INTRODUCTION

The ability to measure sea surface temperature allows us to observe the global system and quantify ongoing weather and climate change. Several industries are particularly affected by increased SST the shipping industry, the offshore oil and gas industry, the fishing industry, etc. Knowledge of ocean wind behavior will enable ship masters to choose routes that avoid heavy seas or high headwinds that may slow the ship’s travel, increase fuel consumption, or possibly cause damage to vessels and loss of life.

This paper aims to realize the Cyprus region’s sea surface temperature and wind speed data. The comparison of results obtained using Sentinel Application Platform (SNAP) and ArcGIS Pro, shows that both tools can be used to realize Sea Surface Temperature and Ocean Wind Speed Data and give satisfactory results.

STUDY AREA

The Cyprus regions as the study area.

METHODOLOGY

The EUMETSAT cooperates with agencies around the world, securing additional satellite data of benefit to weather forecasting and climate monitoring and provides access to Sentinel satellite data by providing Sentinel-3 data for processing.

RESULTS

Our research evaluated the results of SNAP and ArcGIS Pro software. The preliminary results of the two software during the vessel tracking process showed that a large number of objects were detected.

CONCLUSION

The SST and OWS data from Sentinel-3 are valuable tools for scientists and researchers studying the ocean and its impact on the climate system. The data can provide insights into the complex interactions between the ocean and the atmosphere, which are critical for understanding and predicting weather patterns and long-term climate trends.

The sum of the results is greatly enhanced and the results show that the different techniques and methods provide a thorough analysis, so they can be used in maritime surveillance and security missions, both for industries and shipping.

REFERENCE

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SEA SURFACE TEMPERATURE AND OCEAN WIND SPEED DATA IN THE CYPRUS REGION FROM SENTINEL-3 USING SENTINEL APPLICATION PLATFORM (SNAP) AND ARC GIS PRO

Figure 1: Area of Interest – Cyprus

Figure 2: Sea Surface Temperature in Cyprus – SNAP

Figure 3: Ocean Wind Speed Data in Cyprus – SNAP

Figure 4: Sea Surface Temperature in Cyprus – ArcGIS Pro

Figure 5: Ocean Wind Speed Data in Cyprus – ArcGIS Pro