

Risk Intelligence (“RI”) —

**make climate-related risks
visible, quantifiable, manageable, and foreseeable**

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An Overview of the Risk Intelligence (RI) Framework—to undertake climate adaptation from perspectives of insurance and reinsurance

4 RiskInsights — Foreseeable

 
Scenario Analysis & Stress Testing

3 RiskFolio — Manageable

 
CAT Bonds Portfolio Management

2 RiskQuant — Quantifiable

   
CAT Models = Hazard x Vulnerability x Exposure x Loss

1 RiskVista — Visible

    
Risk Maps Expertise Reports Data Early Warning

to G

- Emergency
- Early Warning
- Fiscal budget
- Regulation

RI

to F

- Banking
- Insurance
- CAT Bond
- SLB / SLL

to B

- Energy
- Transportation
- Agriculture
- Industrial Buildings

1. RiskVista—to make climate-related risks visible



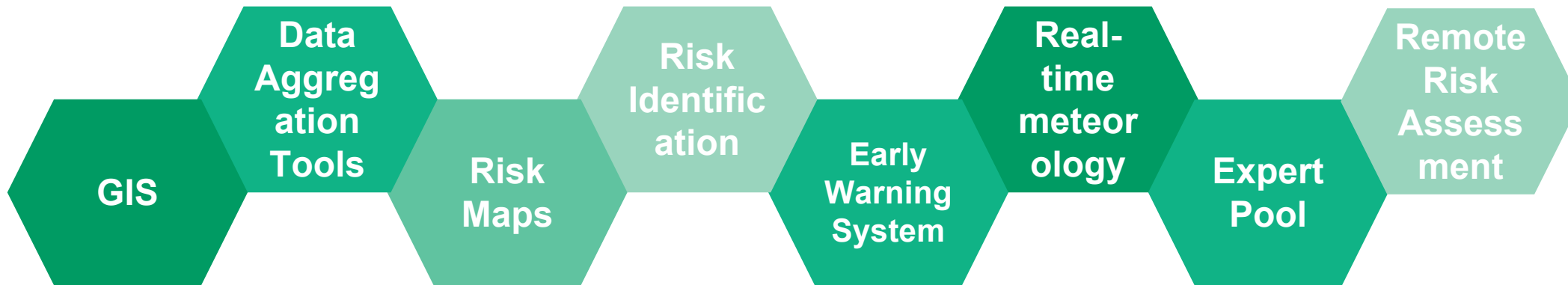
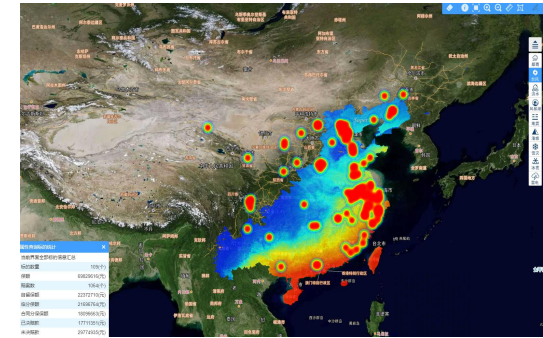
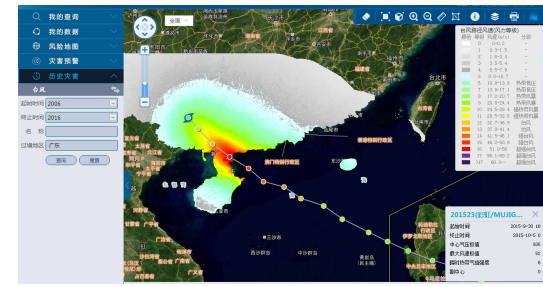
Early Warning System



