



PRODUCTS AND SOLUTIONS

Un producto de

AVIATEK

energy • aviation • engineering

www.aviatek.co



AVIAMET: It is a technological tool that supports decision-making, integrates information from hydrodynamic models (oil spill), high resolution regional meteorological models, hydro meteorological stations and models based on artificial intelligence (AI) that together with an interdisciplinary scientific group of 24X7 support, which helps our clients plan and execute operations safely, providing analysis, early warnings, reports and forecasts of meteorological conditions and valuable information for decision-making in real time.





Prediction of your renewable energy production.

High-precision forecasts of atmospheric variables for renewable energy production help you manage your wind or solar energy projects, plan maintenance, and obtain the best returns.

High resolution meteorological weather forecasts on an hourly scale with horizons of 24, 48, 72 hours up to 5 days, through time series, interactive maps, together with data observed from meteorological stations and field sensors.

AVIAM ET's short-term atmospheric variables forecasting service (in terms of power) provides valuable assistance in the effective management of your renewable assets. Provides accurate and up-to-date site-specific forecasts.

A highly qualified interdisciplinary scientific team through use of field meteorological data, network of observing stations, high-resolution meteorological models adjusted to project terrain conditions.

Productos



ITEM	SERVICIO	Básico	Medio	Profesionales	soluciones integrales
1	Wind forecast ~ 4km (maps, series)	✓	✓	✓	✓
2	Solar radiation forecast ~ 4km (maps, series)	✓	✓	✓	✓
3	Electric power forecast ~ 4km (maps, series)		✓	✓	✓
4	Hydrological forecast (mm/m ³ /s)		✓	✓	✓
5	Operational weather forecast ~ 4km (maps, series)		✓	✓	✓
6	Term climate prediction, decadal			✓	✓
7	Term climate prediction, monthly (variability climatic)			✓	✓
8	Meteorological support for special operations			✓	
9	High resolution probabilistic forecasts (~ 1.33 km)			✓	✓
10	Analytical reports of weather conditions or weather				✓
11	Real time monitoring				✓
12	Control Center Operational Support 7/24 English-Spanish				✓





On/Off-Shore - MetOcean:



Minimize costs and time limits for inactivity due to adverse weather conditions.

Safe operations planning, risk mitigation and reduction of operating costs.

Technical support in Spanish and English and advice for taking decisions 24/7.

Case studies and analysis of meteo-oceanic phenomena that affect the operation.

Regressive meteo-oceanic studies and forecasts. Environmental risk analysis and ocean data analysis.

The marine conditions weather forecast service helps oil and gas operators plan daily operations on the sea.

Metoceanic Conditions, analysis of extreme events and seasonal variability of hydroclimatic variables for the design of oil and gas facilities, seismic studies, among others.

Early warning model of threat due to mass movements. Generation of early warnings of the probability of landslides along the pipeline.

Planning of operations with the hydrometeorological information of winds, waves, currents, tides, forecasts of electrical storms and meteo-oceanic phenomena that affect the integrity of its assets and fulfillment of the mission.

Oil Spill Track



Off-Shore – Spill Track:

The hydrodynamic oceanographic model of high resolution allows the development of simulations of hydrocarbon spills in bodies of water to predict the trajectory of slicks, sacrifice beaches, areas of impact to the environment, with information on the characteristics of hydrocarbons according to the needs of our users.

Analysis for route optimization for vessels.

Tools specialized in oceanography and models high resolution hydrodynamics.

Simulation and prediction of oil spill trajectories, impact evaluation studies on in situ ocean measurements.

Forecasts for planning operations in the sea, search and rescue operations and pollution control, among other activities.





With technological tools, atmospheric models applied to the aviation industry, a network of sensors and an interdisciplinary group of pilots, air traffic controllers and local forecast support analysts, we provide aviation meteorological solutions that help to increase safety, management and efficiency and operational performance.

Custom aviation alerts and forecasts optimized for a safe flight.

Up-to-date weather forecasts designed specifically for pilots, as well as safety alerts and route recommendations created by professionals in the aviation industry.

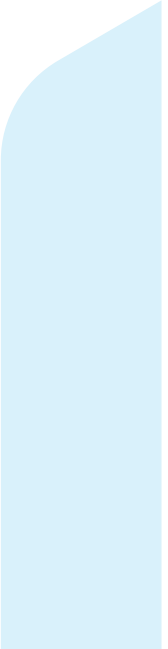
- Flight risk assessment information and flight profile.
- Have accurate forecasts to improve results by reducing canceled flights.
- Increase the optimization of times and efficiency in planning your flights and operations
- Improve flight safety





Agroindustry:

Precision tool for planning crops in agribusiness that allows monitoring the weather and climate in order to manage operations, higher yields when planting, cultivating and harvesting each season.







Comprehensive risk management, weather-marine monitoring and forecasting service, generation of early warnings, support for planning On-Shore and Off-Shore operations in the Gulf of Morrosquillo.

Simulations, real-time monitoring and forecasting of the trajectory of hydrocarbon spills in water bodies, determination of sacrificial beaches and areas of impact on the environment.



Development of a landslide risk and susceptibility model affecting the integrity of pipelines.



AVIATEK has tools for meteorological diagnosis and analysis that allow: characterizing the uncertainty of observation and simulation platforms, reporting on the representativeness of points and observations in the network, and quantifying systematic and random errors. Our most recent projects have made it possible to find systematic and quality errors of the sensors, as well as to disseminate these results to improve the obtaining of information and optimization of the observation network for monitoring, engineering, and research purposes. Our statistical and analytical procedures for handling observations are governed by practices, protocols, and standards accepted by the US National Oceanic and Atmospheric Administration (NOAA), the Environmental Protection Agency (EPA) and follow the recommendations of the World Meteorological Organization (WMO).

