The CCB-bulletin, no 8, 29 August 2003
http://www.wageningen-ur.nl/ccb/
(Website Updated 21 August 2003, newsletters will be on the website available from 7 7 september)

In this Bulletin:

1. Land Open Science Conference(31 October 2003, Morelia Mexico)

More info: http:www.oikos.unam.mx/landOSC
Date: 2-5 December, 2003 Morelia, Mexico
Registration Deadline: 31 October 2003

The Land Project will hold its first Open Science Conference 2-5 December, 2003 in Morelia, Mexico. The purpose of the conference is to bring together the research communities dealing with global change science related to land use/cover changes, terrestrial ecosystems, and aquatic ecosystems on land. The science plan and implementation strategy for the new Land project of IGBP and IHDP will be presented and discussed. There will be a preceding Global Change and Terrestrial Ecosystems (GCTE) symposium on 1 December.

Conference Themes
- Coupled human environmental system
- Decision making with global environmental change
- Land dynamics under multiple stressors
- Coupled biogeochemical cycles
- Aquatic ecosystem interface with the coupled system
- Vulnerability of mountain resources
- Agroecosystems and global change
- Human dominated landscapes
- Sustainability of ecosystem goods and services

2. Soils and the Carbon Cycle (14-16 October 2003, Boulder, US)

More info: http://outreach.cof.orst.edu/AmFlux/

NIGEC soils workshop
A workshop is planned on measurement and analysis of soil CO2 fluxes, to be held at the Boulder Marriott in Boulder, Colorado on October 13, directly preceding the annual AmeriFlux meeting (Oct 14-16). It is intended to generate discussion of the state of our knowledge and ideas for advancing the science. There will be about 15 invited speakers and discussion leaders, and about 30-40 observers. Gene Takle, Mike Ryan, and Bev Law are the co-conveners of the workshop.

Annual AmeriFlux Meeting
No information yet available.

Carbon Cycle and Cabon Sequestration Program (TCP) Meeting
The themes that I think should be discussed at the 1.5 day meeting include the following:
- Soil carbon measurements, processes and sequestration
- CO2/carbon experiments and related science (i.e., FACE, EBIS, genomics, etc)
- CO2 measurement and modeling at different scales (ecosystem to global)
- Research coordination with NACP activities

Please read the registration process carefully. We must receive credit card payment via fax or phone call, do to difficulties securing a web-based server. Please register and send payment before October 6, 2003. Make your room reservations early. Indicate it you have any special dietary needs.

Like last year, AmeriFlux annual site updates will be done with posters. Please indicate the number of posters you plan on presenting. Poster room facilities are approximately the same as last year, and if the poster session grows in size, we will have to make adjustments. For those who plan on presenting items that are on the agenda, Please prepare your presentation in Powerpoint and send it electronically to me

before October 10, 2003. This way we can load all the presentations prior to the meeting and avoid long delays between presentations.

I apologize for any cross postings. If you have any further questions or concerns, please do not hesitate to contact me at; hank.loescher@oregonstate.edu 541.737.8020

Looking forward to a productive conference,

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3. ECOLOGY IN FRESHWATER MANAGEMENT: (21 November 2003, Wageningen)

For the complete programme and registration: www.currentthemesinecology.nl
Place: Friday November 21st 2003. Wageningen, WICC 9.30 - 17.00

With: Prof David W. Schindler, Univ of Alberta, Canada; Prof James J. Elser, Arizona State Univ,USA; Dr Bas Ibelings, Netherlands Institute of Ecology, The Netherlands; Prof Moshe Shachak, Ben Gurion Univ, Israel; Prof William J. Davies, Univ of Lancaster, UK; Prof Mike S.M. Jetten & Dr Marc Strous, Univ of Nijmegen, The Netherlands and Prof Jos T.A. Verhoeven, Univ of Utrecht, The Netherlands

