

Meteodrone enabled hyper-local weather forecasting and simple access to quality weather data via API

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The reinsurance market is flooded with alternative and traditional capacity. Availability and access to quality weather data have improved dramatically over the past decade and the advent of drone-enabled forecasting further strengthens the argument for strategic weather risk management and enabling protection to be structured even in remote locations around the globe.

By leveraging simplified access to these weather data it is possible to better inform traditional catastrophe modelling and to write business for new perils and territories. It is also mutually beneficial to deploy some of the excess funds in the market into weather-focused index-insurance schemes. Increasingly ILS managers and reinsurers are looking to weather linked products as potential new avenues to put capital to work.

Meteomatics is a commercial weather data provider that is working collaboratively with National Met Services (NMSs), Academia and Scientific communities. We bring together historical, nowcast and forecast weather data from global models, satellite operations and station data. By applying in-house modelling and downscaling capabilities, Meteomatics is able to deliver weather data for any lat / long and time series to use in 3rd party models simply via an industrial scale robust Weather API.

In addition, we are at the forefront of drone technology for Meteorological observation gathering. Meteomatics have designed, developed, manufactured and now operate our own Meteodrones. We are authorised to fly beyond visual line of sight (BVLOS) including forecast operations, including within regulated airspace, and so can use Meteodrones to gather data across all layers of the atmosphere from the ground up to 3km AGL. Working with collaborative research and intercomparison programmes such as ISARRA (International Society for Atmospheric Research using Remotely Piloted Aircraft) and EPIC (Environmental Profiling & Initiation of Convection) and with airport airside operations and Air Traffic Control we are demonstrating the value of drone observations up to the Planet Boundary Layer and their positive impact on hyper-local weather forecasting, for example forecasting fog formation and clearance for airports.

In the field of agriculture, weather risk management solutions are already protecting the crops of farmers across Africa from drought, for example, reinsurance giant Swiss Re's efforts with the World Bank in Africa has now safeguarded two million African smallholder farmers against natural perils, via insurance offerings.

Energy companies, both in the traditional and renewable sectors, are extensively using these solutions to protect themselves against unfavourable seasons and safeguard revenues. Meanwhile, wind farm operators seek protection against low or excessively strong wind to secure cash flow and underpin their financing.

Marine insurers are combining vessel tracks and crew's behaviours in differing weather conditions to influence their view of risk.

So, in summary, simple API access to quality weather data and the enhanced observational data that can be gathered using new technological advances with UAVs is expanding risk modelling solutions for a broad range of sectors. The speed of development of new products and services, particularly parametric or index-based insurance is growing rapidly.