., Kay, D., Wyer, M. D., Davies, C., Watkins, J., Kay, C., **McDonald, A. T.** and Crowther, J. (2010) Identification of microbial risk factors in shellfish harvesting waters: the Loch Etive case study. Aquaculture Research (Special Issue on the Proceedings of the Scottish Aquaculture: A Sustainable Future? Symposium, 21 - 22 April 2009, Edinburgh; ISSN 1365-2109). (in press).

Wither, A., Stapleton, C., Wyer, M., **McDonald, A.** and Kay, D. (2010) Climate change impacts on microbial pollution of Bathing and Shellfish Waters. 'Report Card' on Climate Change. Marine Climate Change Impacts Partnership, Prepared by CEFAS for DEFRA. (in press).

[http://newsweaver.co.uk/coastmapnews/e\\_article001305349.cfm?x=bf094hr.b6km8gb2,w](http://newsweaver.co.uk/coastmapnews/e_article001305349.cfm?x=bf094hr.b6km8gb2,w)

Kay, D., Crowther, J., Kay, C., **McDonald, A. T.**, Ferguson, C., Stapleton, C. M. and Wyer, M. D. (2010) Effectiveness of best management practices (BMPs) for attenuating the transport of livestock-derived pathogens within catchments. In Bos, R. and Bartram, J. (Eds) Animal Waste, Water Quality and Human Health: WHO - Emerging Issues in Water and Infectious Disease series. International Water Association and WHO, London. (in press).

O'Connor, F. M., Boucher, O., Gedney, N., Jones, C. A., Folberth, G. A., **Coppell, R.**, Friedlingstein, P., Collins, W. J., Chappellaz, J., Ridley, J. and Johnson, C. E. (2010) The possible role of wetlands, permafrost and methane hydrates in the methane cycle under future climate change: A review, Rev. Geophys., doi:10.1029/2010RG000326, in press.

(Richard Coppell is a member of River Basins but works with both clusters).

**12/07/2010**

### **New grants**

Steve Arnold (SEE) and **Stephen Sitch**: UNECE International Co-operative Programme on Vegetation. ICP vegetation contract for £12,072 in total (Stephen is a subcontractor to Gina Mills, CEH Bangor). This is shared between Stephen Sitch and Steve Arnold in School of Earth and Environment.

### **NERC standard grant**

Steve Arnold and **Stephen Sitch**: NERC standard grant proposal entitled "Export of Ozone and Precursors from Europe and Impacts on Air Quality, Climate and Ecosystems". FEC (£392,087.88).

**19/07/2010**

*No news*

**26/07/2010**

***News***

After some worrying delays in this time of austerity, NERC confirmed the funding of the £1.6m pilot Virtual Observatory which will be lead jointly by the University of Leeds (**Adrian McDonald**), University of Reading (Robert Gurney) and Centre of Ecology and Hydrology (Bridget Emmett). The project involves 17 researchers from 13 institutions and is a proof of concept study. It seeks to use cloud computing to 'merge' models, data and questions at a range of scales. The focus is on water and soils.



## River Basin Processes and Management Cluster News: August 2010

### 02/08/2010

#### *News*

**Clare Woulds** was recently interviewed for the following article which has just appeared in the Times Higher Education.

<http://www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=412748>

#### *New paper accepted*

Wilson, L., Wilson, J., **Holden, J.**, Johnstone, I., Morris, M. and Armstrong, A. (in press) Recovery of water tables in Welsh blanket bog after drain-blocking: discharge rates, timescales and the influence of local conditions. *Journal of Hydrology*.

#### *New publication*

**Grayson, R.**, **Holden, J.** and Rose, R., Long-term change in storm hydrographs in response to peatland vegetation change. *Journal of Hydrology*, 389(3-4): 336-343.