RiskVista Main Platform



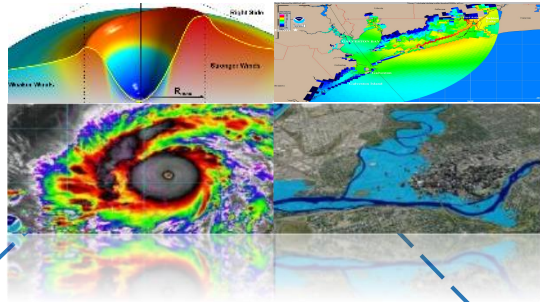
Risk Inspection and Assessment



2. RiskQuant—to make climate-related risks quantifiable (1/2)

Climate-related Risks = Hazard x Exposure x Vulnerability x Loss

Hazard



Vulnerability



Stochastic Events



Exposure

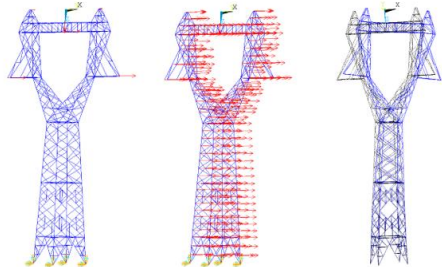
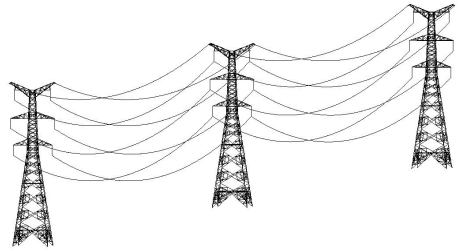


Loss

2. RiskQuant—to make climate-related risks quantifiable (2/2)

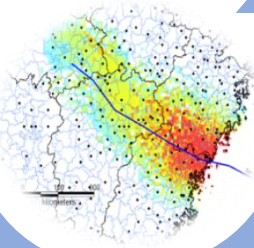
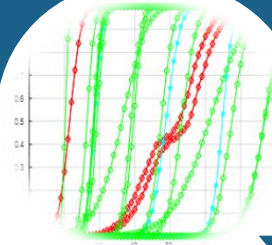
Prediction of the typhoon paths based on real-time meteorological data

Typhoon Event



Constructing the vulnerability of underwriting assets

Assets Vulnerability

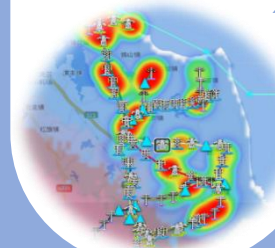


Typhoon Field Calculation

Real-time calculation of the typhoon fields

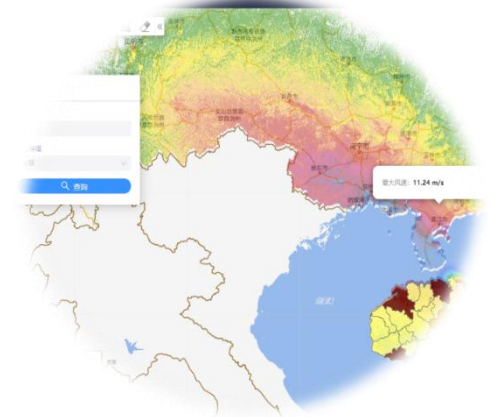
Emergency Management based on quantitative early warning

