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Off-Shore wind potential in Cyprus: Towards an integrated representative geospatial database.

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Cyprus' energy balance today depends to a large extent on imports of petroleum products for energy production. This has an impact on both the economy and the environment of the island. The contribution of renewable energy sources (RES) in Cyprus, although there is considerable potential, still remains limited. Specifically, renewable energy sources today account for less than 9% of the country's total gross energy consumption.

This paper contributes to the study of the off-shore wind power on the island, focusing on the creation of an integrated geospatial database for the study of wind characteristics on the coasts and offshore of Cyprus using measurements from meteorological stations, data from the European database with horizontal analysis 25x25 km, and 24-hour forecasts from the Open Skiron meteorological model in 5x5 km resolution.

The analysis take advantage of both wind measurement from meteorological stations in coastal Cyprus areas, as well as information on wind values from forecasting models and databases to record an initial reference distribution in space and time.

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