#### *New grant*

**Grayson, R. and Holden, J.** (2010-11) Monitoring peat erosion rates using ground based lidar. £6400, Peatscapes.

### 09/08/2010

#### *New paper accepted*

Wilson, L., Wilson, J., **Holden, J.**, Johnstone, I., Morris, M. and Armstrong, A. (in press) Recovery of water tables in Welsh blanket bog after drain-blocking: discharge rates, timescales and the influence of local conditions. *Journal of Hydrology*.

#### *New article*

Armstrong, A., **Holden, J.** and Walker, A., (2009) Grip-blocking in upland catchments: some insights from a national survey. *Conservation Land Management*, V7 (4) p5-9.

### 17/08/2010

#### *New paper accepted*

Boyle, J., Dearing, J. A., **Blundell, A.** and Hannam, J. A. (accepted) Testing competing hypotheses for soil magnetic susceptibility using a new chemical kinetic Model. *Geology*.

#### *New grant application*

Grant Application by **Chris Keylock**: EPSRC Challenging Engineering - Environmental Grain-Fluid Mechanics Centre (£870,000).

### 24/08/2010

#### *New paper accepted*

Heinemeyer A., Croft, S., Garnett, M., **Gloor, E.**, **Holden, J.**, Lomas M.R. and Ineson, P. (in press) The MILLENIA peat cohort model, predicting past, present and future soil carbon budgets and fluxes under changing climates in peatlands. *Climate Research*.

#### *New grant*

**Sheila Palmer**, **Pippa Chapman** and **Joseph Holden** with external collaborators. (2010 - 2013) Greenhouse gas emissions associated with non gaseous losses of carbon from peatlands - fate of particulate and dissolved carbon. Defra £300,000 (£50,000 to SoG).

## River Basin Processes and Management Cluster News: September 2010

**06/09/2010**

***New papers:***

Wilson, L., Wilson, J., **Holden, J.**, Johnstone, I., Morris, M. and Armstrong, A. (2010) Recovery of water tables in Welsh blanket bog after drain-blocking: discharge rates, timescales and the influence of local conditions. *Journal of Hydrology*, 391, 377-386.

Robroek, B.M.J., **Smart, R.P.**, **Holden, J.** (2010) Sensitivity of blanket peat vegetation and hydrochemistry to local disturbances. *Science of the Total Environment* 408, 5028-5034.

\***McDonald, A.**, **Clarke, M.**, **Boden, P.**, and Kay, D. (2009) Social Justice and Water. *Issues in Environmental Science and Technology*, 31.

*\*The Regional Review paper published last year which evaluated the retention and multiplier effects of the financial impacts of the Yorkshire Water regional investment programme, has been converted into a user friendly format for public consumption and has been well received by the industry.*

**Adrian McDonald** has been invited to be the Founding Chair of the new West Yorkshire Strategic Flood Risk Board. The Floods and Water Management Act 2010 and Flood Risk Regulations (2009) have placed a range of new duties and responsibilities upon local authorities, the Environment Agency and other partners in relation to the management of flood and coastal risk.

The Annual 'Report Card' of the Marine Climate Change Impacts Partnership has invited contributions by **Adrian McDonald**.

In September the School hosted the project management team of the NERC pilot Virtual Observatory (pVO) and in October will host the first meeting of the 13 constituent institutions. The pVO is led jointly by Leeds (Professor **Adrian McDonald**), Reading (Professor Robert Gurney) and CEH Bangor (Professor Bridget Emmett).

**22/09/2010**

***News***

The Regional Review paper, authored by **Adrian McDonald**, **Peter Boden**, **Martin Clarke** and David Kay and published last year, which evaluated the retention and multiplier effects of the financial impacts of Yorkshire Water regional investment programme has been converted into a user friendly format for public consumption and has been well received by the industry.

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**Clare Woulds** and new PhD student Carol White have just returned from a successful research cruise in the Baltic Sea. They spent two and a half weeks aboard the research vessel Skagerak, conducting experiments to look at C-cycling and pigment decay rates under contrasting oxygen conditions in sediments from the Gotland Basin.