Ecology in Freshwater Management
Freshwater supply is one of the most critical environmental issues of the 21st century. The availability of freshwater of good quality is increasingly under pressure throughout the world. Ecological research has a role to play in solving these problems. Natural freshwater reservoirs such as lakes, rivers and wetlands are full of life. Through research we increasingly understand the risks to pollution and the resilience of such complex ecosystems and how their biodiversity may be restored. Other wetland ecosystems are known for their capacity to clean water and recent work has revealed the factors that determine this natural ability and its limitations. New micro-organisms have recently been discovered that possess a previously unknown metabolism which makes them very suitable for wastewater management. In dry areas water conservation is critical. Studies at the borderline between hydrology and ecology have shown that organisms may act as ecosystem engineers that preserve water in interaction with landscape properties. Using basic ecophysiological principles it has been possible to enhance the efficiency of water use by crops under arid conditions.

Focus of the symposium
In the United Nations International Year of Freshwater this symposium will focus on the water issues that lay ahead. A selected group of internationally renowned ecologists will present their innovative research related to water quality and water scarcity. The opening speaker is Prof. David Schindler, who unravelled the role of phosphate in freshwater pollution which led to the banning of phosphate in detergents worldwide. For his contribution to the improvement of water quality, he received the first Stockholm Water Prize in 1991, considered the Nobel Prize for water science.

Current Themes in Ecology
Ecology has been referred to as the science of the new millennium. Many of the current environmental

issues in our society, such as climate change, environmental pollution, and land use, require ecologists to analyse and solve them. However, as a scientific discipline, ecology is under pressure, partly caused by the increasing attention for novel developments in biotechnological and biomedical research. Yet, ecology is a thriving scientific discipline making enormous progress in many fields, producing exciting results and is ready for the major task to cope with current issues in the world. The symposium series Current Themes in Ecology has been founded to highlight some of the exciting developments in ecological research and bring them to the attention of a wider audience of both fundamental and applied scientists.

Current Themes in Ecology is a symposium series organised by:
Wageningen University
University of Nijmegen
Netherlands Institute of Ecology (NIOO-KNAW)

4. European Motor BioFuels Forum, 26 November 2003, Berlin

For the complete programme and registration: www.europoint-bv.com/events/biofuels2003

Herewith we would like to update your information on the 4th European Motor BioFuels Forum, which will be held from 24 - 26 November 2003 at the Hotel Park Inn Berlin-Alexanderplatz, Berlin in Germany. The current developments in biofuels in Europe, North and South America as well as in Asia underline the global activities in field of biomass, which are aimed at developing lasting strategies for the production and marketing of biofuels. Supply and environmental political aspects underscore the need to develop alternative supply strategies to assure mobility. It is high time to push for an international exchange of experience. It is with this in mind that the 4th European Motor BioFuels Forum takes place in Berlin.

If you would like to register for the conference please notice the special price:
registration before 01-10-2003 is Euro 440 per person. After this date a fee of Euro 490 applies. (All fees are excl. of 16 percent VAT.Included in the conference fee is: acces to all conference days, lunches, coffee breaks, the trade show, and the conference proceedings.

Contact:
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Project Manager

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5. Vacancy: Hydrologist/climatic modeller

I would like to call your attention to a newly opened job announcement within NCAR:

Scientist I Recruitment
Job Category: Scientific
Division/Program: NCAR Divisions & Programs
[Job #3210, at Boulder locations]

http://www.fin.ucar.edu/hr/careers/uco.cfm?do=jobDetailExt&job_ID=112

Each year NCAR hires several new early-career scientists to augment existing scientific staff. The goal is to hire the best young scientists who could contribute to NCAR's mission independent of scientific expertise. This hiring process is again underway and a new group of scientists will be hired over the coming year.

This year the Climate and Global Dynamics (CGD) Division has identified hydrology as one scientific area within which to expand our activities. Therefore, I would like to urge qualified hydrologists who would like to contribute to climate modeling to apply for one of the Scientist I positions. The following text provides a few more details on how a hydrological modeler could augment our climate modeling activities and other research at NCAR.

