

# JGOFS Final Open Science Conference 5-8 May 2003 ~ Washington, DC USA

*"A Sea of Change: JGOFS Accomplishments and the Future of Ocean Biogeochemistry"*

## Introductory Remarks by Hugh Ducklow on behalf of the OSC Organizing Committee



JGOFS was created as a visionary program, both **global** and **predictive** in concept, and **interdisciplinary** and **international** in execution.

We should never lose track of that J-Word – JOINT – it means together, and JGOFS was joint in two senses – joint in its union of biology, chemistry and physics, and joint in bringing together scientists and students from 30 nations. As we meet this week, we regret the problems of plague and war that prevented some of our colleagues from attending our conference. But we are grateful for everyone who chose to travel to Washington, demonstrating the continuing power of science as a force for peace, unity and understanding in the modern world.

In JGOFS we made a revolution in science.

In its original meaning, Revolution meant Return. You returned to a prior, better state, a Golden Age, and you got something new. It comes from the first scientists – the ancient observers of the Heavens, who learned that the sun returned each year in its revolution around the Earth, and that the stars returned over the eons, to their previous places in the sky.

Biogeochemistry began with studies of trace element cycling in the plankton, by G E Hutchinson and his students. The term biogeochemistry was coined by Vernadsky in his great book, The Biosphere. But biology and geochemistry came apart – at least in the West.

JGOFS reunited these fields of study.

Today in ocean science, biologists use chemical tracers to learn about the structure of the ocean ecosystem and chemists invoke the latest ecological ideas to explain patterns of fluxes. And we all test our results by coding them in models of physical circulation, validated by remotely sensed ocean temperature and color (at the beginning of JGOFS, the very existence of modeling was debated as a proper element of the program!).

It must seem ludicrous to students in the audience that it was ever any other way – that there were ever ocean programs that were not interdisciplinary.

This is the achievement of JGOFS. The Revolution is being consolidated as funding agencies and policy makers learn to create new structures for supporting and nurturing the new science, and as our findings are written into textbooks and taught in schools and shown on TV.

Indeed, we have made some progress since our earth-centric ancestors gazed skyward. The children of our time know the Earth revolves about the sun to begin each year anew. We also know there is still much to discover and understand about our world.

It is up to you to carry JGOFS forward. I hope you enjoy this celebration of our program this week, enjoy Washington and meeting your colleagues from here and abroad.

**Washington, D.C.    Hugh Ducklow    05 May, 2003**