Dave Rippin (Hull /York) and **Jonathan Carrivick** have been awarded a Royal Society Research Grant (£10,350) to further their research into the dynamical response to climate change of the glacier Karsaglaciaren, which is located in arctic Sweden. This project is informed and complimented by the ongoing PhD research of **Chris Williams**, who is analysing historical and modern changes in ice mass at Karsaglaciaren.

**Jonathan Carrivick** has recently completed a series of training courses for his forthcoming fieldwork on the Antarctic Peninsula. This comprised three days briefing on British Antarctic Survey (BAS), three days wilderness first aid, and two days wilderness field camp craft and alpine rope work.

At the RGS-IBG annual conference last week, **Chris Keylock** was appointed secretary of the Quantitative Methods Research Group of the RGS.

RBPM was well represented at last week's British Ecological Society annual meeting here in Leeds with the following talks and posters:

#### **Talks:**

**Brown, L.E.**, Robertson, A. & Milner, A.M. Stream macroinvertebrate biological trait responses to catchment deglaciation.

Ledger, M.E., Edwards, F., **Brown, L.E.**, Woodward, G. & Milner, A.M. Fragility of aquatic ecosystem function in response to simulated climate change: an experimental test in stream mesocosms.

#### **Posters:**

**Brown, L.E.**, Edwards, F., Woodward, G. Milner, A.M. & Ledger, M.E., Biocomplexity of stream mesocosm food webs.

**Hughes, S. R., Kay, P. & Brown, L. E.** The impact of 5 pharmaceuticals (diclofenac, erythromycin, ibuprofen, mefenamic acid and propranolol) on the structure and function of UK river ecosystems.

**Aspray, K. L., Brown, L. E., Holden, J. & Ledger, M.E.** Freshwater biodiversity and ecosystem functioning in changing moorland landscapes.

Van der Velden, N. K., **Brown, L. E. & Carrivick, J. L.** Diversity and development of alpine plant communities: ageing a dynamic river braidplain from a vegetation chronosequence.

#### **New publication**

**McDonald, A., Clarke, M., Boden, P. & Kay, D.** "Social Justice and Water". Issues in Environmental Science and Technology, 31.

#### **New papers accepted**

Woodward, G., Benstead, J. P., Beveridge, O. S., Blanchard, J., Brey, T., **Brown, L. E.**, Cross, W. F., Friberg, N., Ings, T. C., Jacob, U., Jennings, S., Ledger, M. E., Milner, A. M., Montoya, J. M., Pichler, D. E., O'Gorman, E., Petchey, O. L., Olesen, J. M., Reuman, D. C., Thompson, M. S., Van Veen, F. J. F. & Yvon-Durocher, G. Ecological networks in a changing climate. Advances in Ecological Research.

Wallage, Z. E. and **Holden, J.** (in press) Spatial and temporal variability in the relationship between water colour and dissolved organic carbon in blanket peat pore waters. Science of the Total Environment.

**28/09/210**

**News**

**Jonathan Carrivick** visited the Observatoire Midi Pyrenees in Toulouse last week to talk to Etienne Berthier about remote sensing of snow and ice, to obtain archived satellite imagery and digital elevation models, and to have an exclusive tour of the SPOT5 receiving station facility. This is part of Jonathan's work with researchers at Aberystwyth on a NERC funded project examining glaciers on the Antarctic Peninsula.

**Conference**

**Lee Brown** hosted a joint Freshwater Biological Association (FBA) and water@leeds meeting on the subject of Disturbance and Stressor Effects on Aquatic Ecosystems on 22 September at Bodington Hall. The meeting was attended by 30 delegates including staff from the Environment Agency, Natural England, FBA, British Waterways and various universities and private consultancies. During the Annual General Meeting held over lunch, Lee was elected to the Freshwater Biological Association council for a period of four years.

