

Contributor: Marieke J. Rietveld

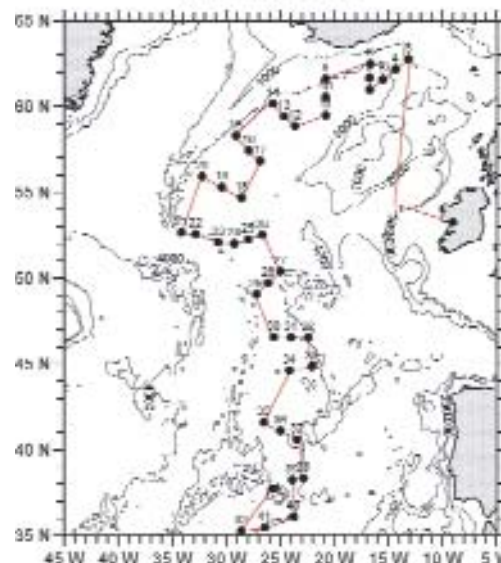
MRF advises the Earth and Life Sciences Board (GB-ALW) of NWO on the technical, logistic and financial aspects of the execution of the National Programme for sea research. When sea-going projects have been approved and granted by GB-ALW, MRF helps the chief scientists in the planning, preparation and execution of the cruises. MRF also advises GB-ALW on long-term investments, in consultation with the financial department and technical services of NIOZ and advisory committees on CTD systems, Auto-analyser systems, Moored instrumentation systems, Bottom sampling and seismic systems and Biological sampling systems. In these advisory committees scientists and technicians from all Dutch scientific groups involved in sea-going research participate.

In June 2002 the updated Long Term Plan on seagoing Marine Facilities 2001 — 2005 was submitted to the NWO advisory Committee for Marine Facilities (CMF). The Long Term Plan will be updated every year.

In 2002 the National Programme consisted of:

1. PASS-2/BIODEEP, Palaeoceanographic, Palaeoclimatic, Palaeo-environmental and diagenetic Aspects of Sapropel formation in the Eastern Mediterranean with emphasis on the most recent S1 (PASS-2). Project manager and cruise leader Dr. G.J. de Lange, Institute of Earth Sciences, Utrecht University. The project is the sea-going contribution to the EU-programme Sapropels and Paleooceanography (SAP) in combination with the EU-project BIODEEP. The overall aim is a better understanding of the (paleo)functioning of the Eastern Mediterranean and to determine the role in the global environment by studying the characteristic biogeochemical processes. The Project is a co-operation with Italian research groups. This year field work took place on board of the Italian research vessel URANIA.
2. PLUME & BLOOM, the Role of non-phytoplankton food for zooplankton in the North Sea. Project manager and cruise leader Dr. M. Baars (NIOZ). This multidisciplinary Frisian Front programme concentrates on both the nutrient, turbidity and plankton dynamics in the East Anglian Waters as well as on the resulting blooms and secondary pelagic consumption and production downstream over the Frisian Front. In 2002 a 12-day research cruise was carried out on board R/V PELAGIA in August.
3. CANOBA (The Continental Shelf Pump: a pilot study in the North Sea). Project manager and chief scientist Dr. H. Thomas (NIOZ). This project aims to test the hypothesis of a continental shelf pump for the uptake of CO₂ from the atmosphere and the subsequent transport to the open ocean in the North Sea. Two 26 day cruises were carried out on board RV PELAGIA, one in the winter (February/early March) and one in spring (May) covering the whole of the North Sea.
4. EMIR (Enhanced Carbon Mineralisation rates in permeable sandy sediments). Project manager and chief scientist Dr. ir. W. van Raaphorst (NIOZ). This project studies the role of sandy sediments in carbon cycling. A 17 day cruise was carried out on board RV PELAGIA in June 2002 in the nearby North Sea.
5. TRANSAT (Transformation of dissolved organic matter (DOM) in the North Atlantic Deep Water and intermediate waters). Project manager Prof.dr. G. Herndl (NIOZ). This project aims to determine the structural changes in the bacterioplankton community and the dissolved organic matter (DOM) in the North Atlantic Deep Water (NADW) over a timespan of around 50 years. A cruise was held in the North Atlantic Ocean from the Greenland/Iceland/Norwegian (GIN) Sea towards the Azores during 26 days on board R/V PELAGIA covering a distance of approximately 5000 km.
6. FORAMS (The role of Foraminifera in Benthic Food Webs and the Marine Carbon Cycle). Project manager Dr. L. Moodley (NIEE-CEME). The purpose of this project is to establish the role of foraminifera in the benthic carbon cycle and food web using stable isotope tracers in mesocosm experiments. A 6 day cruise was performed on RV PELAGIA in mid April.
7. MOMAP (Mortality of marine phtoplankton in ecosystems with contrasting trophic status (oligotrophic vs eutrophic)). Project manager Dr. Corina Brussaard (NIOZ). This project has three main goals: first to elucidate the ecological role of phytoplankton cell lysis in systems along a large trophic gradient. Secondly, to identify and understand the mechanisms controlling phytoplankton mortality. Thirdly, to comprehend the effects of environmentally relevant variable on the different algal mortality processes. A 14 day cruise on board RV PELAGIA was done in the second half of April.

