ambiental®
predicting · preventing · protecting

Australia FloodCat™

Property level catastrophe model for Australia

Improve capital allocation, strengthen flood underwriting strategy and optimise reinsurance purchase.

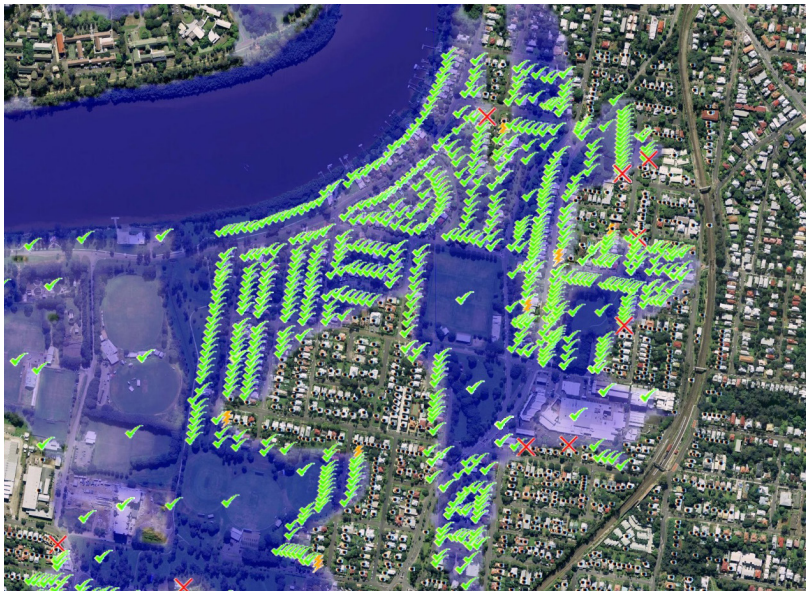
Built from individual property level up, and based on the most comprehensive and accurate Australian flood hazard model, Australia FloodCat™ is the ideal solution for insurers and risk managers looking to more accurately assess and manage exposure to flood risk.

With 10,000 synthetic event years modelled for each flood peril FloodCat™ enables users to quickly and easily understand and quantify the impact of a full range of loss scenarios, predicting both hazard and vulnerability.

With both realistic synthetic event sets and major historic flood events included in the model, Australia FloodCat™ is the best way to develop and check a robust underwriting and reinsurance strategy.

KEY BENEFITS

- ✓ Available today through ELEMENTS platform
- ✓ Develop robust underwriting and reinsurance strategy
- ✓ Most comprehensive and accurate model available



An extract from a validation study of Ambiental's flood hazard data demonstrating 95% predictive accuracy in the catastrophic flooding of Brisbane in 2011. Green ticks represent flooded properties which Ambiental correctly predicted. This property level precision is a feature of Australia FloodCat™.

Australia FloodCat™ - AT A GLANCE

- Full country-wide model
- Property and postal code level
- Pluvial and fluvial flooding
- FlowRoute™ 2-D flood model
- High precision for major cities
- Probabilistic event catalogue with 10,000 synthetic years
- Detailed vulnerability data

Australia FloodCat™ Technical Details

Flood Sources

- Fluvial (from rivers on floodplain)
- Pluvial (from surface water off floodplain)
- Combined fluvial and pluvial

Topography

- Urban: 5 metre grid resolution LiDAR (nominal vertical accuracy ±0.15m)
- Rural: 30 metre grid resolution SRTM-based

Hydrology

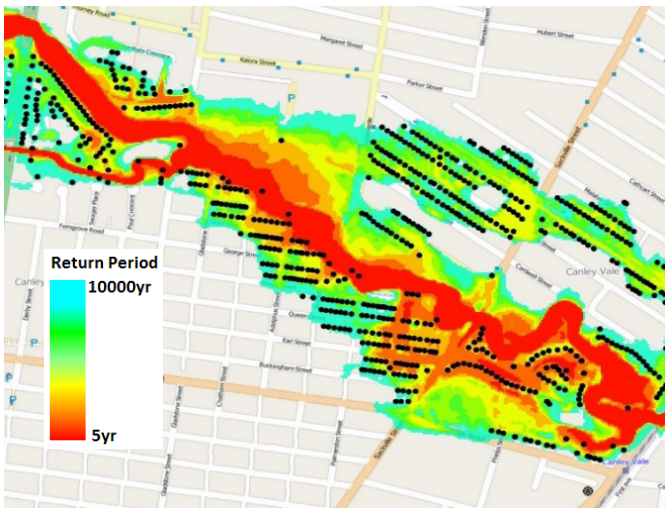
- Rainfall and runoff method (regional best practice)
- Rational method augmented with unit hydrograph approach where gauges are available

Hydraulics

- Full shallow water wave 2-d modelling (Flowroute-i™)
- Spatially variable land use (e.g. roughness/infiltration)

Probabilistic Event Sets

- 10,000 years of simulated rainfall
- 150,593 fluvial loss generating events
- 164,688 pluvial loss generating events



Extracting flood hazard values at various return periods to provide a precise hazard intensity value for every discrete flooding event.

Deterministic Event Sets

- Historic events for every state in Australia
- Includes major events (e.g: New South Wales 1986, Victoria 2010, Queensland 2011)

Geocoding

- PSMA Australia G-NAF address database
- Cresta zone / postal code

Vulnerability

- Residential and commercial business lines
- 30 residential construction classes, 9 commercial constructions classes
- 28 cost of replacement bandings
- 5 residential property age bandings
- Additional modifiers (number of stories, basement, high/low set)

Validation

- Hazard validation against historic floods
- Loss validation against historic losses
- Internal and independent studies

Delivery Formats

- Various raw data formats
- Aon Benfield ELEMENTS
- Oasis
- Coming soon: AIR, RMS(one)

Contact Us

If you would like more information on Australia FloodCat™ then please contact Ambiental on:

+44(0)1273 704 441
info@ambiental.co.uk

ambiental®
predicting · preventing · protecting

info@ambiental.co.uk
UK Head Office
Asia/Australasia

www.ambiental.co.uk
+44 (0)1273 704 441
+61 (0)420 834 080

The Sussex Innovation Centre, Science Park Square, Brighton, BN1 9SB, UK