***New paper accepted***

**Brown, L. E., Mitchell, G., Holden, J.,** Wright, N., Beharry-Borg, N., Berry, G., Brierley, B., **Chapman, P.,** Clarke, S., Cotton, L., Davies, R. J., Dobson, M., Dollar, E., Elfleet, M., Fletcher, M., Folkard, A., Foster, J., Griffiths, M., Hanlon, A., Hildon, S., Hiley, P., Hillis, P., Hoseason, J., **Johnston, K., Kay, P., McDonald, A.,** Parrot, A., Philips, M., Powell, A., Ponton, G., **Slack, R. J.,** Sleigh, A., Spray, C., Tapley, K., Underhill, R. & **Woulds, C.** (in press) Priority water research questions as determined by UK practitioners and policy-makers. *Science of the Total Environment* .

## River Basin Processes and Management Cluster News: October 2010

05/10/2010

*News*

**Antony Blundell** attended the IUCN (International Union for Conservation of Nature) conference. He presented a poster entitled "Application of palaeoecological techniques to contextualise the present ecological and hydrological status at Keighley Moor". The purpose of the poster was to advertise a new project with Yorkshire Water, detailed below.

*New grant*

**Antony Blundell** together with **Paul Kay**, **Joseph Holden** and Yorkshire Water have been awarded a grant of £31,500 to look at the palaeoecological record of Keighley Moor to help inform and contextualise future land management strategies.

11/10/2010

*News*

**Mike Kirkby** and **Brian Irvine** took part in the final meeting and science conference for the DESURVEY (EU) Integrated Project at IFAD (International Fund for Agricultural Development) in Rome on 26 - 30 September. The project, on surveillance systems for desertification, has been running since 2005.

**Mike Kirkby** led a small workshop on 05 - 07 October funded by ACES, Aberdeen University on integration of bio-physical and socio-economic models. Plans were made to generate three new projects and a journal special issue.

*New paper accepted*

**Ramchunder, S., Brown, L. E. and Holden, J.** Spatial and temporal variability of UK peatland stream ecosystems. *Ecohydrology*.

20/10/2010

*New paper accepted*

Huntingford, C., Cox, P. M., Mercado, L. M., **Sitch, S.**, Bellouin, N., Boucher, O. and Gedney, N. "Highly contrasting effects of different climate forcing agents on ecosystem services" PTRS accepted.

## River Basin Processes and Management Cluster News: November 2010

### 01/11/2010

#### *News*

**Mike Kirkby and Brian Irvine**, with Luuk Fleskens and Lindsay Stringer from SEE, attended the fourth annual meeting of the EU DESIRE Integrated Project, held in Xi'an in conjunction with the LANDCON conference, from 10 - 18 October.

**Joseph Holden** hosted the Upland Hydrology Group last week - they are a group of stakeholder organisations interested in upland management and water (e.g. Environment Agency, Yorkshire Water, Natural England, National Trust, Moors for the Future, Game Conservancy Trust, United Utilities, Moorland Association etc).

**Joseph Holden** hosted the British Society for Geomorphology's research committee meeting last week.

The Sustainable Uplands project has released two new short films. Both are available to view on YouTube. ***The Sustainable Uplands project film*** provides an overview of the project, including a discussion of upland issues and interviews with members of the Sustainable Uplands team whilst ***'What are scenarios?'*** is a short animated film explaining the use of the project's scenario development work. You can also follow Sustainable Uplands on Twitter at [www.twitter.com/reluuplands](http://www.twitter.com/reluuplands)

#### *New paper*

Wallage, Z. E. and **Holden, J.** (2010) Spatial and temporal variability in the relationship between water colour and dissolved organic carbon in blanket peat pore waters. *Science of the Total Environment*, 408, 6235 - 6242.

### 08/11/2010

#### *News*

**Joseph Holden** is to be awarded the 2011 Gordon Warwick award by the British Society for Geomorphology. The award is for excellence in geomorphological research. He will receive the award at a ceremony in Liverpool next June.

**Sarah Buckmaster, Joseph Holden and Pippa Chapman** (with Mark Reed and Claire Quinn) presented a Sustainable Uplands lunchtime seminar for senior policy-makers in Westminster last week. The proposals presented were suitable for policy implementation and these were very well received and there have been a number of important follow-up enquiries (e.g. from MP's secretaries/researchers and senior civil servants) and very strong feedback.

