

Parametric solutions as a contributor to closing protection gaps

Why do we need probabilistic, event-based natcat models?!?

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NatCat risk assessment: Natural Perils vs. Fire

Fire



Frequency

high

Volatility

low

Loss potential

low-moderate

Risk assessment

experience

Natural perils

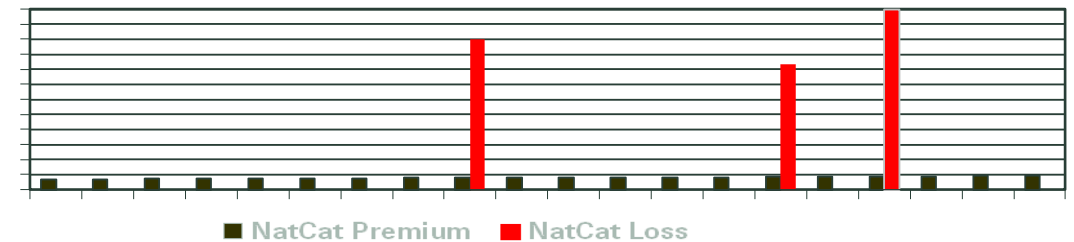
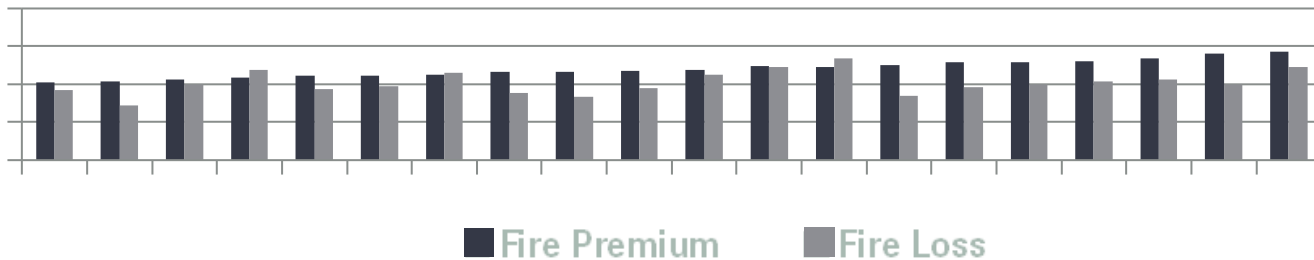


