

THE INTERNATIONAL OCEAN CARBON COORDINATION PROJECT (IOCCP)

A joint project of SCOR and IOC and an affiliate program of the Global Carbon Project.

Project Coordinator: Maria Hood, Intergovernmental Oceanographic Commission - UNESCO

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WHOI ocean carbon meeting provides information on future program structure

In 2003, the US Carbon Cycle Science Steering Group and its Interagency Working Group requested the ocean carbon community to develop an integrated, cross-agency implementation strategy for the ocean carbon component of this program. The Ocean Carbon and Climate Change program (now officially pronounced "O.C.cubed") was developed to undertake this task, and the US OCCC implementation strategy was published in January 2004. (download report from <http://www.carboncyclescience.gov/occc-report.html>).

At last week's meeting in Woods Hole ("The Ocean Carbon System: Recent Advances and Future Opportunities"), Scott Doney, chair of the newly created OCCC Scientific Steering Group, outlined plans for the future U.S. ocean carbon research program based on this implementation strategy. OCCC has established an 8-person steering committee composed of scientists representing the major US agencies with interests in ocean carbon: NSF, NASA, NOAA, and DOE. This steering committee will provide guidance and coordination advice to the agencies, and will interface with the larger, integrated US Carbon Cycle Science group.

Within this OCCC structure, there will also be a larger group called the "Ocean Carbon and Biogeochemistry" steering committee made up of approximately 20 people. This group will include the OCCC Steering Group members, and will steer and coordinate U.S. OCCC, SOLAS and IMBER activities. There will be an Ocean Carbon and Biogeochemistry project office and data management office funded by NSF, NASA, and NOAA, and an announcement for the competition of these two offices is expected late summer /fall of this year. In the interim, Scott Doney, Ken Buessler, and David Glover at WHOI have been funded to extend some of the coordination and data management activities of the JGOFS planning and data management offices, which ran out earlier this year. This will provide interim support for the Ocean Carbon and Biogeochemistry Program until a final project office has been established.

Royal Society of London releases report on ocean acidification

On June 30th, the Royal Society of London released it's report on "Ocean acidification due to increasing atmospheric carbon dioxide". The report describes the impacts of chemical changes on the oceans and calls for a substantial research effort to address uncertainties. (From the Royal Society

Press Release, Thursday June 30.) "Basic chemistry leaves us in little doubt that our burning of fossil fuels is changing the acidity of our oceans. And the rate change we are seeing to the ocean's chemistry is a hundred times faster than has happened for millions of years. We just do not know whether marine life - which is already under threat from climate change - can adapt to these changes." Professor John Raven, chair of the Royal Society working group on ocean acidification said: "The oceans play a vital role in the earth's climate and other natural systems which are all interconnected. By blindly meddling with one part of this complex mechanism, we run the risk of unwittingly triggering far reaching effects." The report looks at various ways of tackling rising acidity such as adding limestone to the oceans to make them more alkaline. However, it found that the only practical way to minimise the risk to the oceans and marine life is to reduce emissions of carbon dioxide into the atmosphere. The report points out that there is still much uncertainty around the impacts of ocean acidification and recommends that a major international effort be launched into this relatively new area of research.

The IOCCP has developed a new sub-site on the Ocean Carbon Directory dedicated to providing information and news on the Ocean in a High CO₂ World. Please contact Maria if you have links or materials to contribute to this network of information.

The full report is available at: <http://www.royalsoc.ac.uk/displaypagedoc.asp?id=13314>.

Global Carbon Project Climate Vulnerabilities Conference talks on-line

During the June Scientific Steering Committee meeting of the GCP, the GCP convened a mini-conference on Vulnerabilities of the Carbon-Climate-Human system. This 1 day open conference examined what is known about positive and negative feedbacks of the carbon-climate-human system and highlighted needs for future investigations. Preliminary studies suggest that, once the major positive and negative feedbacks are combined, the overall response of the system will lead to a decreasing ability of the ocean and land to absorb atmospheric CO₂ and an acceleration of the accumulation of CO₂ in the atmosphere. By the end of the century, the potential magnitude of these feedback processes could be almost as large as the fossil-fuel emissions themselves. The presentations from this mini-conference are now available on-line at the GCP web-site.

http://www.globalcarbonproject.org/meetings/2005/mini-conference_announcement.htm

New Terms of Reference approved for the IOCCP

At its 23rd Assembly, the Intergovernmental Oceanographic Commission approved new Terms of Reference for the SCOR-IOC Advisory Panel on Ocean CO₂. The CO₂ Panel will be replaced by the IOCCP and its mandate will broaden to include the full range of ocean carbon variables (not just CO₂) and to provide communications and coordination services for research programs as well as large-scale field programs. The text from the meeting report is provided below:

"Dr Maria Hood, IOC programme specialist and technical secretary for the "CO₂ Panel", introduced this agenda item. At the 2002 meeting of the IOC-SCOR Advisory Panel on Ocean CO₂ ("the CO₂ Panel"), it became clear that, while the CO₂ Panel was an effective mechanism for identifying areas requiring closer collaboration in ocean carbon observations, there was a need for a group to implement the necessary actions at the international level. In response to this need, the CO₂ Panel, in partnership with the Global Carbon Project, developed a pilot project in 2003, International Ocean

Carbon Coordination Project (IOCCP), to implement targeted, time-bound coordination activities for the ocean carbon community.

In its first two years of operation, the IOCCP has been successful at meeting the needs of the community, working directly with over 100 scientists from 17 countries, and attracting external financial support from national agencies and programmes to implement its activities. Several global, regional, and national research programmes have now asked the IOCCP to expand its programme to provide coordination services for research programmes as well as for observational activities.

To meet this request without developing a new IOC programme and keeping the financial implications at existing levels, it is proposed to replace the Terms of Reference of the present SCOR-IOC Advisory Panel on Ocean Carbon Dioxide by those of the newly expanded IOCCP, given in Information Document IOC/INF-1208 and rename the Panel the International Ocean Carbon Coordination Project."

These new Terms of Reference broaden the mandate for the IOCCP to provide communication and coordination services for ocean carbon (not just CO₂) and for research programs as well as large-scale field programs. The IOCCP will work closely with IMBER and SOLAS, as well as other national, regional, and global research programs, building on collaborations established by the December stakeholders' meeting.

For more information, visit the About pages of the IOCCP web-site.