**Adrian McDonald** attended the regional flood defence committee, the meeting of chairs of the Strategic flood and coast defence partnerships and a brief meeting to sign off the last catchment management plans for coastal rivers.

**Adrian McDonald, Richard Roebuck and Paul Eades** attended the revisions meeting at the Royal Institute of British Architects.

**Richard Roebuck and Paula Micou** were invited observers at a meeting of companies, regulators and policy departments considering behavioural aspects of water efficiency modification. The meeting was facilitated by **Adrian McDonald**.

**Adrian McDonald** attended the Westminster Forum meeting on IPR and the economy.

On behalf of [water@leeds](mailto:water@leeds), **Adrian McDonald** with several partners submitted an expression of interest to Leeds City Region to develop an expertise node on water.

**15/11/2010**

**News**

**Clare Woulds** and **Carol White** have secured a grant in kind worth £18,000 for use of the NERC Life Sciences Mass Spectrometry facility at Lancaster. This will allow the analysis of samples from recent carbon tracing experiments in the Baltic and Arabian Seas.

**Clare Woulds** was invited to give a talk at the Society of Biology Symposium, held at The Deep in Hull on Saturday 13 November.

**Rebecca Slack** had a paper presented at Waste 2010 (Stalleicken, J. and **Slack, R.** "Trends in hydrogen sulphide concentrations in landfill gas: an assessment of perceived causes and operational implications") and will be presenting recent research at the Cefic-LRi 12th Annual Workshop 2010 in Brussels on 17 - 18 November with colleagues from Imperial College London ("Female breast cancer: who, how and why?").

**Faith Chan** attended the Humber Flood risk management (FRM) Steering group meeting on 08 November 2010 at the Environment Agency. He observed the stakeholders engagement and the recent progress in the Humber FRM strategy. The meeting was facilitated by **Adrian McDonald**.

**Joseph Holden** has been elected as a Fellow of the Royal Meteorological Society.

**What do UK uplands mean to you?**

The Sustainable Uplands project has launched an innovative new website at [www.ouruplands.co.uk](http://www.ouruplands.co.uk). The aim of this website is to give UK uplands a much-needed voice and find out what these areas mean to each of us via written accounts, photos, videos, and artwork. This provides a platform to communicate the value of these beautiful and unique environments. Participants from all walks of life are being invited to contribute to the site, from farmers and landowners to policy-makers and children who live and go to school in the uplands.

**Joseph Holden** and **Sarah Buckmaster** also featured in an article in the Yorkshire Post last Wednesday describing the work of the Sustainable Uplands project and the new website described as above. Hopefully this will be another route to KE and impact. The story was also covered by USA Today.

**Joseph Holden, Richard Grayson** and **Rebecca Slack** attended the "10 Ways to a More Sustainable World" launch event on Friday 12 November. They represented the Sustainable Uplands project and also used this as an opportunity to further promote water@leeds. This was a university-wide competition, and ten projects were chosen to showcase and celebrate their world-class achievements and demonstrate how the University of Leeds is having a significant impact on the wellbeing of the natural world and the responsible use of natural resources, as well as a positive influence on the behaviours, products, services, technology and wider societal issues associated with this vital cause.

**23/11/2010**

**New papers**

**Kay, P.** (2010). Reply to comment on 'A pilot study of the efficacy of residuum lodges for managing sediment delivery to impoundment reservoirs'. *Water and Environment Journal*, 24(4), 248.

Byrne-Bailey, K. G, Gaze, W. H., Zhang, L., **Kay, P.**, Boxall, A., Hawkey, P. M. and Wellington, E. M. H. (accepted). Integron prevalence and diversity in manured soil. *Applied and Environmental Microbiology*.

**Faith Chan, Adrian McDonald** and **Gordon Mitchell** have an article published in China-dialogue entitled "A lot to lose" and it is available in both English and Chinese!