low

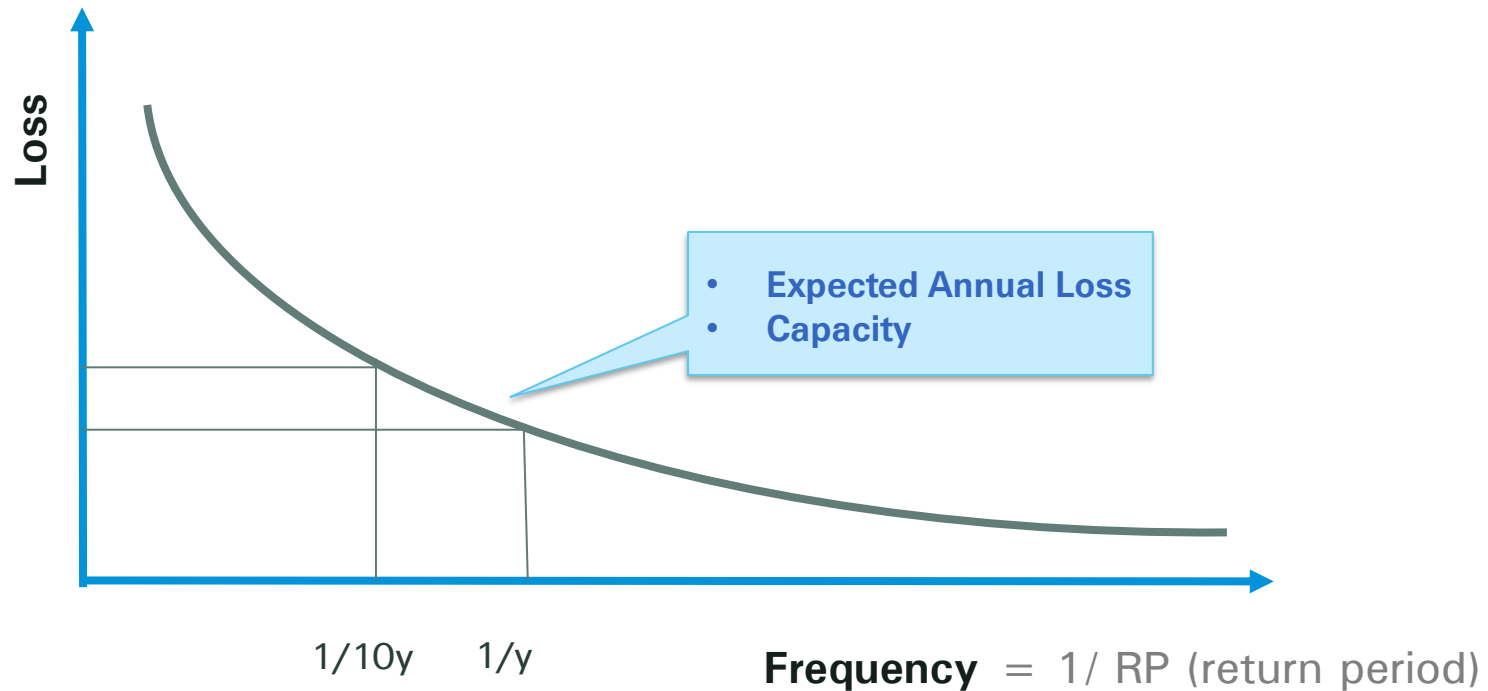
high

moderate-very high, and huge correlation potential!!!

