

## **Title Coupled ocean-atmosphere DA in operations at ECMWF**

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### **Abstract**

As of May 2026, ECMWF went operational with the new ocean/sea ice model (NEMO4/SI3) but at the same time introduced major developments to its initialization in the form of coupled data assimilation methodology. In this talk we will give an overview of the system and its different streams: from anchoring to a reanalysis (ORAS6), to daily forced model analyses, to streams coupled to the atmosphere. We will cover observations that are used (including how we use radiance observations in the coupled streams) but also more structural changes that mean we will have regular small updates to each cycle rather than monolithic changes every decade. Importantly, we will discuss how the structural changes have entrained non-ocean specialists into doing (coupled) ocean investigations and how ocean diagnostics have become business as usual for all researchers at ECMWF.