A Scientist I is needed to provide the scientific leadership and expertise to expand the existing representation of the terrestrial hydrologic cycle in the Community Land Model, the land component of the Community Climate System Model. The scientist would provide expertise broadly in basin-to-continental scale hydrology and water budgets, including such things as snow cover and melt, runoff, streamflow, and soil moisture. This scientist would contribute to an integrated understanding of energy, water, carbon, and nitrogen cycles and thus would be a critical contributor to the NCAR Biogeosciences Initiative and would help expand that initiative from its biogeochemical roots. A more sophisticated depiction of the terrestrial hydrologic cycle and water resources would also begin to merge the two communities that separately model hydrologic feedbacks within climate models and hydrologic impacts of climate change. As such, it would contribute to the evolution of CCSM to an earth systems model, but it would also contribute to assessing impacts of climate change and water resources on society and the environment under the NCAR Assessment Initiative. Finally, the scientist would contribute to and help expand the focus of the Water Cycle Initiative, which considers runoff on scales of small watersheds and uses observational analyses to understand continental runoff. The scientist would expand existing analyses and modeling in the initiative to encompass large drainage basins and continents.

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6. Vacancy: Study of emissions of non-CO2 greenhouse gases at CSIRO, Australia

More info: http://www.greenhouse.crc.org.au/crc/education/nonCO2grants.htm

Three PhD scholarships are available in Australia for the study of emissions of non-CO2 greenhouse gases. Details are available at the following web site. Note that applications close by 4 Aug, so if you are intersted, a preliminary statement of interest should be submitted if there is insufficient time for a full application.

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CSIRO Atmospheric Research
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Australia
Tel: 61 2 6246 5557
Fax:61 2 6246 5560
email: ray.leuning@csiro.au

Visit the Ozflux website at: http://www.clw.csiro.au/research/waterway/interactions/ozflux/index.html

7. Vacancy Announcement in Bangladesh

More info: www.unops.org.my

UNDP, DFID and the Government have jointly adopted a programme approach to disaster management for the first time in Bangladesh under a project titled Comprehensive Disaster Management Programme (CDMP). This approach encompasses all aspects of risk management and the CDMP's aim is to facilitate the move from a single agency relief-oriented response to a holistic strategy that addresses various issues, including that of community vulnerability. In view of this, the project is now seeking to recruit an International Expert on Climate Change to be based in Dhaka, Bangladesh for an initial 12 months with a view to extend for another 34 months.

We are looking for experienced candidates with a post graduate degree in Geography/Climatology/Environment Science/Mathematics/ Research experience in climate change and climate variability impacts, (Elnino, Lanina, global warming) and experience in conducting such researches on the national economy. Community on means of livelihood and environment. Must have at least 10 years relevant working experience in addition to other skills, like training, database management and computer skills.

The complete Terms of Reference is attached or it can be retrieved through our website at www.unops.org.my . If you are interested in applying or know of any expert with the experience, kindly send your/their CV to Sylvie Tan at e-mail: sylviet@unops.org or vacancieskl@unops.org indicating clearly, this reference number: BGD/01/004/CC

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8.Environmental flowS methodology presented by IUCN at Stockholm Water Week

More info: http://www.waterandnature.org.

Stockholm, Sweden and Adelaide, Australia, 13 August (IUCN) - IUCN today releases the guide "*Flow - The Essentials of Environmental Flows*" that sets out the way to ensure the long-term prosperity and health of river basins throughout the world.

"*Many rivers and underground reserves are empty because of the wasteful way we use water. It is estimated that already 1.4 billion people live in river basins where water abstractions are equal to or more than the available water and thus lead to serious social and environmental damage*", says Dr. Ger Bergkamp, co-editor of the report.

