

## **Morphologic and stratigraphic sea-level indicators from the Venetian-Friulian Plain and northern Adriatic Shelf (Italy)**

Livio Ronchi<sup>1</sup>, Alessandro Fontana<sup>1</sup>, Annamaria Correggiari<sup>2</sup>

<sup>1</sup> Department of Geoscience, University of Padua, Italy

<sup>2</sup> CNR-ISMAR Bologna

### **Abstract**

The reconstruction of the sea-level rise is often hampered by the scarceness of available or reliable indicators. The area of the Venetian-Friulian Plain is characterized by the presence of a number of incised valleys which formed between ca. 17 and 8 ka BP. Their fillings are, in many cases, directly connected to the last marine transgression as they experienced a shift from a fluvial to a tidal-influenced environment (limans/estuaries). Detailed stratigraphic investigation of the upper infill of these IVs can contribute to improve the Holocene relative sea-level rise reconstructions for the Northern Adriatic.

The information retrieved from the analysis of these incised valleys can also be integrated with the investigation of fossil tidal inlets, which are widespread features in the northern Adriatic shelf subsoil. The presence of a series of paleo tidal channels placed at comparable depths suggests a period of stasis in the relative SLR, dated between 9.5 and 9.0 ka BP (radiocarbon dating from cores). This value is also supported by other perfectly matching values from cores taken in the Po Delta area, the Trieste Gulf and the area of Istria.

These relict landforms represent privileged spots for reconstructing timing and modes of the last marine transgression before 7.5 ka BP, when the rate of sea-level rise was fast, since they are one of the few available, and sometimes almost continuous, sedimentary record of that period.