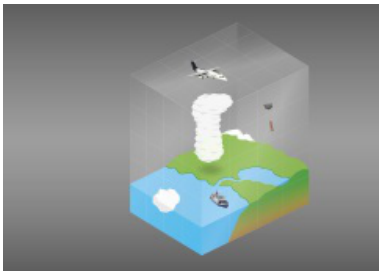

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Developing field campaign science plans using research models and operational forecasters

TerraMaris is a future airborne field campaign based between Java, Indonesia and Christmas Island (Aus.) and will be supported by two instrumented ground sites, and oceanographic measurements.

In advance of the airborne Intensive Operating Period (IOP) in January 2020 we have begun to undertake a number of planning "Dry-Runs" in order to simulate the day-to-day field campaign operations. We use existing model products and research NWP models, along with guidance from operational forecasters to asses the science planning and the likelihood of success of proposed airborne research missions. Success in this case can be either a good science flight in the expected conditions, or an aircraft down-day to avoid unsuitable conditions.

Events have taken place in the same season as the IOP at 2 years and 1 year lead time and have involved Met Office teams and UK University collaborators along with the Indonesian Met. Service BMKG, and aeronautical agency LAPAN . Findings have helped develop and refine the available model products, and understand model biases compared to satellite and land based observations. This has lead to the development of new science hypotheses and the generation of new sortie plans to explore these.

Here we present an overview of the process and successes to date and invite broader collaboration from interested scientists and operational centres.

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