The implementation of 'environmental flows' in the river basins of the world can repair the damage done and help avoid future conflicts. 'Environmental flows' is an easy concept. It means enough water is left in our rivers and is managed to ensure downstream environmental, social and economic benefits. It includes planned releases of water from dams and other infrastructure. Releases of a minimal amount of water are alternated with larger amounts to cause rising water levels in the river and limited floods downstream. The goal is to maintain the river in a healthy state as agreed between the many water users in the basin. Environmental flows requires integration of a range of disciplines, including engineering, law, ecology, economy, hydrology, political science and communication. It also requires negotiations between stakeholders to bridge the different interests that compete for the use of water, especially in those basins where competition is already fierce.

"*In the Sabie river in South Africa, the natural river flow is 594 million cubic meters. Of that water, 170 million cubic meters is reserved to have water in the river in the dry season and flood the fertile floodplains in the wet season. This protects the river ecosystem and the livelihoods of downstream users*", says Ms. Megan Dyson, lead editor.

"*Flow - The Essentials of Environmental Flows*" gathers the major lessons from the pioneering work of South Africa, the United States and Australia in a practical guide for the implementation of environmental flows. The publication helps all the different interest groups to implement environmental flows and make rivers healthy again. It explains the technical methods as well as how to change laws, negotiate with stakeholders, and find the means of financing.An illustration of the importance of environmental flows comes from the Lesotho Highlands Water Project, which constructs several dams on the Senqu River System in Lesotho. Releases keep the river alive for the benefit of the poorest: downstream, 5,098 households catch an annual average of 22.7 kg of smallmouth yellowfish, rock catfish and rainbow trout per household. The approximate market value is US$ 31.78 per household. Over 13,000 households gather on average US$ 44.40 of wild vegetables each. Reeds, thatch grasses and the craft grass *leloli* within the riparian zone are harvested by 20,172 households. Medicinal plants are collected by 6,391 households, with a mean market value of approximately US$ 6.60 annually per household.

In a country where 53.9% of the rural population is below the poverty line, these natural resources, worth over US$ 80 in total, are of extreme importance. The implementation of environmental flows in Lesotho means that water is released from reservoirs to create artificial floods. These ensure that vital resources remain available to the 155,000 people downstream. Without environmental flows, these people would have lost a substantial part of their livelihood.

Environmental flows also have great benefits to biodiversity. In the Murray-Darling Basin in Australia, in 2000/2001 a 1-in-5 year flood event in the Barmah-Millewa Forest was enhanced through releases made from a major storage. Following these releases, the great egret bred in the forest for the first time since 1979, as did nine species of frog and a variety of native fish. The case of the Indus river shows that, from an economic perspective, the benefits of environmental flows far outweigh the costs. The yearly benefits of natural resources from the river are valued at US$ 120 million, which excludes the unquantifiable value of environmental aspects such as biodiversity, habitat provision and coastal protection. In comparison, releasing 25% of the Tarbela Dam water for floods, thus making it unavailable for irrigation or power generation, would cost US$ 38 million.

"*Environmental flows is an essential component of modern water management. This guide gives every country access to the tools that are needed to address our insatiable thirst for water*", says Bergkamp.

More information
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9.Warmte en droogte in zomer 2003 leidt tot vroege oogst dit Jaar

Bron: www.natuurkalender.nl (14 Augustus 2003)
Zowel juni en juli waren zeer warm dit jaar en ook mei was in de ogen van het KNMI vrij warm. De hoge temperaturen hebben dan ook een duidelijke uitwerking op de planten en dieren om ons heen. Op dit moment, midden in de zomer, zijn de gevolgen van de warmte het beste te zien aan de landbouwgewassen en de vlinders. Augustus staat algemeen bekend als de oogstmaand. Dit jaar loopt de ontwikkeling van veel gewassen tot zo'n drie weken voor op schema. Met name de druivenplanten staan er goed bij. Als het uistekende weer aanhoudt dan zal de oogst drie werken vroeger beginnen dan normaal. De aanhoudende hitte en droogte verbeteren bovendien de kwaliteit van de druiven. Op de Wijnidee website