(<http://www.chinadialogue.net/article/show/single/en/3919-A-lot-to-lose>)

**29/11/2010**

**News**

**RBPM cluster meeting - Priority water research questions**

**Wednesday 01 December, 2 - 3 pm, Room 1.36**

Last year, several members of RBPM and water@leeds conducted an exercise which produced 94 priority water research questions that policy makers and practitioners would like answering. The paper from the process can be read [here](#).

At this RBPM cluster meeting we would like to continue discussions about how the school can respond to some of these questions, be it through directed research applications or writing papers, for example. The questions are not all scientific so the session is open to anyone who would like to come along and get involved. For example, one of the top 10 questions was about how we might improve knowledge transfer between scientists and stakeholders. As a seed for discussion, could we as a group be producing a publication detailing the processes that underpin the Yorkshire Water strategic research partnership?

Please try to read the paper before the session, and come along with some ideas about how we might begin to address one or more of the questions.

***New paper:***

**Carrivick, J.L.** (2011) Exploring the value of professional body accreditation for Masters programmes. *Journal of Geography in Higher Education*.

## River Basin Processes and Management Cluster News: December 2010

**06/12/2010**

### *Policy paper published*

**Chan, F., Loh, C., McDonald, A., Mitchell, G. and Adekola, O.** (2010) "Rich Delta, Costly Flooding" Civic Exchange policy report (attached).

The article was also linked in the Standard, Hong Kong on 01 December 2010, "Floods to move a million, study warns".

[http://www.thestandard.com.hk/news\\_detail.asp?cat=4&art\\_id=105519&sid=30476613&con\\_type=1&dir=20101201&fc=4](http://www.thestandard.com.hk/news_detail.asp?cat=4&art_id=105519&sid=30476613&con_type=1&dir=20101201&fc=4);

Bloomberg (by John Duce) on 30 November 2010, "Climate Change Increasing Flooding Risk in Hong Kong, Pearl River Delta". <http://www.bloomberg.com/news/2010-11-30/climate-change-increasing-flood-risk-in-hong-kong-update1-.html>;

And also China Daily Hong Kong Edition (by Timothy Chui) on 01 December 2010, "Flood risk warned on Lok Ma Chau Loop".

[http://www.cdeclips.com/en/hongkong/Flood\\_risk\\_warned\\_on\\_Lok\\_Ma\\_Chau\\_Loop/fullstory\\_56135.html](http://www.cdeclips.com/en/hongkong/Flood_risk_warned_on_Lok_Ma_Chau_Loop/fullstory_56135.html).

### *Press conference*

**Faith Chan** has presented his joint flood policy report and his research on the sustainable flood risk appraisal in Hong Kong and the Pearl River Delta with the Civic Exchange on 30 November 2010 and has been interviewed from various Hong Kong radio stations and newspapers (attached press release has details).

**Richard Grayson** has been awarded a grant of £1496 by the British Society for Geomorphology for a project entitled 'Development of an improved analytical method for measurement of particulate organic carbon using an autoanalyser'.

**13/12/2010**

### *News*

On 08 December **Clare Woulds** attended the opening of the LIFER gas chromatography and isotope analysis facility in Liverpool.

On 09 December **Clare Woulds** gave a year 7 assembly at Calder High School in Mytholmroyd. She presented slides about her last Arabian Sea research cruise, and about her forthcoming Southern Ocean cruise. While at sea Clare will be in contact with Calder High geography students via, e-mail, a blog, and hopefully a video diary. She will re-visit the school after the cruise to report on her experiences. These activities form part of a Researchers in Residence placement.