scientific modelling

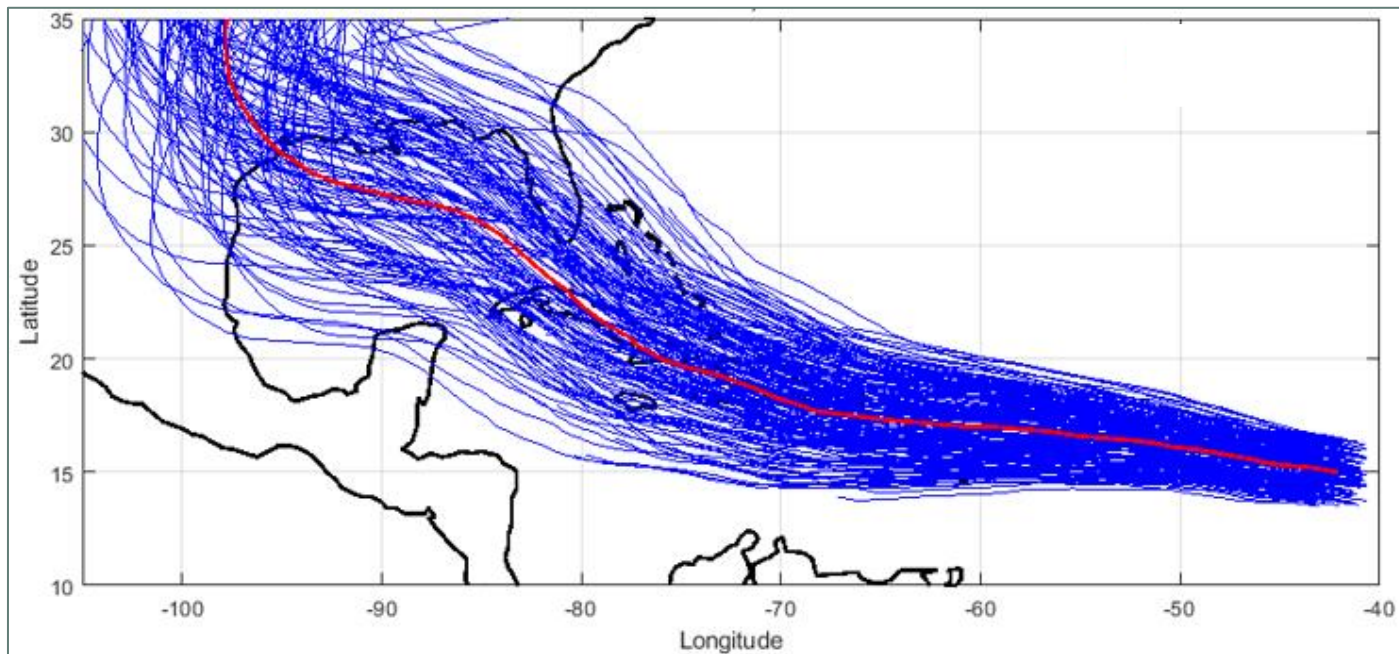


Goal of the models: Derive an severity-frequency distribution, i.e. how often do we expect to experience which level of loss amounts for a given location or portfolio?

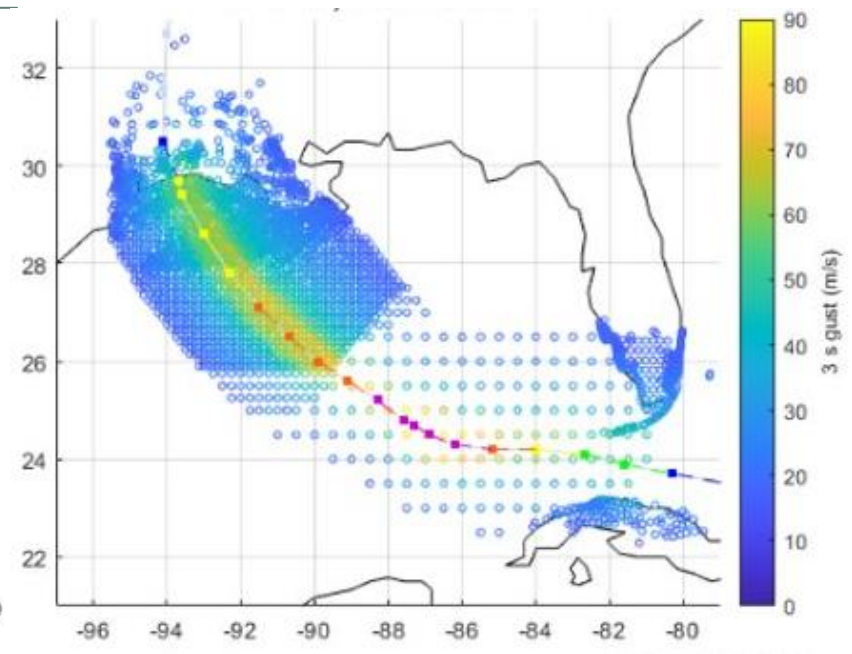


History is not enough! Probabilistic event simulation extends the observed natcat activity to millions of realizations of the current risk

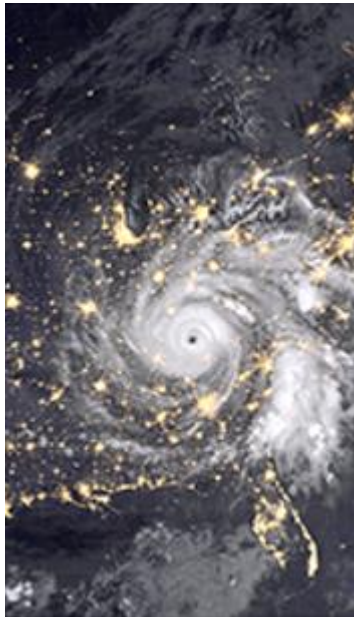
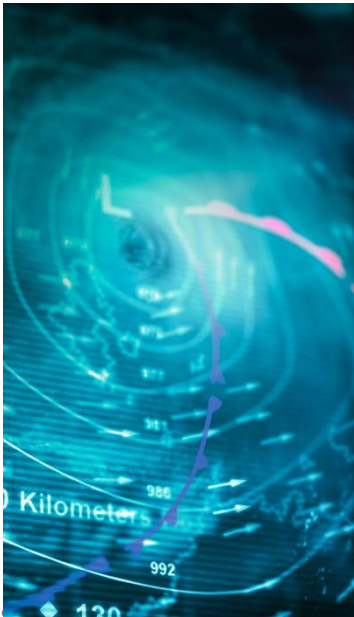
Historical track (red) and probabilistic tracks (blue) for the Galveston 1900 hurricane in the TCNA model



