Observations carried out between 1988 and 1991 on the state of the water of the Marche Coast

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Between 1938 and 1991 a series of chemical, physical and biological tests were carried out on the water along the Marche Coast (PENNA *et al.*, 1989). This was in order to acquire better knowledge of the trophic state of the water and of the algae blooms that periodically appear in this area of the Adriatic Sea.

The conclusions that can be drawn are in agreement with the fact that in the years taken into consideration there have been no significant eutrophic phenomena in the water of the Central-Northern Adriatic and consequently there has been no algae flowering. The last significant episode was in 1984.

Instead, notable observations on other algae pollution phenomena have been found during the last few years (DEGOBBIS, 1989).

Above all, there has been the appearance of extracellular material or "mare sporco", as it was called in the past (HERNDL et PEDUZZI, 1988 a).

These phenomena appeared in August 1988, in July-August 1989 and in June-September 1991. During the appearance of the mucilages, tests were carried out on the dissolved oxygen along the water column of the area involved. On the basis of these tests, hypoxic and anoxic phenomena of the water can be excluted in all periods in which extracellular material appeared on the water surface.

Possible death of benthonic organisms such as MEL was due to forms of mechanical suffocation following accumulation of mucilaginous masses on the sea bed.

In 1988-89 the mucilages moved "en masse" to the upper part of the Adriatic where more consistent formation seemed to take place and to the South in Emilia, Marche and Abruzzo (RINALDI *et al.*, 1990). The reason for this was the North-South current that affect the Western coasts of the Adriatic (Fig. 1).

In 1991 the appearance of extracellular material followed a different pattern compared with previous years, both as regards the place of their formation and their diffusion. The mucilages appeared almost simultaneously in the entire Adriatic from Istria to Ancona, but in a much smaller quantity.

Along the Marche coast there was no great surface movement caused by North-South currents, contrary to what happened in 1988 and 1989.

In 1991 the formation of mucilaginous masses seemed to be of local origin and for this reason was in a much smaller quantity than in previous years.

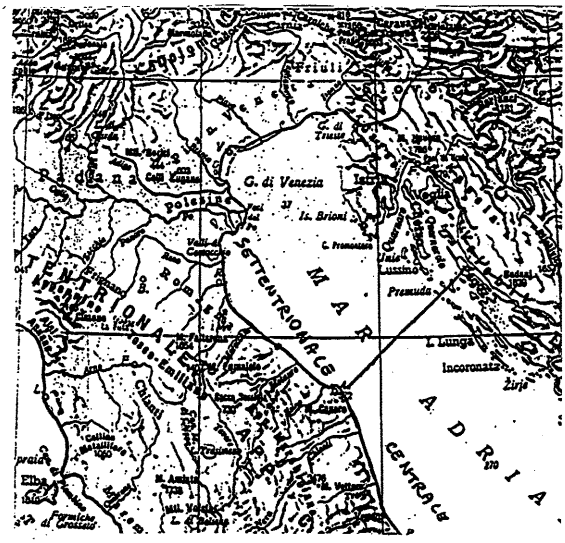

Fig. 1.

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