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**PhD project: Numerical study of sediment-transport processes in Northwest Iberian Continental Shelf**

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**Summary:** This study aims to contribute to the understanding of sediment transport processes in the continental shelf of Northwest Iberian Peninsula using numerical modelling tools. A state of the art ocean circulation model with sediment transport module, will be implemented and validated against observations. This work will focus on the study of mechanisms of resuspension, transport and suspension of fine-grained sediments in the continental shelf. Several time scales, from short-term processes to interannual time scales, will be solved to identify the role of waves, tides, shelf circulation, meso- and submesoscale circulation, and river run-off in the sediment transport patterns. In addition, the fate of the resuspended sediments and materials coming from rivers will be studied. This model system will provide a sound basis for further environmental studies concerning sediment dispersion and availability in the continental shelf (e.g., marine biology, coastal management, etc.).