







CCB-bulletin, no 4, 16 September 2004



<http://www.wageningen-ur.nl/ccb/>

New website for climate science: [Http://www.klimaatportaal.nl](http://www.klimaatportaal.nl)

UPCOMING EVENTS

1.  Rapport over klimaatverandering aangeboden aan Tweede kamer (CE, Wageningen UR, KNMI)
2.  International Conference 'Climate change: a challenge or a threat for water management (Amsterdam 27 - 29 September 2004)
3.  Announcement of the APGC-Post Flux Meeting on Oct. 22-23, 2004, Tsukuba
4.  Integrated assessment of the land system: The future of land use (28-30 Oktober2004, Amsterdam)

VACANCIES

5.  UNESCO-IHE - Lecturer in Land and Water Development (m/f) closing date 30 September 2004 see attachment
6.  Post-Doctoral Research Associate Micrometeorologist for the Carbo Europe IP Network (see attached)

NEWS ITEMS

7.  Bush shifts its Focus on Climate - 26th August 2004
8.  Effecten van klimaatverandering duidelijk zichtbaar in Europa
18 Augustus 2004 (Bron: RIVM, Europees Milieuagentschap)

1. Rapport over klimaatverandering aangeboden aan Tweede kamer (CE, Wageningen UR, KNMI)

Klimaatverandering: temperatuur mag niet meer dan 2 graden stijgen

Op 16 september heeft de voorzitter van de Tweede Kamer, Frans Weisglas, een onderzoekrapport over klimaatverandering in ontvangst genomen dat is geschreven door Alterra, het KNMI en onderzoek- en adviesbureau CE uit Delft. Het rapport is opgesteld op verzoek van de vaste commissie voor Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer. Aanleiding voor het onderzoek was de behoefte van de Tweede Kamer aan actualisering van de stand van zaken ten aanzien van klimaatverandering. Het rapport vormt de basis voor de discussie tussen Kamer en Regering over het klimaatbeleid voor de periode na 2012.

De auteurs hebben zich vooral beziggehouden met de mogelijke effecten van klimaatverandering en hoe daar mee om te gaan (het adaptatiebeleid), en daarnaast met de positie van de landbouw in het huidige en het toekomstige mitigatiebeleid. Volgens de onderzoekers is klimaatverandering nu reeds zichtbaar en daarmee ook de effecten ervan. De waarschijnlijkheid dat de opwarming van de atmosfeer wordt veroorzaakt door menselijk handelen is toegenomen. De gemiddelde temperatuur op aarde is al 0,6 graad Celcius hoger, waardoor bijvoorbeeld de zeespiegel 10 tot 20 cm is gestegen. In de loop van deze eeuw wordt een verdere temperatuurstijging verwacht van 1,4 tot 5,8 graden ten opzichte van de pre-industriële periode, en moeten we er dus rekening mee houden dat reeds in gang gezette effecten zullen doorzetten.

De onderzoekers achten twee soorten maatregelen nodig: enerzijds maatregelen om de gevolgen van klimaatverandering tegen te gaan, en anderzijds maatregelen om te voorkomen dat de temperatuur de komende eeuw met meer dan 2 graden zal stijgen. Bij een grotere of snellere stijging wordt namelijk veel schade aan onze leefomgeving verwacht. De onderzoekers adviseren diverse maatregelen, variërend van sterk internationaal beleid tot maatregelen die innovatie stimuleren en maatregelen ten aanzien van woningen en transport. Op basis van dit onderzoek zullen hoorzittingen worden georganiseerd en zal een slotdocument worden opgesteld.

Meer informatie kunt u krijgen bij Alterra, Ronald Hutjes, 0317 47 47 44 of ronald.hutjes@wur.nl. Het volledige achtergrondrapport kunt u downloaden via www.ce.nl.

2. Climate change: a challenge or a threat for water management?

Amsterdam RAI, The Netherlands : 27 September - 29 September 2004

Organized by the International Water Association (IWA) in Co-operation with the Netherlands Association on Water Management and Aquatech Amsterdam 2004.