(http://www.wijnidee.com/) schrijft de heer Schildermans dat men in het Beaujolais-gebied hoopt op de vroegste oogst sinds 1893. Als het weer aanhoudt, zullen de druiven geoogst worden vanaf 25 augustus. De druiven in het Duitse Rheinhessen zijn sinds 1934 niet meer zo vroeg in bloei gekomen als dit jaar. Ook in Wuerttemberg hebben ze nog nooit een zo vroege bloei gezien. Ook in Nederland liggen de druiven een aantal weken voor op schema. Aan de druif in de achtertuin zitten ongelofelijk veel druiventrossen die eind juli al begonnen te kleuren aldus Arnold van Vliet. Ook in Zuid Limburg zal dit jaar vroeg met de oogst begonnen kunnen worden als dit weer zo aan houdt. Net als de druiven doet de maïs het dit jaar ook goed in Nederland. Het Maïsmeetnet van Oogst meldt dat de maïs dit jaar maar liefst 30 centimeter hoger staat dan vorig jaar. De precieze hoogtes van het maïs op verschillende plaatsen in Nederland is te vinden op: http://www.lto.nl/Actueel/maismeetnet/default.htm. Dat de landbouwgewassen vroeg zijn is ook goed te zien op de website van Harry Schreuder die een boeren bedrijf heeft in Oostelijk Flevoland (http://www.harrysfarm.nl/). Op deze site vermeld hij dat het vlas dit jaar al op 12 juli getrokken is. Dit is 20 dagen vroeger dan 2002.

10. Van Geel wil in kader klimaatbeleid cruise control in alle nieuwe auto's

Bron: www.milieuactueel.nl /ministerie van VROM(21 Augustus 2003)

Staatssecretaris Van Geel wil dat alle nieuwe auto's in Europa worden uitgerust met een cruise control en boordcomputer. Dat staat in de notitie 'Nederland in de EU: de Europese milieu-agenda', waarvan deze week een samenvatting naar de Tweede Kamer is gestuurd. De plannen maken deel uit van de invoering van het zogenoemde Nieuwe Rijden (eco-driving) in Europa. Deze nieuwe milieuvriendelijkere manier van autorijden kan leiden tot ongeveer 10 procent minder brandstofverbruik en CO2-uitstoot. Het Nieuwe Rijden is een uitwerking van de afspraken die in Kyoto zijn gemaakt om het broeikaseffect terug te dringen. De auto-importeurs, verenigd in de RAI, hebben inmiddels positief gereageerd op de plannen van de staatssecretaris. Op dit moment zijn de verkoop van cruise control en boordcomputer vrijgesteld van de verbruiksbelasting BPM. Uit onderzoek van de RAI blijkt dat mede als gevolg van deze vrijstelling de voorzieningen bij twee van de drie nieuwe wagens zijn ingebouwd.

11. Feddes in NRC: naar een flexibeler peilbeheer van het IJsselmeer

Bron:NRC Handelsblad[25 augustus 2003

Ingezonden brief van Prof. Reinder A. Feddes (hoogleraar Bodemnatuurkunde, Agrohydrologie en Grondwaterbeheer) aan NRC Handelsblad

Om de gevolgen van droogte in Rijnland te bestrijden is men er pas recent toe gekomen om zoet water uit het IJsselmeergebied (IJsselmeer, Markermeer en Randmeren) naar Rijnland te pompen om daar het oppervlaktewater op peil te houden. Het IJsselmeergebied met een oppervlakte van 2000 km2 is bij uitstek ons belangrijkste zoetwaterreservoir. Zo wordt water vanuit dit reservoir ingelaten ten behoeve van de watervoorziening van Friesland, Drenthe, Groningen, Noordoostpolder en Noord-Holland.

Gemiddeld wordt echter in de zomer ook nog 326 m3/s (onder vrij verval) gespuid op de Waddenzee, een hoeveelheid die je graag zou willen benutten in tijden van extreme droogtes zoals nu. Slechts enkele weken geleden is men er toe overgegaan om het spuien op de Waddenzee stop te zetten. Achteraf gezien te laat: men had beter meer kunnen opslaan.

