



**INTERNATIONAL WORKSHOP IN SEVASTOPOL ON STUDY OF METHANE FORMATION,
TRANSPORT PATHWAYS AND THE ROLE WITHIN THE CARBON CYCLE
IN THE BLACK SEA**

On initiative and with sponsorship of the Research Center Ocean Margins, University of Bremen (RCOM, Germany), the International Workshop on "Methane in sediments and water column of the Black Sea: formation, transport pathways and the role within the carbon cycle" took place in Sevastopol (Ukraine), from 17 to 22 May 2005. The workshop was supported by the Ministry of Education and Research in Germany (BMBF), and was organized by Institute of Biology of the Southern Seas (IBSS, Sevastopol, Ukraine), the Center for Marine Geosciences of Moscow State University (MSU, Moscow, Russia) and the RCOM. The Programme Committee was composed of Prof. Gerhard Bohrmann (RCOM), Prof. Michael Ivanov (MSU) and Prof. Viktor Egorov (IBSS).

The workshop was opened by deputy Director of IBSS DSc Yu. N. Tokarev.

Workshop was focused on hydroacoustic, seismic, geothermic studies of methane sources in the Black Sea, on visual underwater observations, microbiological and biogeochemical researches and the modeling of distribution and migration of methane in the bottom sediments and water column, on results of geological, geochemical and geophysical investigations of Black Sea gas hydrates and mud volcanoes carried out during the recent international expeditions on German, Russian, French and Ukrainian oceanographic vessels.

Also, numerous hydro-acoustic flare images, found at the Black Sea mud volcanoes, and the maps of basin-wide distribution of methane seeps were presented during the workshop. The relation of gas seeps distribution to the sea-floor morphology and sub-surface structures, the calculations of the gas fluxes in specific Black Sea areas, such as the Dnepr paleo-delta, the contribution of gas seeps to the flux of methane to atmosphere, and the influence of the methane plumes on abiotic and biotic features of the water column,

including structure of backscattering layers, have been shown and discussed. An emphasis was done on the mercury-enriched fluids found in the upper bottom sediments adjacent to methane seeps.

A number of presentations were related to methane origin, to microbial processes of its transformation, particularly – anaerobic oxidation of methane operated by a consortium of archaea and sulphate-reducing bacteria, and to biogeochemistry of carbonate microbial buildups growing at the methane seeps in anoxic zone of the Black Sea.

Also, main outcomes of international research and technological development projects, supported by EU and some national and intergovernmental foundations (ASSEMBLAGE, BEBOP, CRIMEA, GEO-HYDRATE, GEOTECHNOLOGIEN, GHOSTDABS, MARGASH, METRO, OMEGA, UNESCO/IOC TTR), as well as aspects of joint databases development, related to these projects, have been presented and discussed.

The workshop was attended by 37 scientists, which made 31 oral and 8 poster presentations prepared in 29 institutes and research centers of 13 countries: Azerbaijan, Belgium, Bulgaria, Canada, France, Georgia, Germany, Netherlands, Norway, Romania, Russia, Turkey and Ukraine.

After the workshop, the most of its participants took part in the field trip in the area of Kerch peninsula, organized by Academician, Prof. E.F. Shnyukov (Kiev, Ukraine), visiting there some land mud volcanoes.

V. N. Egorov, Prof., DSc,
S. B. Gulín, DSc,

Institute of Biology of the southern Seas, Sevastopol,
Ukraine