The conference is supported by:

- UNESCO's international Hydrological Programme (IHP)
- World Meteorological Organization
- The International Commission for the Hydrology of the Rhine Base
- The international secretariat of the Dialogue on Water and Climate (DWC)
- The Ministry of Transport, Public Works and Water Management of the Netherlands
- Royal Netherlands Meteorological Institute (KNMI)
- Netherlands Institute for Inland Water Management and Waste Water Treatment (RIZA)
- Netherlands Institute for Coastal and Marine Management (RIKZ)

Second announcement and invitation to register

 [Climate-change-2nd-call.pdf](#) (570 kb)

Latest news

The second announcement and invitation to register is out! In the second announcement you can find information about the programme, excursions, social events and the registration form. For more information e-mail: Roelof.kruize@dwr.nl

3. **Announcement of the APGC-Post Flux Meeting on Oct. 22-23, 2004, Tsukuba**

An APGC-Post Flux Meeting will be convened after the symposium of "The 6th International Symposium on Plant Responses to Air Pollution and Global Changes" to be held on Oct. 20-22, 2004 at the Tsukuba Center for Institutes, Tsukuba, Japan (<http://apgc2004.en.a.u-tokyo.ac.jp/>). We hope the APGC-Post Flux Meeting will give you an opportunity to discuss the current research results, to foster cooperation and to exchange ideas.

4. **Workshop: Integrated assessment of the land system: The future of land use
28 October 2004 - 30 October 2004**

First Announcement of a Joint International Workshop: Integrated assessment of the land system: The future of land use. Details on the workshop aims and programme as well as on the registration fee and abstract submission deadline can be found on www.lucc.nl under Workshop. Deadline for Abstract submission: 15 August 2004

Location:

Institute for Environmental Studies
Amsterdam
More Information : (www.sense.nl)

5. **Lecturer in Land and Water Development (m/f) (UNESCO-IHE)**

The UNESCO-IHE International Institute for Water Education conducts long term education, training and capacity building programmes all over the world. It is also engaged in research and the evaluation and supervision of civil and environmental engineering projects in developing countries. In The Netherlands, UNESCO-IHE has a permanent staff of 125, of which 70 are scientific staff, whilst some 350 guest-lecturers from a number of countries contribute to the educational programme. Each year 750 participants from all over the world attend the regular MSc courses and the various short courses at UNESCO-IHE where the working language is English.

The department of Water Engineering

The Core Land and Water Development (LWD) of the Department of Water Engineering is mainly dealing with education and research in the field of irrigation and drainage issues in their broadest sense, as well as with the integrated development of lowland areas. With respect to irrigation there is a worldwide development, especially in the emerging developing countries, that systems are being modernised and in conjunction with this at least the responsibility for operation and maintenance of the systems is being transferred from the central government to irrigation agencies and water user associations. In addition to the technical aspects involved, the institutional and financial aspects of systems and system management play an important role in the modernization, the transfer and in the resulting operation and maintenance afterwards.

There is presently a vacancy for a Lecturer in Land and Water development within the Department of Water Engineering. The particular need is for a person who has practical as well as research experience of working within the land and water development sector and who has been involved in education and training activities as part of his / her career.

Tasks and responsibilities

lecturer, or senior lecturer in irrigation course management for regular and short courses combination of teaching and research guidance of individual studies, MSc

studies and PhD studies participation in projects abroad with emphasis on education and training

Competences

MSc, or PhD level civil engineer, speciality irrigation 5-10 years relevant international experience in modernisation, operation and maintenance of irrigation systems with a special focus on the institutional and cost recovery aspects, preferably in developing countries conversant with institutional, socio-economic and environmental aspects of water management working experience with relevant professional software preferably teaching experience, and keen interest in knowledge transfer prepared to work abroad for short and long term assignments fluent in spoken and written English team player capable of working in multidisciplinary teams

Conditions of Employment

Salary from 2934 euro to 4580 euro (scale 11 -12) depending on experience. An 8% holiday allowance. Compensation for health insurance costs applicable for civil servants. Dynamic and professional working environment. Challenging opportunity for innovative development

Information and application

Persons who wish to be considered for this post or persons who can propose eligible candidates are requested to contact the Head of the Land and Water Development Core, Prof Dr. Ir. Bart Schultz , tel +31-15-2151734, or the Head of the Water Engineering Department, Ir. Joop de Schutter, tel: +31-15-2151823.