Het streefpeil van het IJsselmeer is in de zomer 20 cm onder NAP, in de winter 40 cm onder NAP, waarbij (afhankelijk van de hoogte van de zeespiegel, stormen, aanvoer vanuit de Rijn en vanuit de regio) de werkelijke peilen in een gemiddeld jaar tussen 40 cm onder NAP en 0 cm NAP schommelen. Dit houdt in dat met deze speelruimte van 40 cm in principe een forse berging is te realiseren. Indien men de regionale waterbehoeften tezamen met een lange termijn weersverwachting kent, kan men een flexibeler peilbeheer van het IJsselmeer realiseren dan tot nu toe het geval is.

In de geest van het rapport Waterbeleid 21e eeuw van 'eerst vasthouden, en opvangen en daarna pas afvoeren' , dient eerst te worden gezocht naar mogelijkheden om water te bergen in gebieden met te verwachten tekorten. Naast reservering van extra ruimte voor waterberging in de regio's, kan mijns inziens aanvullend het IJsselmeergebied hierin een belangrijke functie vervullen. Het voordeel van deze reeds bestaande berging is dat geen extra ruimte hoeft te worden onttrokken aan andere bestemmingen.

Om tot een uitgekiend peilbeheer te komen kunnen de waterschappen gebruik maken (en een aantal doet dat al) van geavanceerde computermodellen Deze modellen beschrijven het transport van water door de bodem, de vegetatie en de atmosfeer en voorspellen optredende verdampings- en bodemvochttekorten onder verschillende soorten landgebruik. Deze gebiedsmodellen kunnen worden getoetst aan de werkelijk optredende tekorten zoals o.a. bepaald met satellietbeelden (zie NRC 23 Aug). Samen met betrouwbare informatie over de neerslag en gegevens over de aan- en afvoer kan vervolgens de regionale waterbalans worden opgesteld.

Blijft over de weersvoorspelling op lange termijn. Een 10–daagse droge periode zoals nu kunnen KNMI en Meteo Consult al voorspellen. Gerrit Hiemstra liet op het NOS journaal zelfs al kaarten zien over de te verwachten ruimtelijke verdeling van regionale neerslaghoeveelheden van de komende week over Nederland voorzien van een bepaalde bandbreedte. Ditzelfde kan ook voor de te verwachten z.g.referentiegewasverdamping worden gedaan, zodat de situatie van het bodemvocht en de verdampingsreducties 10 dagen vooruit kunnen worden voorspeld met behulp van simulatiemodellen. Daarmee kunnen de probleemgebieden worden geïnventariseerd en kan er speciale aandacht aan het conserveren van water en het inlaten van gebiedsvreemd water worden gegeven.

Door de som van alle regionale waterbehoeften te confronteren met het op de lange termijn te verwachten weer kan met een flexibel peilbeheer het IJsselmeer beter de functie van zoetwaterberging vervullen. Met deze zoetwaterbuffer kan, zo nodig met aanpassingen van de infrastructuur, de regionale waterverdeling voor de korte termijn worden beïnvloed: zowel in droge als natte tijden.

Prof. Reinder A. Feddes, Hoogleraar Bodemnatuurkunde, Agrohydrologie en Grondwaterbeheer, Wageningen Universiteit en Researchcentrum

12. Prolonged heatwave has caused crop yields to drop across southern Europe (14 August 2003).

Source European Commission
The crop yield results at Pan-European level and a full description of the methodology **are available at** http://mars.jrc.it/stats/bulletin and at http://www.marsop.info/

22/08/2003 Europe may be breathing a sigh of relief as its record-breaking heatwave eases, but there is still plenty to worry about. Temperature changes caused by global warming are likely to transform agriculture on both sides of the Atlantic. While the heatwave claimed thousands of lives in France, started bush fires in Portugal and toppled temperature records from London to Baghdad, the European Commission (EC) issued a little-noticed bulletin. It showed a prolonged drought was causing drastic changes in agricultural output, especially in southern Europe. And the changes almost perfectly match predictions of the effects of global warming over the next century.

