

The year 2002 has been a turbulent year in terms of science and building activities but also financially and socially.

Virtually all year long most of our personnel suffered significantly from the activities associated with the building of ca. 3000 m<sup>2</sup> laboratories, offices, storerooms and the canteen going on above their heads. There was a lot of noise, dust and dirt and every now and then no electricity, water or other facilities. A sigh of relief was noticed when most of the builders left the main building at the end of November. The members of several scientific and supporting departments as well as the personnel of Alterra started to move in and were installing themselves in the new offices and laboratories at the very end of the year. The major renovation of the large Experimental Facility Building went on all year and will be finished and ready for use again early next year. Furthermore, preparations have been made for a second phase of new building of offices for the technical departments, a facility to store formaline preparations and the guest centre.

The RV Pelagia as well as the other research vessels have been cruising all year long to facilitate the seagoing research of many Dutch and foreign marine research groups. The new deep-sea winch has been installed and used throughout the year and has, as expected, operated very well. Since it is foreseen that the RV Pelagia will be fully- or even overbooked in the years to come it was decided to extend the permanent crew considerably to prevent hiring external crew members on a temporary base. This year the RV Pelagia became part of a consortium of research vessels run by England, France, Germany and the Netherlands. This participation will further improve the flexibility and quality of our national seagoing research. Moreover, in July the RV Pelagia became ISM-certified, so that the quality of operation of the ship is guaranteed even more than before. One of the old small ships operating on the Wadden Sea was sold and replaced by a faster and more adequate ship, the Stern. The new building of a modern fast ship, to be shared by Royal NIOZ and TNO, for transport and research in the Wadden Sea and the coastal North Sea has been prepared in detail. If sufficient funding is obtained that ship will be built next year.

The excellent seagoing facilities will also enable the execution of a major five-year scientific program, LOCO (Long-Term Ocean Climate Observations). This program focuses on the permanent and long-term observation of the variability of the worldwide Thermo Haline Circulation (THC) at crucial locations, i.e. the Irminger Sea, the Mozambique channel and the Indonesian Through-Flow by means of mooring and modelling activities by international co-operation of the physical oceanographers of the University of Utrecht (IMAU), the KNMI and Royal NIOZ with physical oceanographic research groups of many other countries. Funding for this program was obtained through NWO (NWO-groot). At a later stage chemical and biological sensors will be installed on the mooring devices to monitor long-term changes in the chemistry and (micro)biology as well.

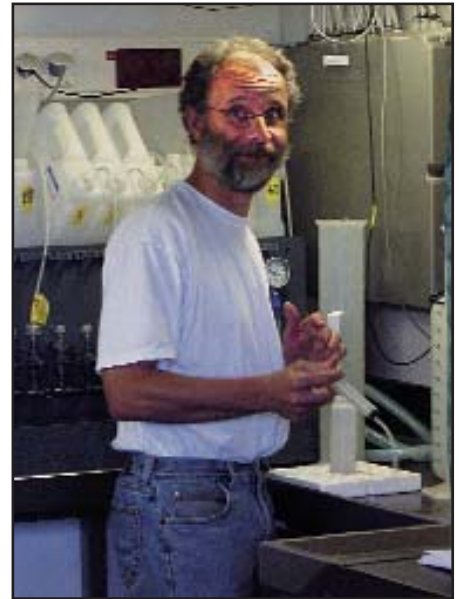
A major successful effort was undertaken by Helmut Thomas and many coworkers over the last two years as part of the NEBROC program. For the first time a detailed study was performed to find out whether a coastal sea like the North Sea is a source or a sink for CO<sub>2</sub>. Four major expeditions during four subsequent seasons took place and thousands of water samples were analyzed. The intriguing results are mentioned in this annual report.

Although the tenure staff of Royal NIOZ decreased once again as a consequence of the financial status the total number of tenure and temporal scientists remained at the same level due to the successful submissions of proposals to several funding agencies. As a result the total number of articles in peer-reviewed journals, including Nature and Science increased as well as the number of theses.

To improve the financial situation of Royal NIOZ the NIOZ Board and directory have spent considerable time and energy in discussions with NWO and others. Several documents have been prepared highlighting the historical cause of the financial problems as well as the required budgets for 2003 and the years thereafter. Apart from the funding for science and seagoing facilities the high costs required for the working environment and labour conditions, for safety and security as a consequence of Dutch legislation have been emphasized. It is foreseen that the General Board of NWO will take a final decision on these matters early 2003.

Early this year a major farewell party was organized for ca. 30 coworkers who left or were about to leave Royal NIOZ as a consequence of our early-retirement arrangement set up in 2000. The atmosphere at that party was very good and all participants enjoyed several cabaret performances of NIOZ coworkers and a professional, the dinner, as well as many shared sweet memories.

November 6 and the days and weeks thereafter Royal NIOZ was in a shock; Wim van Raaphorst, the department head of the Department of Marine Chemistry and Geology, was hit by a car while biking home in terribly bad weather and died shortly afterwards in the hospital in Den Helder, leaving behind his wife and three young children. Wim was not only an excellent scientist with a very broad multidisciplinary view of marine sciences but also a dedicated Department head and a very sympathetic person with many good friends in and outside Royal NIOZ. One of his last activities was leading the preparation of a new Science Plan for the next 5 to 10 years for Royal NIOZ. His ideas and thoughts will certainly impact our science in the years to come.



I have the wish to end this introduction of our annual report 2002 by expressing my hope that Royal NIOZ as well as other scientific institutions in the Netherlands will be able to maintain the high quality of their research, despite the continuous and nation-wide loss of quality in basic and high school education, in management of enterprises and in politics and despite the ever decreasing funding for science.

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