



MIS1-5 high resolution foraminifera ecostratigraphy in the Adriatic Sea with paleoclimatic inferences for the Late Holocene (EC-EUROSTRATAFORM project)

A. Piva (1), A. Asioli (2), R. Schneider (3), N. Andersen (4), L. Langone (1), L. Vigliotti (1) and F. Trincardi (1)

(1) Istituto di Scienze Marine (CNR) – Sezione di Bologna, via Gobetti 101, 40129 Bologna, Italy, (2) Istituto di Geoscienze e Georisorse (CNR)- Sezione di Padova, via Giotto, 1, 35137 Padova, Italy, (3) Institut für Geowissenschaften, Christian-Albrechts-Universität zu Kiel, Ludewig-Meyn-Str. 10, 24118 Kiel, Germany, (4) Leibniz Laboratory for Radiometric Dating and Stable Isotope Research, CAU Kiel, Max-Eyth-Str. 11, D-24118 Kiel, Germany

The EC-EUROSTRATAFORM project allowed obtain new insights on the Adriatic planktic and benthic foraminifera ecobiostratigraphy for the last 125kyrs. This ecobiostratigraphy has been integrated with O and C stable isotope stratigraphy, tephrochronology, magnetic properties, and ^{210}Pb data. This study is framed in a seismic stratigraphic reconstruction of the area and takes into account information from reference cores from previous works. We present a synthesis of the main ecozones detected in the Southern Adriatic for this time interval, with comparisons to the ecozones previously defined in the Central Adriatic. In particular, we present new data for the last 6kyrs from cores collected in Central and Southern Adriatic in complementary shelf (including the modern mud belt) and slope sedimentary settings.

The two main planktic foraminifera bioevents for this interval are the well known LO of *Globorotalia inflata* at ca. 6 kyrs B.P., approximating the maximum flooding surface, and the LCO of *Globigerinoides sacculifer* at ca. 1200 AD, approximating the beginning of the Little Ice Age (LIA). The planktic foraminifera assemblages revealed, from 6 kyrs to the beginning of the LIA, a paleoclimatic variability much stronger and complex than previously reported in literature for the Adriatic. This variability is characterised by at least three alternating warmer (and dryer) and colder periods, that we tentatively relate to the Holocene climatic oscillations detected in the Atlantic Ocean. Interestingly, the benthic assemblage does not seem dramatically affected by

these oscillations in the deepest cores, while it is quite sensitive to such changes in the shallowest ones. In particular, on the shelf the LIA and its two main phases are best detected in the benthic assemblage by the increase of abundance of species somewhat related to the fluvial runoff (such as *Valvulineria complanata*).