TRANSAT 2002



Map of the transect sailed for the TRANSAT cruise from the GIN sea to the Azores.

Advice to GB-ALW for the National Programme 2003:

For the ongoing TRANSAT project (Transformation of dissolved organic matter (DOM) in the North Atlantic Deep Water and intermediate waters; project manager Prof.dr. G. Herndl, NIOZ) a cruise was advised in the North Atlantic Ocean from Bermuda towards the Greenland/Iceland/Norwegian (GIN) Sea during 26 days on board R/V PELAGIA.

For the ongoing MOMAP project (Mortality of marine phytoplankton in ecosystems with contrasting trophic status (oligotrophic vs eutrophic); project manager Dr. Corina Brussaard, NIOZ) a 14 days cruise on board RV PELAGIA was advised to take place in July in the North Sea.

The 2003 cruise for the long term PASS-2 project (project manager Dr. G. de Lange, UU) will take place on board the Italian RV UNIVERSITATIS in an 16 day cruise in June/July in the Mediterranean.

For the new BADE project (Bacterioplankton cell death: the diel variations in microbial activity in the surface layers of the Western Mediterranean Sea gyre as influenced by ultraviolet radiation; project manager Prof.dr. G. Herndl, NIOZ) a 21 day cruise was advised in the Western Mediterranean on board RV PELAGIA.

For the ODP proposal 549-Full2 (project manager Dr. J.W. Zachariasse, UU) a preparative cruise was advised in June 2003 for 12 days on board the UK research vessel RRS CHARLES DARWIN.

For the new EUROCORES projects EUROMARGINS and MEDIFLUX/NAUTINIL cruises were advised on RV PELAGIA for 30 days on the Rockall/Porcupine and in the Shetland Channel for EUROMARGINS and on the French RV L'ATALANTE with the submersible NAUTIL of IFREMER for 30 days in the Eastern Mediterranean and Nile Delta for NAUTINIL.

For the NWO big-investment grant for the LOCO project (Long-Term Ocean Climate Observations) three cruises were advised. One cruise for LOCO/IW (Internal Waves; project managers Dr. H. van Haren and Dr. L. Maas, NIOZ) in February/March for 26 days in the Canary Basin on board RV PELAGIA; one cruise for LOCO/North Atlantic (project manager Dr. H. van Haren, NIOZ) for 4 days in the Irminger Sea in combination with the NIOZ CLIVAR cruise CAMP in the North Atlantic on board RV PELAGIA and for LOCO/Mozambique (project manager Dr.ir. H. Ridderinkhof, NIOZ) in November for 6 days on board the UK research vessel RRS CHARLES DARWIN in the Mozambique Strait.

M.J. Rietveld, member and secretary of ISOM, participated in the 16th meeting of the International research Ship Operators Meeting (ISOM), at FIMR in Helsinki, Finland. She also participated in the 4th European Research Vessel Committee (ERVO) meeting in Bergen, Norway.

The total effort in terms of ship days and personnel involved in 2003 is given in the table.

Project		ship days	scientists	students	MRF support	others
1	PASS-2/BIODEEP	18	6		4	
2	PLUME&BLOOM	12	7	2	5	2
3	CANOBA-3	26	2	7	2	
	CANOBA-4	26	4	7	2	
4	EMIR-2	17	8	2	4	
5	TRANSAT	26	9	3	3	
6	FORAMS	6	9		1	
7	MOMAP	14	9	4	2	
	Total	145	54	25	23	2