

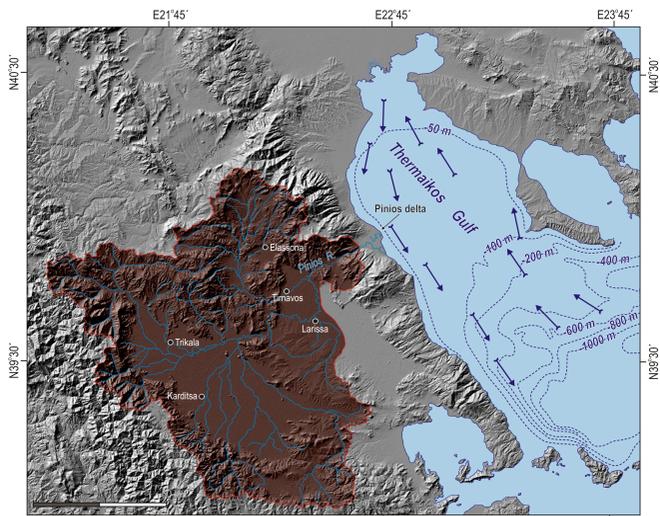
# GEOMORPHOLOGY OF THE PINIOS RIVER DELTA (CENTRAL GREECE)

Efthimios Karymbalis<sup>a</sup>, Kalliopi Gaki-Papanastassiou<sup>b</sup>, Konstantinos Tsanakas<sup>b</sup> and Maria Ferentinou<sup>c</sup>

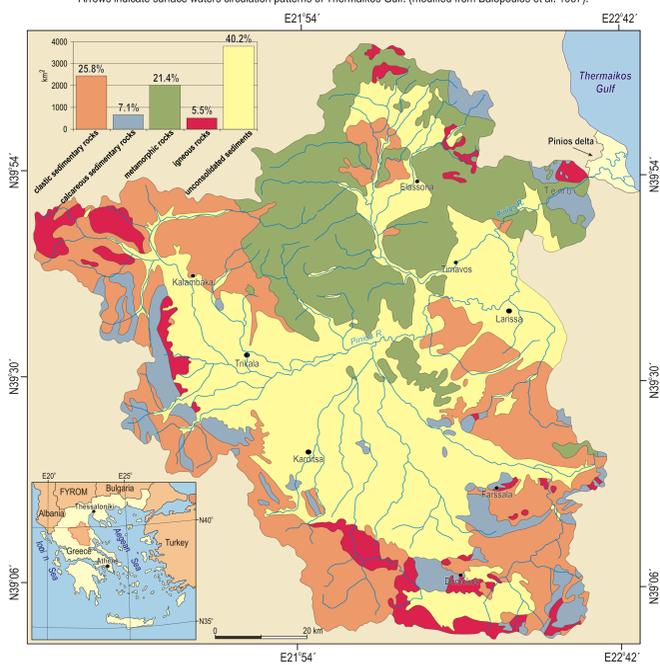
<sup>a</sup>Department of Geography, Harokopio University, 70 El. Venizelou Str, Athens GR-17671, Greece (karymbalis@hua.gr)

<sup>b</sup>Department of Geography and Climatology, Faculty of Geology and Geoenvironment, National University of Athens, Athens GR-15784, Greece (gaki@geol.uoa.gr, ktsanakas@geol.uoa.gr)

<sup>c</sup>School of Agriculture, Earth and Environmental Sciences, University of KwaZulu – Natal, Private Bag X54001, Durban 4000, South Africa (Ferentinou@ukzn.ac.za)



Location map of the Pinios river drainage basin and delta. Arrows indicate surface waters circulation patterns of Thermaikos Gulf. (modified from Balopoulos et al. 1987).



Lithological map of the Pinios river drainage basin with a diagram showing the percentage area of each one of the lithological types in the basin. It is based on the Greek Institute of Geology and Mineral Exploration (IGME) 1:500,000 geological map of Greece (1983).

Catchment	
Catchment climate:	Mediterranean
Rainfall:	400-1,600 mm
Catchment area:	10,704 km <sup>2</sup>
Alluvial Valley	
Length of the main channel:	257 km
Main channel gradient:	0.78 % (0.1 % up to 200 m elevation)
Delta Plain	
Climate:	Mediterranean
Tectonic setting:	Subsiding platform
Delta area:	69 km <sup>2</sup>
Length of distributary channel:	13.79 km
Distributary channel gradient:	0.058 %
Shoreline length/delta width:	2
Mean annual discharge:	81 m <sup>3</sup> /sec
Maximum discharge:	4,090 m <sup>3</sup> /sec
Minimum discharge:	6 m <sup>3</sup> /sec
Delta type:	Arcuate
Sinuosity index (channel length/straight channel length):	1.50
Receiving Basin	
Basin geometry:	Gulf of active subsidence seaward of the present shoreline with an open ended depositional basin.
Tidal range:	20 cm (1958-1990)
Number of active river mouths:	1
10 m, 20 m, and 50 m isobaths distances from the river mouth:	0.2 – 0.9 – 5 km

Characteristics of the Pinios river delta concerning catchment, alluvial valley, delta plain and the receiving basin (Thermaikos Gulf).