The European report by the EC`s Joint Research Centre in Brussels reveals that the prolonged heatwave has caused crop yields to drop across southern Europe. For example, high temperatures and water shortages have cut maize and sugar beet yields in Italy by a quarter, and wheat yields have fallen by a third in Portugal. However, yields have risen in northern Europe, which has not been affected by drought. For example, the warm weather has helped increase sugar beet yields by a quarter in Ireland and by up to 5 per cent in Denmark and Sweden. Yields of oilseed rape, or canola, rose by 12 per cent in Finland. The shift in productivity is almost exactly what was forecast last year by Jørgen Olesen of the Danish Institute of Agricultural Sciences in Tjele and Marco Bindi of the University of Florence in Italy. Their analysis predicts that agricultural productivity will soar in northern Europe as the region becomes wetter. Higher

temperatures and increased carbon dioxide levels will further boost yields in the region. But in southern Europe, temperature changes will lead to water shortages and lower crop yields, and agriculture could cease altogether in the most parched regions. "With drier conditions in the south, it will be difficult to maintain dairy production, for example, and there will be parts of southern Europe where agricultural production is no longer viable," says Olesen. "If there`s competition for [water], urban areas will probably win over agriculture."

Commission's Joint Research Centre forecasts this year's crop losses caused by drought

The Commission's Joint Research Centre (JRC) uses its advanced crop yield forecasting system to predict the effects of the persisting drought on this year's harvest in the European Union. The expected drop in the main crop yields ranges from about 2% for potato to 25% for sunflower at EU level. The loss in wheat production will be approximately 10 million tonnes compared to the previous agricultural campaign. The quantitative forecasts produced by the JRC on a regular basis in support of the Common Agricultural Policy cover the main crops, such as wheat, grain maize, rape seed, sunflower, sugar beet and potato.

Commissioner Philippe Busquin, responsible for Research, stresses that the exceptional weather situation has affected the whole of Europe and that the state of the art crop yield forecasting system allows to anticipate the impact of the drought and to support decision making in European Agricultural Policy in an effective manner.

From the analysis of the JRC crop indicators it emerges that this year's extreme weather conditions diminish the quantity and quality of the harvests particularly in central and southern Europe's agricultural areas.

The winter crops suffered from the effects of a harsh winter and late spring frost. The heat wave starting as early as June caused the crops to develop in advance by 10 to 20 days anticipating ripening and maturity stages. Thus winter-spring cereals entered into grain filling stages under insufficient soil moisture conditions.

The very high values of air temperature and solar radiation, recorded especially in the second part of July and beginning of August, resulted in a notable increase of the crops' water consumption. This, together with the summer dry spell, resulted in an acute depletion of the soil water reservoirs available to the crops. Since April 2003 the climatic water balance indicator (which represents the balance between water supply from rainfall and the crops' water requirements) shows a significant deficit in the majority of the Member States (excluding only the northern countries: Denmark, Finland, Ireland, Sweden and U.K.) giving concern for yields for the summer crops still in place.

A coherent agriculture production forecasts system for Europe

The yield forecasts are calculated bi-monthly based on agro-meteorological model outputs and satellite indicators combined with time series trend analyses. The models and methodology used have been conceived, experimented and operationally implemented within the Monitoring Agriculture with Remote Sensing Unit (MARS) of the Institute for the Protection and Security of the Citizen (IPSC) of the European Commission's JRC.

The crop yield results at Pan-European level and a full description of the methodology are available at http://mars.jrc.it/stats/bulletin and at http://www.marsop.info/

The following yield forecasts, issued on 14th August, are based upon observation data recorded on 10th August (it should be noted that all of the yield forecasts refer to potentially harvested areas):

Total Wheat (including soft wheat and durum wheat varieties): The yield is expected to be lower by 6.6% as compared to last year. At EU15 level the MARS forecasts show a reduction of the total wheat yield by around 7% which results (together with the expected reduction in areas) in a lower wheat production of

about 9.5% (approximately 10 Mt) compared to the previous year. The most affected countries contributing to the low European yields are France (about 9% below average results), Germany (7% below average), Italy (12.3% below average) and Portugal (15% below average).