Applications (letter of motivation, CV and references) can be sent **until 30 September 2004** to UNESCO-IHE, Personnel and Organisation Department, PO Box 3015, 2601 DA Delft, The Netherlands (E w.kool@unesco-ihe.org / Fax +31 (0)15 212 29 21). Please refer to the relevant vacancy number: 04-200-01.

6. **Post-Doctoral Research Associate Micrometeorologist for the Carbo Europe IP Network Faculté Universitaire des Sciences Agronomiques de Gembloux Unité de Physique des Biosystèmes**

STARTING DATE: October 15, 2004 or as soon as possible

APPLICATION CLOSING DATE: For full consideration September 30, 2004

CONTEXT: We seek a Post-doctoral Research Associate to participate in the night flux measurement activity of Carbo Europe IP. The overarching aim of the Carbo Europe IP is to understand and quantify the carbon balance of Europe and the uncertainty at the local, regional and continental scale. The project is divided in several components. The first component (Ecosystem carbon budget and its driving forces) aims to observe water, carbon and energy fluxes from representative land use/ cover types of Europe by eddy covariance. In this component, a particular activity is devoted to night flux measurement and analysis.

The aims of this activity are : (i) to improve the understanding of the processes that develop at night and, in particular, (ii) to better describe the advection and storage at different sites subjected to different topographies. This should allow (iii) a better quantification of the CO₂ flux exchanged at night at the sites and, thus, a better estimation of the net CO₂ exchange by ecosystems.

A mobile advection and storage measurement system will be set up. It will measure the CO₂ concentration and the air velocities at different points in order to allow a precise estimation of the advection and the CO₂ storage. The measurements will be performed with the same system during short campaigns at different sites already equipped with eddy covariance systems. It will be moved from site to site in order to allow a comparison of the different processes at different sites. The aims of the comparison are to detect the common flow patterns as well as the differences between sites, to define the topographic (slope) and the meteorological conditions (net radiation, wind speed, stability...) under which the different processes appear in order to finally allow a prediction and a quantification of the night advection and storage.

Models will be developed in order to both allow the preceding analysis and to describe more fundamentally the transport processes. Two fields could be investigated by the modelling : air movements and transport processes above complex terrains, and CO₂ storage and transport in the soil pores. These models should be calibrated and validated on measurements made at the different sites with the mobile advection system or with complementary measurements.

RESPONSIBILITIES: The incumbent will have primary responsibility for coordinating the measurement campaigns at the different sites. He will organize the system installation in collaboration with the host site staff and the different teams supplying the material. He will gather, treat the results and redistribute them to the different teams. He will be in charge of the data analysis (in collaboration with the host site PIs and the measuring team staff members) and of the modelling of processes. He will act as liaison between the different labs involved in the project, assist in organizing workshops of the advection working group. The person will also present results at the annual Carbo Europe meeting, and produce scientific publications for peer-reviewed journals. The incumbent will design and conduct individual research questions.

REQUIRED QUALIFICATIONS: A Ph.D. in micrometeorology, biometeorology, environmental physics, or similar degree program is required. Proven ability to conduct independent research, and to work as part of a scientific team. Experience in analysis, interpretation and synthesis of eddy covariance data. Candidate must have additional skills in publications. Demonstrated ability to work extensively at remote field sites with little or no supervision, and demonstrated ability to produce high quality publications. Tower experience desirable.

EMPLOYMENT CONDITIONS: Full time 2 years position. Gross salary 45,000 €.

FOR MORE INFORMATION: Contact Marc Aubinet, Unité de Physique des Biosystèmes Faculté Universitaire des Sciences agronomiques, 8 Avenue de la Faculté, B 5030 Gembloux, Belgium. fax: 32 81 62 24 39; internet: aubinet.m@fsagx.ac.be

TO APPLY: For full consideration send a letter of application, curriculum vitae, copies of transcripts of all university work, up to 2 examples of your senior-authored publications, one letter of recommendation and the names and contact information for two (2) additional references by September 30, 2004. In the letter, please explain how your experience, training, and professional goals will apply to this project. These should be sent to:

Marc Aubinet
Unité de Physique des Biosystèmes
8 Avenue de la Faculté
B 5030 Gembloux

7. Bush shifts its Focus on Climate - 28th August 2004 (New York Times)

In a striking shift in the way the Bush administration has portrayed the science of climate change, a new report to Congress focuses on federal research indicating that emissions of carbon dioxide and other heat-trapping gases are the only likely explanation for global warming over the last three decades.

