ESPOmar Project: New Passenger Maritime Transport System for the Gulf of Cadiz (Preliminary Results)

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The ESPOmar project is a cooperation research network with the aim of designing and evaluating a new sustainable cross-border maritime transport system for the Gulf of Cadiz. The key objectives of the ESPOmar project are: to analyse the real demand of such a transport system; study the nautical condition for navigation of the area; define the capacity and specification of each proposed maritime route and optimize the design of specific ferries to compete with the established land transport system in terms of speed, safety and comfort, reducing emissions and economic viability. Economic viability and local economic impact were key tenets of the evaluation process. This paper presents the results and conclusions of the evaluation process for the proposed maritime routes examined.

ESPOmar Project: Ship Design Optimization for New Passenger Maritime Transport System for the Gulf of Cadiz

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The ESPOmar project is a European Interreg POCTEP Project, in which several Spanish and Portuguese Universities, research groups and public organizations, collaborated to examine the potential of establishing a competitive regular passenger maritime transport system in the Gulf of Cadiz. This paper reports on the engagement of the project in the multidisciplinary approach of Marine Design for each of the different maritime routeways evaluated. This multidisciplinary approach examined: ships optimization; design requirements; process methodology; interior and exterior layout together with structural and propulsion specification. Two distinctive new concepts vessels are presented in this paper. This first is a passenger ferry for coastal routes, which has been designed with the aim reducingCO_2 emissions in comparison to the equivalent land based public transport system. This innovative design proposal has a sustainable propulsion system, lightweight structure and hydrodynamically optimized hulls. The second vessel is a medium size ferry specifically designed for nautical tourism, with the design meaning of both a meeting point and an entertainment centre.