

Cross-Institute Programme for Sustainable Soil Function

SoilCIP

Newsletter for July and August 2007



Roland Bol - promotion

The headline for this Newsletter is that Roland has been promoted to Band 4, backdated to 1st July. Well done Roland. Very well deserved.

BBSRC Joint Strategy Meeting

I presented some of the new science that we are doing in the SoilCIP, together with an explanation of how we had developed and were managing the SoilCIP, to BBSRC's Joint Strategy Meeting on 10th July 2007. The SoilCIP is favourably viewed within BBSRC and Council and seen as ideal for funding through one of the new Institute Strategic Programme Grants. I have been drafting a proposal and will keep you in touch with progress.

Cross-Institute visits and links

CEH

I met Bridget Emmett (CEH Bangor) at Roland's promotion interview. It seems that NERC is eager for CEH to align its new research theme on 'Sustainable management of Soils' with that of the SoilCIP. I shall be talking to Bridget about this in September/October. Each of the NERC themes has an identified lead person at NERC's Swindon Office, and one or more 'champions' on NERC's Science and Innovation Strategy Board (SISB) to advise on behalf of SISB; details at:

<http://www.nerc.ac.uk/research/emergingops/>

I don't know who the 'Soils Champion' is yet, but I'll try and meet them when I do.

EU funding

Although not strictly SoilCIP, Rothamsted and North Wyke are partners in an EU grant: 'Structuring Infrastructures for the ANALYSIS and Experimentation on Ecosystems (ANAEE)'. This is a Support Action in EU Framework Programme 7, 'Infra – 2007 – 2.1.1: Design studies for research infrastructures in all S&T fields'. The project's coordinator is Gilles Lemaire, INRA Lusignan. Other participants are

CNRS France and the Universities of Padova and Napoli in Italy. The project summary states :

This Design Study aims at implementing a new concept of integrated research infrastructures in Europe for research on agro-ecosystems and natural ecosystems and environment. This infrastructure consists in interfacing three types of platforms:

(i) The *in situ* Long Term Experimental platforms which consists in developing experiments for the main type of land use systems (arable crops, grasslands, forest, marchlands, heathlands...), where different types of land management are imposed for the long term and where the state variables of the system are monitored for the long term in conjunction with the measurement of the environmental fluxes to atmosphere and hydrosphere.

(ii) The *in vitro* ECOTRON equipments where blocks of ecosystems of different size could be introduced within a controlled environment. Since feedbacks between the plants and the soil responses take time to establish, experiments often need to last a few years. An alternative use of Ecotrons is to analyse the physiology of blocks of ecosystems which have been subjected *in situ* for years to various treatments within LTEP platforms. In that case, Ecotrons can be seen as ecological analysers receiving samples for analysis.

(iii) The *in silico* Data base and Modelling platform should complete the system by developing facilities for sharing data bases among European scientific community, and possibilities for coupling experimental with theoretical approaches.

This Design Study aims at developing and sharing this ANAEE concept among European research partners in order to (i) specify the needs for such "instrument" for the scientific stakes on continental biosphere; (ii) convince national strategic research institutions to support such a concept; (iii) inventory the capacities of partners to develop such a network of equipments; and (iv) determine the condition for networking and sharing these infrastructures among different European countries.

Visit to Rothamsted by Lord Rooker

Lord Rooker, Defra's Minister for Sustainable Food and Farming and Animal Health, made a brief visit to Rothamsted on 26th July and was told about some of the research in the SoilCIP. More details about Defra's new ministerial team are at:

<http://www.defra.gov.uk/corporate/ministers/index.htm>

Doctoral Training Grant (PhD students)

We will be applying for a second round of BBSRC Quota Doctoral Training Grants in the coming round, deadline 12th September 2007. We won a single DTG per year from 2006-8 and will be bidding for more from 2009-11. Current students are Felicity Crotty, who started in April this year, and Darren McCabe who formally starts on 1st October this year but is currently employed on a summer job with Angela Karp at Rothamsted, giving him the chance to settle in; welcome Darren.

We have one more studentship in the current round of funding, starting October 2008. I will be asking for project proposals in the autumn.

Consultation on the proposed EU Soil Framework Directive and initial Regulatory Impact Assessment

Defra, the Scottish Executive and the Welsh Assembly Government have jointly issued a consultation on the proposed EU Soil Framework Directive and initial Regulatory Impact Assessment. The consultation is designed to assist us in developing a robust negotiating position on the proposed EU Soil Framework Directive. The consultation paper seeks views on the need for new EU legislation on soil protection, on the scope of the proposed Directive, the costs and benefits associated with it, and on the detail of the proposed provisions.

The consultation closes on **19 October 2007**, but earlier responses are encouraged because of the Portuguese Presidency's intention to discuss this proposal at the October Environment Council (30 October 2007). I hope that we can find time while writing the Strategic Programme and Quota DTG proposals to respond to this. Full details of the consultation can be found at:

<http://www.defra.gov.uk/corporate/consult/soil-directive/index.htm>

AGU meeting: Investigation of Carbon and Water Cycle Processes using Isotopes: New Techniques, Data, and Analyses, 10-14 December 10-14, 2007.

An announcement about this meeting arrived in my e-mail box the other day. It will interest Roland and maybe one or two others:

Detecting and interpreting changes in biosphere-atmosphere cycling of carbon and water requires the capacity to measure and model key isotope tracers at the appropriate temporal and spatial scales. In recent years, there have been rapid developments in techniques that permit improved measurement of oxygen and carbon isotopes in both the laboratory and field. These new approaches range from improved auto-flask sampling systems, field deployable mass spectrometers, to a variety of high-frequency spectroscopy techniques. These innovations are providing new opportunities to quantify and describe the complex processes influencing carbon and water exchange between biosphere and atmosphere. This session will focus on how isotopes can be used to: 1) Improve mechanistic understanding of carbon and water cycle processes at microbial, leaf, plant, and ecosystem scales; 2) Partition and trace the flow of carbon and water fluxes across spatial and temporal scales; 3) Explore how improved data density can be used to constrain ecosystem, regional, and global carbon/water budgets; 4) Interpret short and long-term changes in atmospheric CO₂ and water vapour concentrations driven by natural versus anthropogenic processes; and 5) Evaluate long-term changes in the carbon sink/source strength of ecosystems. The abstract deadline is September 6, 2007.

Conveners:

Tim Griffis

University of Minnesota-Twin Cities, Department of Soil, Water, and Climate
1991 Upper Buford Circle, Soil Science Building Room 331

St. Paul, MN, USA 55108
612-625-3117
tgriffis@umn.edu

Xuhui Lee
Yale University, School of Forestry and Environmental Studies,
21 Sachem Street, Environmental Science Center, Room 338
New Haven, CT, USA 06511
203.432.6271
xuhui.lee@yale.edu

Kevin Tu
University of California Berkeley
Department of Integrative Biology,
Valley Life Sciences Building
Berkeley, CA, USA 94720
kevintu@berkeley.edu

Holidays

I shall be on holiday from 16th August, back on 3rd September. I hope that you will all have the chance to take a break if you've not already had one. The next Newsletter will be sent out at the end of September. I would love to get some contributions from you. See you in the autumn.

Keith Goulding, 14th August 2007