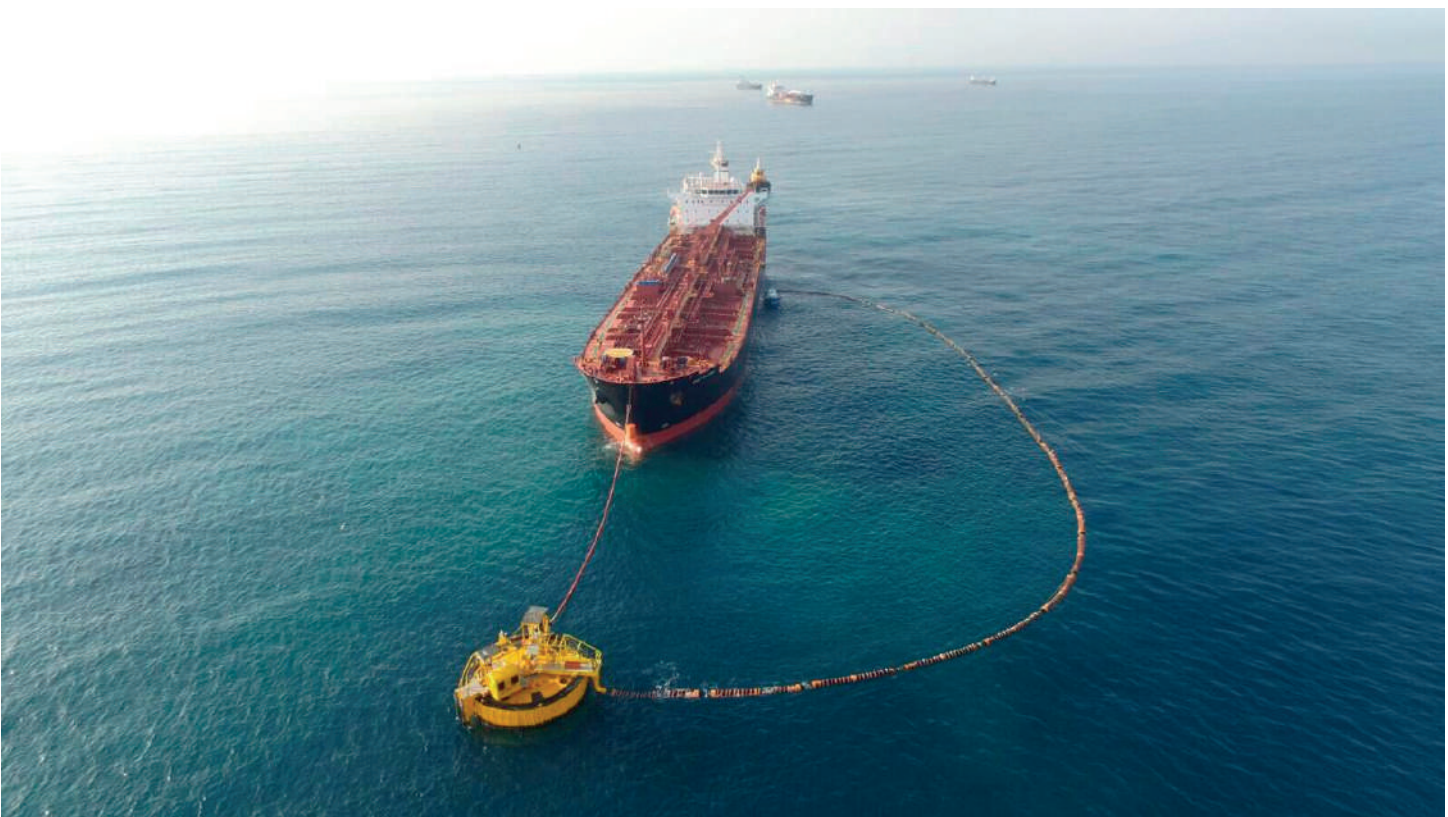


AVIATEK has an interdisciplinary group of professionals with the scientific support of professionals with experience in highly complex projects, where natural hazards impact both communities and corporate assets. Therefore, it has developed the AVIAMET platform as part of the solution of problems associated with hydrometeorological risks, as well as the management and planning of operations where natural phenomena can cause accidents with loss of life and economic losses. Through the different computational and mathematical tools of AVIAMET, the risk of exposure to these threats can be prevented".



AVIATEK, through its AVIAM ET platform, monitors in real time the highly complex operations of the OIL & GAS industry of OCENSA and its partners both in OFF-SHORE (marine operations) and ON-SHORE (Pipeline).

AVIAM ET integrates human capabilities through a 7/24 control center with highly qualified and trained professionals to provide support for its clients' operations, as well as highly efficient computational tools; observation platforms in real time, expert knowledge and experience in the climatic dynamics of our region. Among the tools that AVIAM ET integrates are: high-resolution forecast models, hydrodynamic model for monitoring oil spill slicks, stations, real-time monitoring sensors, mass movement monitoring (eg pipeline case study Caño Limon - Coveñas).



Automated information management, processing and analysis service of the natural hazards platform for oil pipelines and hydrocarbon loading ports (gulf of morrosquillo)



CLIENTS

OCENSA

Oleoducto
de Colombia



Aviatek is a company that implements Eco-efficiency management systems, promoting the efficient use of resources that contribute to the progressive minimization of significant environmental impacts.



aviamet added value
in operations



INTEGRAL
OFF-SHORE & ON-SHORE
RISK MANAGEMENT



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