Taken together, the four examples are compatible with our knowledge of the current evolution of the Apennine foredeep, involving progressive sinking of the foreland belt (fig. 2).

Whether the deformational dynamics of the foredeep in these four areas fit the deformations obtained on the surface using geomorphological criteria remains to be verified. However, in one case, the range of movement may already be supplied.

When studies on neotectonic movements are based on vertical displacements of old coastal forms, the original forms must clearly have followed the horizontal trend of the sea level. When the same phenomena are approached from the viewpoint of fluvial forms, we start from depositional forms which must have had a gradient. What degree of gradient? This is a delicate problem, and at the same time it is interesting and deserves properly defined study methods. Geomorphology does have a role to play, together with structural geology, geophysics and stratigraphy.

ABSTRACT: CASTIGLIONI G.B., *Geomorphology of the Po Plain.* (IT ISSN 0391-9838, 1999).

Except for the noteworthy work of few authors and geomorphologic studies on specific aspects carried out in the past, Italian geomorphologists' attention for the plains developed relatively late. Progresses obtained on the geomorphologic knowledge of the Po plain will be presented here and proposed for further dicussion and research.

On principle, this geomorphologic region should be considered as a whole including both the part which is called today the Pianura Padano-Veneta and the part of the platform submerged in the Adriatic sea up to the Meso-Adriatic Depression. The relationship with the closeby ranges of mountains can be regarded as exemplary from the morphotectonic aspect and for the forms of sedimentary evolution and erosional phenomena; the plain should be considered in fact part of the Apennine's Foredeep.

The asymmetry of the two Po plain sectors, located respectively to the north and to the south of the River Po, is exemplary as well. The distinction between high and low plain, not only in terms of altitude, is also exemplary. Such distinction, characterized by the diversity of fluvial sediments and hydrogeologic and hydrographic conditions, is here represented by the aspects of surface morphology and genetic processes marking the two belts and the transition from one belt to the other. The connections between the alpine glaciation areas and the fluvioglacial and fluvial sedimentation area are also exemplary for a discussion about the nature of the Italian pro-glacial outwash plains, and about the terracing processes affecting not only the piedmont zone but also many sections of the low plain.

The Holocene plain shows a typical basin and ridge feature, with several examples of river changes due to avulsion; it presents a large area not only near the coastline but also inland especially on the right side of the River Po and in a few sectors close to piedmont bands, where young alluvial fans alternate with the older ones; moroever, «Holocene valleys», carved into terraces with meander belt features, belong to it. The delta and lagoon areas were most affected by recent changes caused both by natural processes and by artificial interventions on the coastline and river beds. The effects of subsidence, of changes in fluvial discharge and load, of coastal erosion and sedimentation are evidenced in two maps 1:250,000 now published.

Questions arise on particular themes. For example: which geomorphological correlation does exist between the sectors of the Pleistocene plains in the land and their possible continuation in the part submerged by the sea buried under Holocene sediments of different thickness? Which modifications and deformations can be attributed to the effects of continuing tectonic movements, on the basis of geomorphologic evidences?

KEY WORDS: Late Quaternary evolution, Fluvial and coastal plains, Fluvial surface tilting, Northern Italy.

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