Title: Performance of different ramp configurations characterizing an overtopping wave energy converter: application to the Port of Ancona

The Overtopping BReakwaters for Energy Conversion (OBRECs) are a form of Wave Energy Converters (WEC) embedded in traditional rubble mound breakwaters. These devices have a ramp that allows water waves to be overtopped and generate energy. Port of Ancona will undergo some construction activities such as a new seawall with an embedded OBREC and after statistical analysis of the wave climate on offshore, FUNWAVE-TVD (Wave-resolving model) will be used to propagate the waves from offshore to the port and the performance of different ramp types. The outcome of this research is expected to provide insights regarding the port of Ancona where a seawall with embedded OBRECs will be built which could be considered as a form of harvesting power from renewable energy.