



Minutes: UKCP09 Scottish User Community – 2nd Meeting

Monday, 24 May 2010

eScience Learning Centre, University of Edinburgh

Attendees:

Adam Butler	BioSS	adam@bioess.ac.uk
Michal Petr	Forest Research	michal.petr@forestry.gsi.gov.uk
Roland Burkhard	Heriot-Watt (BIOPICCC)	r.burkhard@hw.ac.uk
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David Jenkins	Heriot-Watt (Low-Carbon Futures)	d.p.Jenkins@hw.ac.uk
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Roger Curtis	Historic Scotland	roger.curtis@scotland.gsi.gov.uk
Iain Brown	MLURI	i.brown@macaulay.ac.uk
Kairsty Topp	SAC	kairsty.topp@sac.ac.uk
Lorraine FitzGerald	SCCIP	lorraine@sniffer.org.uk
Joseph Hagg	SCCIP / SEPA	joseph.hagg@sepa.org.uk
Anna Steynor	UKCIP	anna.steynor@ukcip.org.uk
Andy Kerr	University of Edinburgh	andrew.kerr@ed.ac.uk
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Thanks:

We would like to thank the eScience Institute for hosting this meeting. It was an excellent facility and much appreciated.

Agenda:

1. An overview of UKCP09 Case Studies – Anna Steynor (UKCIP)
2. Experience Using UKCP09 – biodiversity, land use and water resources – Iain Brown (MLURI)
3. Using UKCP09 in Scotland: presentations and pop-ups from users:
 - Forest Research – Michal Petr
 - DOWNPIPE – David Kelly
 - Low-Carbon Futures – David Jenkins
 - Plus summaries from other attendees
4. Update on UK Climate Change Risk Assessment (UKCCRA) - Iain Brown (MLURI)
5. New SCCIP Project – Identifying Vulnerabilities and Adapting to Climate Change: An Area-Based Approach (The A9 Project) – Joseph Hagg (SCCIP)
6. Discussion of UKCP09 use amongst attendees
7. UKCP09 Scottish User Community going forward... training needs / events / forum / updates to UKCP09 / Edinburgh Climate Change Centre / MSc opportunities

Notes:

Agenda Items 1, 2, 3

The meeting up until lunch was focussed on attendees presenting and discussing their use of UKCP09. There were a broad range of projects represented using many of the key data products from UKCP09. Copies of some of the presentations will be made available on the eScience Institute and SCCIP websites.

Anna Steynor (UKCIP)

Provided an overview of recently produced case studies that UKCIP now has available on the UK Climate Projections website (<http://ukclimateprojections.defra.gov.uk>). These included:

- Kent County Council use of UKCP09 with GIS

- Devon County Council comparison with UKCIP02 findings
- South-West Tourism analysis with a tourism climate index
- Royal Haskoning analysis of coastal recession due to sea level rise
- CEH national assessment of change in river flows

Iain Brown (MLURI)

A presentation of work using UKCP09 for land use systems and ecosystems, discussing changes when moving from UKCIP02 to UKCP09, difficulties in using UKCP09 probabilistic data, and highlighted results that included:

- Change in land capability for agriculture and soil-climate interaction
- Drought risk and irrigation demand
- Comparison of results from HADCM3 and Weather Generator as well as difference spatial scales
- Diffuse pollution from nitrates
- Vulnerability of habitat networks and implications for ecosystem services

Michal Petr (Forest Research)

Applications of climate data from UKCP09 to forestry, including risk assessment, management planning and decision support:

- Used weather generator to simulate daily climate variables
- Risk assessments for species based on climate analysis

David Kelly (DOWNPIPE)

The DOWNPIPE project is using the UKCP09 weather generator in decision making for adaptation of building and property drainage:

- Combining weather generator with a building model to assess implications of climate change
- Discussed issues with using UKCP09 outputs with existing models and managing UKCP09 data

David Jenkins (Low Carbon Futures)

Low Carbon Futures is using UKCP09 weather generator to look at decision support for building adaptation in a changing climate:

- combining weather generator outputs with ESP-r building simulations to explore impacts
- able to assess adaptation options and support decision-making

Roger Curtis (Historic Scotland)

HS has a challenge in maintaining traditional buildings in a changing climate, it is trying to find out what adaptation is necessary. Needs to prioritise HS buildings based on impacts of weathering and coastal erosion risk. Also needs to prioritise sites that are under its remit but not within portfolio – e.g. archaeological sites and listed buildings – using GIS to identify sites most at risk and aiming to provide advice on protection (although general maintenance is often an issue, even without climate change).

David Raey (UoE)

Interested in developing decision support tools – these aren't widely available at present – what does climate change mean for asset managers.

Kairsty Topp (SAC)

Is looking at impacts of the agricultural sector, including cost/benefit analysis of adaptation strategies and interaction with mitigation measures. Running dynamic and deterministic models. Also introduced the RERAD project that will hold its first workshop in September.

Adam Butler (BioSS)

Looking at extreme events and statistical methods to estimate return levels that are beyond the data, and scaling of temporal resolutions (e.g. hour to 5 min).

Andy Kerr and Mike Minitier (UoE - SAGES)

Supporting modelling and use of data – when to use (or not) projections – issues of downscaling in space and time – non standardised solutions – issues with data management and use – complexity of research vs. communication with wider audience.

Agenda Items 4 & 5

Iain Brown (MLURI) provided a brief overview of the UKCCRA – many organisations present had some involvement with the process – unclear what role UKCP09 might have in this process

Joseph Hagg (SCCIP) provided an overview of the 'A9 Project' which will try to get organisations looking at vulnerabilities and impacts of climate change within an area from Perth to Inverness.

Andy Kerr (UoE) highlighted an upcoming EU project CLIMSAVE that will be using Scotland as a regional case study to look at climate change adaptation.

Agenda Items 7

Training needs – UKCIP is developing more advanced UKCP09 training packages (e.g. joint probabilities / weather generator), there is also a lot of material now available through the websites that users can access. If training events in Scotland are required please get in contact with UKCIP and SCCIP.

Future events – It was proposed by SCCIP that user community meetings are held on a quarterly basis – the attendees and topics are flexible and should be determined by users. UKCIP will be holding a user event in late summer that will draw together user groups from across the UK, this will also coincide with next large batch of updates to UKCP09.

Online User Forum – is now up and running at <http://moodle.ukcip.org.uk/> - there is a Scottish User Community sub-section.

Updates to UKCP09 – Anna Steynor highlighted upcoming changes/additions to UKCP09 these include:

Now available within the UKCP09 package are:

- Average monthly baseline figures for the UKCP09 administrative and river basin regions
<http://www.metoffice.gov.uk/climatechange/science/monitoring/ukcp09/available/longterm.html>
- Defra atlas of extremes <http://ukclimateprojections.defra.gov.uk/content/view/1209/549/>
- An archive of cumulative distribution function (CDF) and sampled data, accessible via ftp/http download <http://ukclimateprojections-ui.defra.gov.uk/ui/tools/browse.php?dir>
- A document on assessing the differences between UKCIP02 and UKCP09 (will be available on the new website once released)

Still under development within the UKCP09 package are:

- Publication of UK maps of climate change for a change in global temperature
- Maps of probabilities of a given change across the UK
- Improved hourly precipitation extremes in the weather generator
- Improved heat wave simulations in the weather generator
- A package of spatially coherent projections

David Reay (UoE) highlighted the formation of the Edinburgh Climate Change Centre which is a collaborative project between UoE and HW universities.

MSc Carbon Management students might be interested in dissertation topic suggestions in Oct/Nov for completion next year – also might be beneficial for user community in other ways.