



PRIME (Plankton Reactivity in the Marine Environment) was thematic programme, funded by the UK NERC. The Programme ran from April 1995 to April 1998. Its aims were: 1. to describe the nature, distribution and interaction of functional groups of planktonic organisms, which contribute to major biogeochemical processes in the oceans, 2. to quantify the regulation of these groups by physical, chemical and biological processes, 3. to elucidate the properties of these groups that have potential for feedback within the system. Two fieldwork studies were undertaken during the course of the programme. A mesocosm experiment was undertaken at the University of Bergen field station at Espegrend. This ran from the 6th June to 5th July 1995 and involved manipulation the inorganic nutrient environment in such a way as to induce the growth of different phytoplankton groups, so that their consequence on the ecology could be examined. The findings of this work has been written up and published as a supplement to *Estuarine, Coastal and Shelf Science* (1998), Vol. 46. The present set of papers is the outcome of a six-week campaign in the N.E. Atlantic from the 11 June to 23 July 1996. This represented the major collaborative effort of the PRIME Programme. The aim of the study was to examine the differences in the plankton and their effect on the biogeochemistry in high- and low-latitude ecosystems.

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