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**PhD project: A holistic methodology *cum* database for wave energy exploitation: Implementation on the Galician coast (NW Spain)**

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**Summary:** The exploitation of the wave energy resource in a coastal region is based on the definition of two main aspects: the wave energy converter (WEC) and the location to install a wave farm. This decision making should be conducted on the basis of an accurate analysis of different factors, amongst which the power performance is fundamental. With this in view, in this thesis a holistic methodology far from the conventional approach is developed whose implementation in a coastal region produces a database containing the required information for accurately computing the power performance of any WEC at any coastal location. The methodology *cum* database is implemented on the Galician coast and a computer application developed so as to easily access and manipulate the large amount of information generated. As a result, the new decision-aid tool **iWEDGE** (intra-annual Wave Energy Diagram GGenerator) is available for the Galician coast, allowing the automatic reconstruction of annual and monthly high resolution characterization matrices at any coastal location, thereby providing the elements for a combined WEC-site selection. The present database and tool are currently available for the Galician coast; however, the same procedure could be used to generate similar information in any other coastal region of interest where long-term deepwater data are available.