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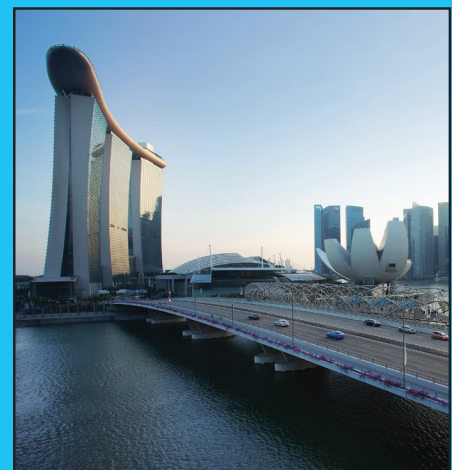
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ADDENDUM

ENVIRONMENTAL CONDITIONS IN THE ADRIATIC SEA WITH RESPECT TO THE DEVELOPMENT POTENTIAL OF OFFSHORE MARICULTURE

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Aquaculture is most rapidly expanding food industry globally, and nowadays practically all marine production takes place not far from the coast. However, coastal zones are becoming increasingly limiting, particularly in tourism-oriented countries like Croatia, which motivates research into use of open sea sites for mariculture production. It is likely that this direction will be associated with higher both capital and operative costs, and therefore design of offshore mariculture should be carefully addressed considering environmental conditions of the target site, technical features of the mariculture farm as well as economic indicators of a whole production chain. There is no clear definition of offshore mariculture, but in this type of activity fish farms are considered as located in deeper and less sheltered waters at some distance away from the coast (definition set by Food and Agriculture Organization of the United Nations (FAO) includes some quantitative indicators), and the cultivated fish stocks are exposed to more naturalistic living conditions with stronger environmental loads (waves & currents), more difficult mooring conditions, and more diverse nutrient flow. There are basically two types of cage structures intended for offshore aquaculture: floating or submersible, where the former ones have been most commonly used up to this stage, while the latter ones are emerging. Before developing the fish farm, important factors to consider are wind and wave conditions, currents, water depth as well as specific seawater parameters desirable for individual species. This part of the overall research within the INTEL-MARIC project deals with mapping of environmental parameters in the Adriatic Sea from the viewpoint of design of offshore floating structures to assess techno-economic viability of offshore mariculture farms, while considerations on physical (temperature, salinity, turbidity...) and chemical (pH, dissolved oxygen...) seawater parameter monitoring will be addressed next steps, Figure 1.

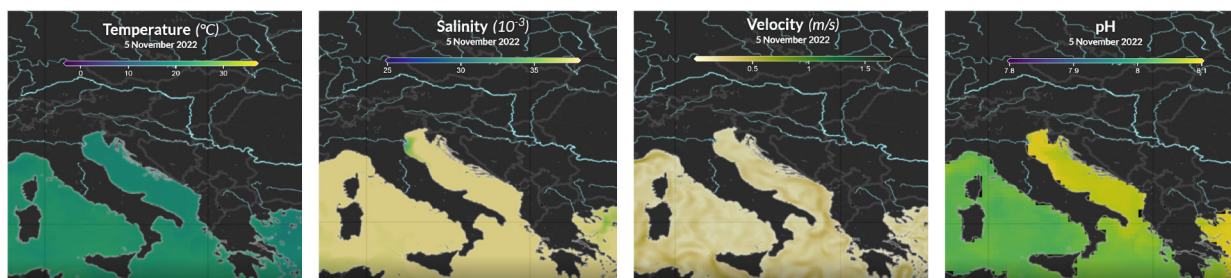


Figure 1. Predictions of selected seawater parameters (source: <https://www.copernicus.eu/en/copernicus-services/marine>, access: November 4, 2022)

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