Grain Maize: The yield is expected to be lower by 10.1% as compared to last year. The exceptionally low soil moisture in summer is expected to decrease the average yield to 8.2 tonnes per hectare where the European average (1998-2002) is 9.0 t/ha. The extremely dry and hot summer conditions are even affecting the irrigated varieties. Possible restrictions to irrigation could further decrease the EU figure.

Rape Seed: The yield is expected to be lower by 4.2% as compared to last year. The European yield will be lower than average by about 6.6% (2.9 t/ha instead of 3.1 t/ha). In Germany and France results are expected to be in the order of 11% and 10% lower than average. The crop suffered from the April late frost, during flowering, and from lack of rain during its ripening period.

Sunflower: The yield is expected to be lower by 25.0% as compared to last year. The exceptionally dry summer is hitting especially the non-irrigated varieties and areas resulting in a lower than average yield by about 22%. The areas most affected will be Spain and Italy.

Sugar Beet: The yield is expected to be lower by 7.2% as compared to last year. The dry conditions are giving lower yields in terms of weight of roots by about 7% as compared to last year (58.3 t/ha instead of 62.5). However, the sugar content should be higher. The areas of production around the English Channel and the North Sea appear to be the least affected.

Potato: The yield is expected to be lower by 2.0% as compared to last year. As for the other summer crops, especially the non-irrigated varieties in light soils, will suffer from drought conditions. The EU yield is currently forecast at 35.7 t/ha (36.5 t/ha last year). The quality of the product could also be affected.

Pastures: All of the main Member States pasture areas are affected by the excessive lack of moisture. However, the largest reduction in biomass produced will be in the southern countries and the southern half of France (about 17% of the EU pasture areas).

Commission's Joint Research Centre forecasts this year's crop losses caused by drought

13. PPO (Wageningen-UR) monitort de verzilting bij boomkwekerijgewassen in de Zuid-Hollandse wateren

Meer info: http://www.ppo.dlo.nl/ppo/Nieuws/Verzilting.htm (Hier is een poster in pdf te downloaden)
Source: PPO 15-08-2003

Recente *inlaat van zout water in Zuid-Hollandse wateren bedreigt de productie van boomkwekerijgewassen. Om die reden bewaakt Praktijkonderzoek Plant & Omgeving (PPO), onderdeel van Wageningen Universiteit en Researchcentrum, nauwlettend de situatie rond de verzilting voor de boomkwekerijsector.*

PPO bemonstert het water voortdurend op circa 20 representatieve punten in de regio. Daarbij vindt controle plaats op EC en chloridegehalte. Bovendien worden water- en gewasmonsters genomen op bedrijven waar schade kan worden verwacht. Op deze bedrijven wordt het gewas nauwlettend gevolgd.

Door de regelmatige controles hoopt PPO zicht te krijgen op de verspreiding van het zoute water en gehaltes waar boomkwekers mee geconfronteerd worden. De beschikbare gegevens worden vergeleken met oudere meetwaarden (o.a. 1976) en onderzoeksresultaten om de ernst van de situatie vast te stellen en waar mogelijk maatregelen te kunnen nemen. Voor veel gewassen is in het verleden een schadedrempel vastgelegd. Om problemen tijdig te onderkennen en mogelijke oplossingen aan te dragen is een vraagbaak voor kwekers gestart.

Meldingen en vragen kunnen per e-mail en per fax aan PPO gericht worden (Infobomen.ppo@wur.nl, fax: 0172-23 67 10)

PPO werkt in het onderzoek nauw samen met Kring Boskoop, de belangenvereniging van de boomtelers in de regio. Op de site van deze organisatie wordt ook aandacht besteed aan de actuele ontwikkelingen rond het waterprobleem voor telers in de regio.

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 oppurtunities 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.

Cwould 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: jeroen.veraart@wur.nl

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