CATASTROPHE AND RISK SOLUTIONS

Verisk Inland Flood Model

for the United Kingdom and the Republic of Ireland

Verisk™

Flooding is a major natural peril in the United Kingdom and the Republic of Ireland that can cause substantial insured losses.

However, historical loss data alone may not be sufficient for assessing current-day flood risk, especially considering climate change impacts.

Growing numbers of properties in flood-prone areas add to pressure on the insurance industry to assess the risk, manage exposure accumulations, and plan reinsurance for a highly complex peril. While detailed maps are available to identify floodplains and pinpoint properties at risk, they do not enable probabilistic risk assessment. Nor do they account for risk to properties located off the floodplain, which have accounted for a significant share of claims in some historical flood events.

Why are we updating our model, and what does it mean for your portfolio?

Updated for 2025, Verisk's Inland Flood Model for the United Kingdom and the Republic of Ireland uses the latest science and advanced engineering. By incorporating the latest research, data, and innovation, our model provides a more comprehensive risk assessment that can lead to a more consistently profitable portfolio. This results in outputs aligned with real-world outcomes to support:

- Underwriting and pricing
- Regulatory, rating agency, capital adequacy, and optimization
- Structuring reinsurance programs and evaluating insurance-linked securities

Validation benchmarks reflect

89%

of significant historical flood events across the region

Verisk Inland Flood Model

What makes Verisk the cat modeling leader that's trusted worldwide?

More than 400 organizations, including top-tier and regional insurers and reinsurers, trust Verisk's cost-efficient, scalable models for granular, by-peril data and insights. We provide responsive, personalized support to ensure that our clients gain the maximum benefit from our solutions.

Our next-generation financial module supports a more sophisticated and accurate view of portfolio risk across all our catastrophe peril models for a consistent framework regardless of region or peril.

More than

400

insurance organizations trust Verisk models

What sets Verisk's Inland Flood Model apart?

Our model, adjusted for near-present climate conditions, is driven by market-leading expertise in meteorology, engineering, and actuarial science, combined with the most current data sets available. It incorporates multiple hazard intensities to account for differences in water depth, event duration, velocity of moving floodwaters, and debris flow. The model employs statistics from detailed, building-specific data from Verisk's proprietary UKBuildings database. It also includes recent flood defense investments and levee updates across the region.

It all adds up to a model unmatched for its current, comprehensive, multi-country coverage. And our next-generation financial model and European demand surge functionality ensure a sophisticated and accurate view of portfolio risk that integrates seamlessly in the Verisk ecosystem for multiperil modeling.

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What's in the model to help drive your business forward?

High-resolution flood modeling

Our 10,000-year stochastic catalog simulates flooding at a granular 5m resolution using detailed LiDAR data to inform the digital terrain model (DTM). Users can separate losses from fluvial and pluvial sources and extract event intensities (e.g., flood depth, duration) for every location and event. This enables model validation and derivation of vulnerability functions. Various hazard maps are also available (e.g., 50-, 200-, 500-year return periods) for both inland and coastal flood.

Near-present climate risk view and future climate change

The model represents near-present climate conditions. De-trended quantile mapping identifies sub-regional trends and climate change effects on precipitation patterns and flood events. Future climate change catalogs are available for various warming pathways (i.e., Shared Socioeconomic Pathways [SSPs]) and time horizons.

Historical event set

Thirteen significant historical flood events (2000–2021) across the United Kingdom and the Republic of Ireland provide valuable benchmarks for model validation.

Extended LOB support, including marine

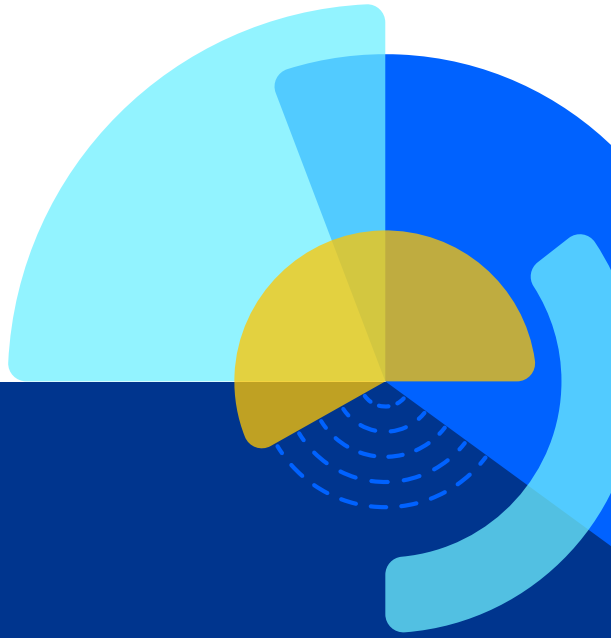
The updated vulnerability module provides a more accurate assessment of flood-related damage to marine cargo, specie, industrial facilities, and auto, in addition to standard property risks such as residential, commercial, and agriculture.

Refined secondary risk characteristics (SRCs)

Expanded secondary risk characteristics are aligned with the Great Britain storm surge model and include custom standard of protection, floor of interest, foundation type, custom elevation, and many others. The SRCs allow for several flood mitigation measures commonly encountered under Flood Re's Build Back Better Initiative.

Unknown assumptions

The model features best-in-market granularity for unknown assumptions—including on key SRCs such as presence of basement—and 72 combinations per the Catastrophe Risk Evaluation and Standardizing Target Accumulations (CRESTA) Zone system, informed by Verisk's UKBuildings database.



Are you ready for the next generation of inland flood modeling?

Contact us today.

Learn more

Verisk™