



The volume aims to present the scientific results obtained during the second phase of the ECOMARGE (ECOsystèmes de MARGE) programme, a part of the France-JGOFS dedicated to the study of the continental margins. After a first phase carried out in the Northwestern Mediterranean, the ECOFER (ECOsystème du canyon du cap FERret) experiment was undertaken in the Atlantic margin off the Bay of Biscay.

The objectives addressed are: to determine the transport mechanisms of particulate matter from the shelf to the basin, to study the particulate fluxes in relation to hydrology, hydrodynamics and climate, to couple these fluxes with the benthic system (organisms and sediment), to attempt to construct budgets of particles and carbon in particular. The strategy used for an interdisciplinary approach includes: large scale investigations of the continental shelf, slope and basin during seasonal cruises, the use of sediment trap moorings at selected stations in the Cap Ferret Canyon, the investigation of benthic communities and modern sediments.

The volume included 15 papers presenting results obtained in the water column (from primary production to particle dynamics) and in the sediment (biological, sedimentological and biogeochemical aspects).

P. Castaing et al. -- Relationship between hydrology and seasonal distribution of suspended sediments on the continental shelf of the Bay of Biscay -- 1979-2001

Xavier Durrieu de Madron, Patrice Castaing, François Nyffeler and Thierry Courp -- Slope transport of suspended particulate matter on the Aquitanian margin of the Bay of Biscay -- 2003-2027

Jean-Marie Froidefond, Patrice Castaing and Robert Prud'homme -- Monitoring suspended particulate matter fluxes and patterns with the AVHRR/NOAA-11 satellite: application to the Bay of Biscay -- 2029-2055

Pierre Laborde, Javier Urrutia and Victor Valencia -- Seasonal variability of primary production in the Cap-Ferret Canyon area (Bay of Biscay) during the ECOFER cruises -- 2057-2079

Encarna Ribera Maycas, André Bourdillon, Claude Macquart-Moulin, Françoise Passelaigue and Gilbert Patriiti -- Diel variations of the bathymetric distribution of zooplankton groups and biomass in Cap-Ferret Canyon, France -- 2081-2099

Serge Heussner et al. -- Spatial and temporal patterns of downward particle fluxes on the continental slope of the Bay of Biscay (northeastern Atlantic) -- 2101-2146

Luc Beaufort and Serge Heussner -- Coccolithophorids on the continental slope of the Bay of Biscay - production, transport and contribution to mass fluxes -- 2147-2174

Olivier Radakovitch and Serge Heussner -- Fluxes and budget of ²¹⁰Pb on the continental margin of the Bay of Biscay (northeastern Atlantic) -- 2175-2203

J.M. Jouanneau, O. Weber, M. Cremer and P. Castaing -- Fine-grained sediment budget on the continental margin of the Bay of Biscay -- 2205-2220

Michel Cremer, Olivier Weber and Jean-Marie Jouanneau -- Sedimentology of box cores from the Cap-Ferret Canyon area (Bay of Biscay) -- 2221-2247

Henri Etcheber et al. -- Distribution and quality of sedimentary organic matter on the Aquitanian margin (Bay of Biscay) -- 2249-2288

Magali Gerino, Georges Stora and Olivier Weber -- Evidence of bioturbation in the Cap-Ferret Canyon in the deep northeastern Atlantic -- 2289-2307

Jean Claude Sorbe -- Deep-sea macrofaunal assemblages within the Benthic Boundary Layer of the Cap-Ferret Canyon (Bay of Biscay, NE Atlantic) -- 2309-2329

M. Elizalde, O. Weber, A. Pascual, J.C. Sorbe and H. Etcheber -- Benthic response of *Munnopsurus atlanticus* (Crustacea Isopoda) to the carbon content of the near-bottom sedimentary environment on the southern margin of the Cap-Ferret Canyon (Bay of Biscay, northeastern Atlantic Ocean) -- 2331-2344