In delivering the report to Congress yesterday, an administration official, Dr. James R Mahoney, said it reflected "the best possible scientific information" on climate change. Previously, President Bush and other officials had emphasized uncertainties in understanding the causes and consequences of warming as a reason for rejecting binding restrictions on heat-trapping gases.

The report is among those submitted regularly to Congress as a summary of recent and planned federal research on shifting global conditions of all sorts. It also says the accumulating emissions pose newly identified risks to farmers, citing studies showing that carbon dioxide promotes the growth of invasive weeds far more than it stimulates crops and that it reduces the nutritional value of some rangeland grasses.

American and international panels of experts concluded as early as 2001 that smokestack and tailpipe discharges of heat-trapping gases were the most likely cause of recent global warming. But the White House had disputed those conclusions.

The last time the administration issued a document suggesting that global warming had a human cause and posed big risks was in June 2002, in a submission to the United Nations under a climate treaty. President Bush distanced himself from it, saying it was something "put out by the bureaucracy."

That may be harder to do this time. The new report, online at www.climate-science.gov, is accompanied by a letter signed by Mr. Bush's secretaries of energy and commerce and his science adviser.

The White House declined yesterday to explain the change in emphasis, referring reporters to Dr. Mahoney, assistant secretary of commerce for oceans and atmosphere and the director of government climate research.

In an interview, he said the report was mainly an update on the overall climate research program and was not intended to be a conclusive "state of the science" summary of the administration's thinking. A series of 21 reports are promised on particular issues in coming years, he said, and the studies on climate models, agriculture and other subjects mentioned in the new report are "significant but not definitive."

Still, the report was disputed by some groups, aligned with industry, that oppose restrictions on carbon dioxide emissions and have attacked science pointing to dangerous human-caused warming as flawed.

Myron Ebell of the libertarian Competitive Enterprise Institute said the report was "another indication that the administration continues to be incoherent in its global warming policies."

At the same time, the report did not please environmental groups, which have repeatedly criticized Mr. Bush for opposing efforts to require restrictions on the gases linked to global warming, though he has gradually come around to the position that warming is at least partly caused by emissions.

"The Bush administration on the one hand isn't doing anything about the problem, but on the other hand can't deny the growing science behind global warming," said Jeremy Symons of the National Wildlife Federation.

The studies in the report that point to a human cause for recent warming all involved supercomputer simulations of climate, which have increased in power over the last several years.

The latest analysis, done at the National Center for Atmospheric Research in Boulder, Colo., found that natural shifts in the output of the sun and other factors were responsible for the warming from 1900 to 1950, but could not explain the sharp and continuing rise since 1970.

The report's section on agriculture focused on several studies in which fields and grasslands were exposed to doubled concentrations of carbon dioxide, with growth patterns in plants shifting in ways that could harm yields.

In such conditions, it said, plots of shortgrass prairie in northeastern Colorado contained less of the nutrient nitrogen, and their grasses were less digestible than those that grew with no extra carbon dioxide.

"In another experiment, increased CO₂ stimulated the growth of five of the most important species of invasive weeds, more than any other plant species yet studied," the report said. "This suggests that some weeds could become bigger problems as CO₂ increases."

8. Effecten van klimaatverandering duidelijk zichtbaar in Europa

Steeds meer effecten van klimaatverandering zijn zichtbaar in vele delen van Europa. Die effecten lijken de theorie van klimaatverandering te ondersteunen. Hierbij gaat het om zowel negatieve als positieve gevolgen voor natuur en maatschappij. Voorbeelden zijn veranderde weersextremen en effecten op planten en vogels, landbouw, gezondheid en economie. Gezien deze effecten, zal Europa zich meer moeten voorbereiden op klimaatverandering. Dit stelt het Europees Milieuagentschap (EEA) in een nieuw rapport 'Impacts of Europe's changing climate', opgesteld door het Milieu- en Natuurplanbureau (MNP) bij het RIVM en het Duitse Milieuagentschap UBA. Het rapport beschrijft 22 indicatoren, die waargenomen en mogelijk verwachte consequenties van klimaatveranderingen voor Europa illustreren.