Modelled wind speeds for Hurricane Rita 2005



Traditionally, natcat modelling bases on 4 specific components. Lately, a 5th element has been added to account for factors not (or insufficiently) considered so far.



- Insured values
 - Deductibles
 - Limits
 - Exclusions
 - Inuring treaties
 - ...
- Post loss claims inflation
 - Deficient input data/underinsurance
 - Partially modelled risk components

We have sophisticated proprietary nat cat modelling capabilities

illustrative

Powerful resources

150 years

of extensive nat cat
risk knowledge

190+

models, covering
>90% of global
insured exposures

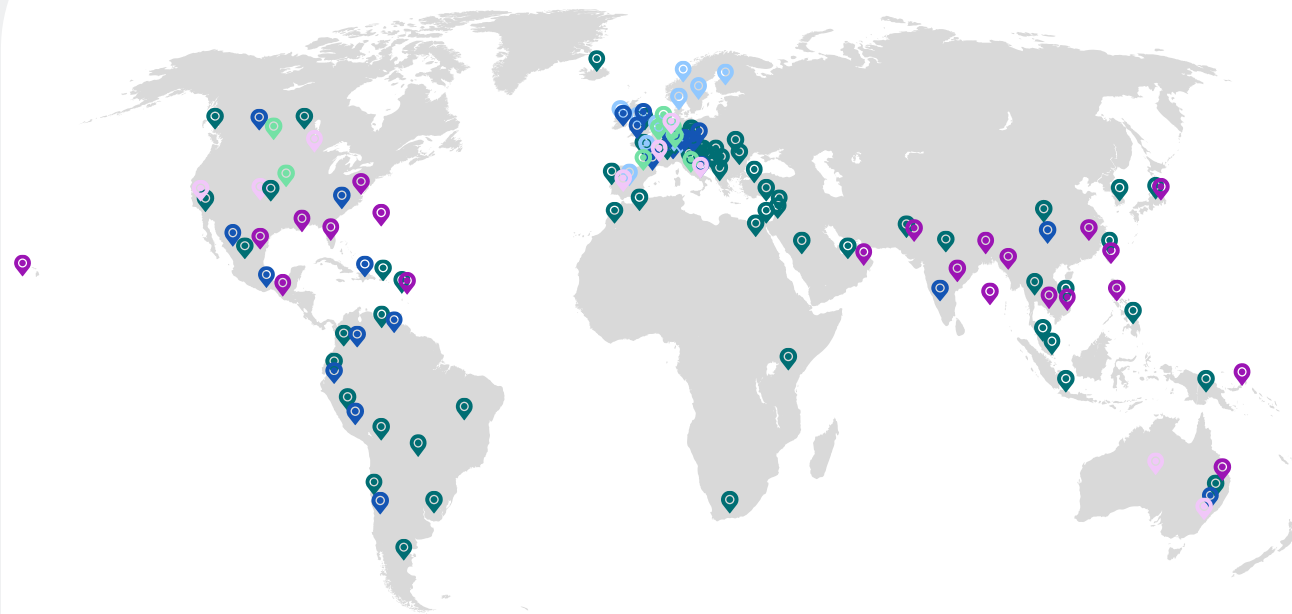
~15

clients

accessing Swiss Re
natcat models to
support their business
decisions

~50

full-time scientists



- Tropical cyclone¹
- Hailstorm/tornado²

- Earthquake¹
- Flood²

- Winter storm¹
- Other secondary perils²

Thank you for your
attention!





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