

## **Comparative Analysis of the Late Quaternary 4<sup>th</sup> Order Depositional Sequence in the Continental Shelves of Southern Spain**

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High resolution seismic profiles have been used to make detail comparative study of Late Quaternary stratigraphic architecture in Southern Spain, between a wide (30 km) a smooth (0, 32°) continental shelf of the Gulf of Cádiz with high sediment input, and a very narrow (< 10 Km) and steep (0,54°) continental shelf of the Alboran Sea with low sediment supply. A 4th-order Type 1 depositional sequences (100-110 kyr) composed of FRST, LST, TST and HST have been determined in both areas. FRST developed during the regressive interval of isotopic stage 3. LST is related the beginning of isotopic stage 2 when sea-level was around 120 m below its present level. TST is characterised by backstepping and aggradational deposits developed between 14-6.8 Kys during sea level stillstands inside the general trend of sea level rise. HST has developed between 6.8 kyr BP (eustatic maximum) and present, and it characterized by the modern deltaic and infralittoral bodies in the inner shelf. The Late Quaternary sedimentary evolution of the continental shelf was controlled by the last 4<sup>th</sup> order asymmetric relative sea-level cycle. The following considerations can be extracted: A) Volumetrically, the FRST and LST are the most important components of the sequence. B) RST, LST, and HST are characterize by low-energy prodeltaic facies and high-energy infralittoral prograding wedge. C) TST comprises a wide variety of coastal depositional, and D) Isopachs maps of each systems tracts show a parallel distribution along the shelf, with a relatively constant thickness. This work has been supported by projects DGICYT PB94-1090-C03 and CICYT MAR-98-0209 of the Spanish Research Programme, and also in relation to a Spanish-Portuguese scientific agreement. This work is part of the 396 IGCP Project "Continental Shelves in the Quaternary"