De temperatuur in Europa is de laatste 100 jaar met gemiddeld 0,95 graden C gestegen. In Nederland is het zelfs nog net iets meer. Het aantal weer- en klimaatgerelateerde catastrofes per jaar verdubbelde in de negentiger jaren in vergelijking met de tien jaar daarvoor. De verhoogde frequentie en intensiteit van dergelijke extreme gebeurtenissen is consistent met wat wetenschappelijke modellen voorspellen. Uiteenlopende gevolgen van waargenomen klimaatverandering zijn zichtbaar. Zo zijn bijvoorbeeld de gletsjers in bijna alle delen van Europa in de twintigste eeuw meer dan 50% in volume achteruit gegaan. De zeespiegel is in de afgelopen eeuw met 0,8-3mm per jaar gestegen (afhankelijk van de regio). Verder is de economische schade van klimaatgerelateerde catastrofes flink gestegen in de laatste twintig jaar, deels door de stijging in frequentie van de catastrofes, deels door toegenomen welvaart. Ook voor de natuur zijn er effecten waargenomen. In de laatste drie decennia is er een achteruitgang van plantensoorten geconstateerd in delen van Europa. Naast verlies aan leefgebied is dit ook gerelateerd aan klimaatverandering. Echter, in andere delen van West-Europa, waaronder Nederland, is het aantal soorten juist toegenomen door een uitbreiding van het aantal warmteminnende soorten, terwijl het aantal koudeminnende soorten langzaam achteruit is gegaan. Verder is het jaarlijkse

groeiseizoen voor planten in Europa in de laatste dertig jaar met gemiddeld 10-14 dagen langer geworden. Daarbij is de toename in Nederland groter dan het Europees gemiddelde. De overlevingskans van vogelsoorten die in Europa overwinteren is in de laatste decennia verbeterd en zal dat blijven doen met stijging van de wintertemperaturen.

Het rapport illustreert ook mogelijke effecten voor de 21ste eeuw, gebaseerd op recente modellen. Daarbij wordt ervan uitgegaan dat er een bepaalde menselijke bijdrage is aan de waargenomen en toekomstige klimaatsverandering. De grootte van deze bijdrage is nog onzeker. Extreem koude winters zullen tegen het einde van deze eeuw bijna geheel uitblijven, terwijl extreem warme zomers en zware regen- en hagelbuien vaker zullen voorkomen. De mogelijke risico's van een toename van extreem warme zomers voor de gezondheid bleken tijdens de extreem warme zomer van 2003. Toen vielen er in het westen en zuiden van Europa meer dan 20.000 extra doden. Verder zal naar verwachting driekwart van de gletsjers in de Alpen in 2050 geheel verdwenen zijn. De stijging van de zeespiegel zal mogelijk versneld worden en nog eeuwenlang voortduren. Landbouw in Europa kan profiteren van een beperkte temperatuurstijging door een uitbreiding naar het noorden en verhoogde opbrengsten in Midden-Europa. Tegelijk wordt echter in delen van Zuid - Europa de landbouwogst onzeker door watertekorten. De waargenomen toename van plantensoorten in West-Europa zal naar verwachting in de 21ste eeuw weer omslaan in een afname, omdat de huidige soorten zich niet genoeg kunnen aanpassen aan een veranderend klimaat.

Het bovenstaande laat zien dat het klimaat in Europa met zekerheid aan het veranderen is en dat effecten zichtbaar zijn. De waargenomen temperatuursverhoging lijkt bij de huidige wetenschappelijke inzichten alleen te verklaren als er rekening gehouden wordt met een menselijke bijdrage. Al is de omvang ervan nog onzeker en onderwerp van lopend onderzoek.

Colofon:

The CCB-Bulletin is a news bulletin for researchers in the field of global environmental change from Wageningen University and Research Centre, as well as for people who are interested. The bulletin is provided by the Climate Change and Biosphere Research Centre (CCB - Wageningen UR). This bulletin board is intended for information exchange, like announcements of workshops, conferences, job opportunities and education courses in relation to global change research. It will be sent to you every 3 weeks, in case of vacancies we may use it ad-hoc. Would you like to add a news item or a changes in E-MAILADRES or you want to be removed from this newsbulletin?

Please, contact us by e-mail:: jeroen.veraart@wur.nl

2004 CCB Wageningen UR