### *New papers:*

**Carrivick, J.L.** (2010) Geographic Information Systems (GIS) in the Water Industry. *Water and Sewerage Journal*, (4). 37-39. <http://viewer.zmags.com/publication/a1bcbf2f#a1bcbf2f/38>

**Chapman, P.J., McDonald, A.T., Tyson, R., Palmer, S.M., Mitchell, G., and Irvine, B.** (2010) Changes in water colour between 1986 and 2006 in the headwaters of the River Nidd, Yorkshire, UK. *Biogeochemistry*. 101 (1-3) 281-294. [DOI: 10.1007/s10533-010-9474-x](https://doi.org/10.1007/s10533-010-9474-x)

**Brown, L.E., Mitchell, G., Holden, J.,** Folkard, A., Wright, N., Beharry-Borg, N., Berry, G., Brierley, B., **Chapman, P.,** Clarke, S., Cotton, L., Dobson, M., Dollar, E., Fletcher, M., Foster, J., Hanlon, A., Hildon, S., Hiley, P., Hillis, P., Hoseason, J., **Johnston, K., Kay, P., McDonald, A.,** Parrot, A., Powell, A., **Slack, R.J.,** Sleigh, A., Spray, C., Tapley, K., Underhill, R. & **Woulds, C.** (2010) Priority water research questions as determined by UK practitioners and policy makers. *Science of the Total Environment* 409: 261-271.

[DOI:10.1016/j.scitotenv.2010.09.040](https://doi.org/10.1016/j.scitotenv.2010.09.040)

**Dickson, N.E., Brown, L.E. & Carrivick, J.L.** (2010) Hydroclimatological and anthropogenic influences on stream temperature dynamics of the Eisboden glacier-fed river, Austrian Alps. *Proceedings of the third British Hydrological Society international symposium, Newcastle, UK:* 726-733.

Woodward, G., Benstead, J.P., Beveridge, O.S., Blanchard, J., Brey, T., **Brown, L.E.,** Cross, W.F., Friberg, N., Ings, T.C., Jacob, U., Jennings, S., Ledger, M.E., Milner, A.M., Montoya, J.M., Pichler, D.E., O'Gorman, E., Petchey, O.L., Olesen, J.M., Reuman, D.C., Thompson, M.S., Van Veen, F.J.F. & Yvon-Durocher, G. (2010) Ecological networks in a changing climate. *Advances in Ecological Research* 42: 71-139. [DOI:10.1016/B978-0-12-381363-3.00002-2](https://doi.org/10.1016/B978-0-12-381363-3.00002-2)

**Brown, L.E.,** Cooper, L., **Holden, J. & Ramchunder, S.** (2010) A comparison of stream water temperature regimes from open and afforested moorland, Yorkshire Dales, northern England. *Hydrological Processes* 24: 3206-3218.

[DOI: 10.1002/hyp.7746](https://doi.org/10.1002/hyp.7746)

Boyle, J.F., Dearing, J.A., **Blundell, A.,** and Hannam, J.A. (2010) Testing competing hypotheses for soil magnetic susceptibility using a new chemical kinetic model. *Geology*, 38, 1059-1062.

**21/12/2010**

#### **News**

Congratulations to **Sorain Ramchunder** who has successfully defended his PhD thesis.

There was a page devoted to an interview with **Andy Baird** discussing peatland research in a recent edition of EoS (23 November) - EoS is the weekly newspaper circulated to around 50,000 members of the American Geophysical Union.

Dave Rippin, **Jonathan Carrivick** and **Chris Williams** have been granted a NERC Airborne Research and Survey Facility (ARSF) overflight for the glacier Karsaglaciaren in arctic Sweden. The overflight will collect high-resolution topographic data via LiDAR, aerial photographs and hyperspectral imagery.

#### **Conference paper**

**Faith Chan** has attended and been invited to chair a session in the Forum on Water Resources and Water Quality Management in Pearl River Delta from 13 - 18 December in Hong Kong and Guangzhou, China.

#### **Conference paper published**

**Chan, F., McDonald, A. T. & Mitchell, G.** (2010) Sustainable flood risk assessment and management: comparative case studies between the Pearl River Delta and United Kingdom. *Proceedings of International Conference on Water Resource and Water Quality Management cum Forum on Water Resource and Water Quality Management in Pearl River Delta. Hong Kong and Guangzhou, China. 13 - 18 December, 2010.*