Quantitative Early Warning



Expectation Losses

Using RiskQuant tools to compute real-time expectation losses



3. RiskFolio—to make climate-related risks manageable

RiskFolio—
Multi-tiered risk
distribution and
cushion system

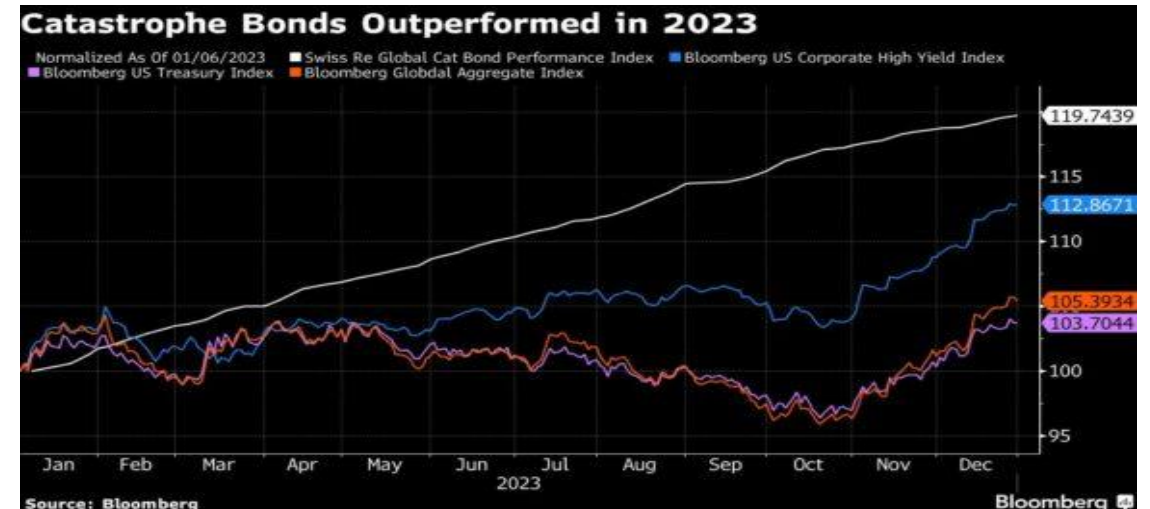
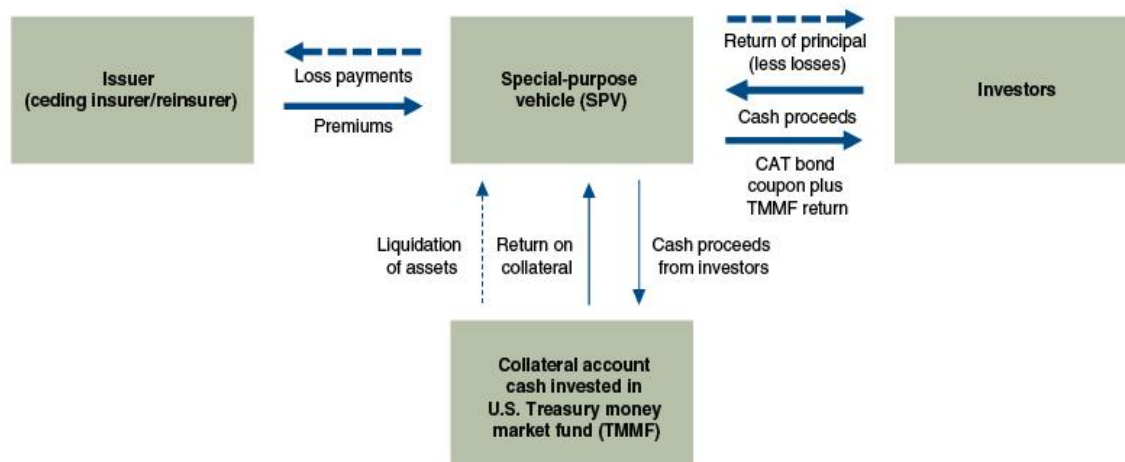
Insurance

Reinsurance

Capital markets: catastrophe bonds

Funds: Loss & Damage Fund; IMF Catastrophe Containment and Relief Trust

Fiscal assistance: local, state, national fiscal recovery



4. RiskInsights—to make climate-related risks foreseeable

| Climate-related Scenario Analyses and Stress Testing Framework (ISSB) | | | | | | | |
|---|----------|--------|------|------|------|------|------|
| Risks \ Scenarios | | 1.5° C | 2° C | 3° C | 4° C | 5° C | 6° C |
| Typhoon | 1/50 yr | | | | | | |
| | 1/100 yr | | | | | | |
| | 1/250 yr | | | | | | |
| Tsunami | 1/50 yr | | | | | | |
| | 1/100 yr | | | | | | |
| | 1/250 yr | | | | | | |
| Flood | 1/50 yr | | | | | | |
| | 1/100 yr | | | | | | |
| | 1/250 yr | | | | | | |
| Drought | 1/50 yr | | | | | | |
| | 1/100 yr | | | | | | |
| | 1/250 yr | | | | | | |
| ExtremeHeat | 1/50 yr | | | | | | |
| | 1/100 yr | | | | | | |
| | 1/250 yr | | | | | | |
| ExtremeCold | 1/50 yr | | | | | | |
| | 1/100 yr | | | | | | |
| | 1/250 yr | | | | | | |

Metrics

- Average Annual Losses
- Probable Maximum Losses (Gross & Net)
- Premiums
- Profits
-

Time Periods:

- 2030
- 2060
- 2100

This is a four-dimensional dataset. For each time period and each metric selected, there will be such a stress testing table. For example, if three time periods are selected and four metrics are applied, there will be altogether 12 tables generated.