

Swiss Re



CatNet[®] Swiss Re's online natural hazard information and mapping system

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SWISS RE
150
YEARS

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Swiss Re at a glance

- One of the world's leading reinsurance companies
- Reinsurance: Insurance for insurance companies
- Founded 1863
- Headquarter in Zurich, Switzerland
- Around 70 offices in more than 30 countries

Increasing Insured Catastrophe Losses

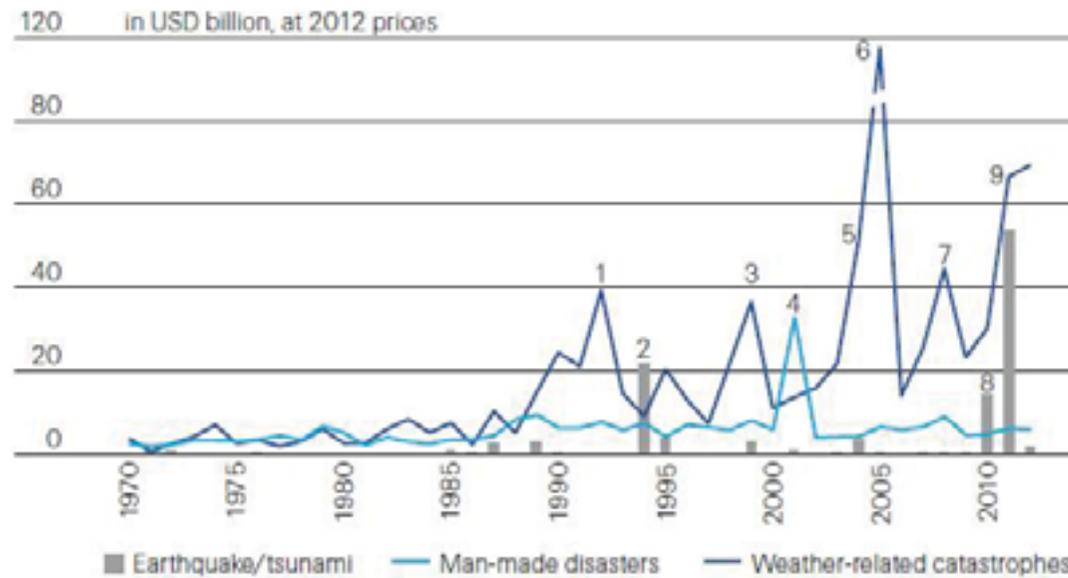
Increasing values

Concentration in exposed areas

Higher insurance penetration

Changing hazard
 ■ climate variability
 ■ climate change

Insured catastrophe losses 1970–2012



- 1 1992: Hurricane Andrew
- 2 1994: Northridge earthquake
- 3 1999: Winter Storm Lothar
- 4 2001: 9/11 attacks
- 5 2004: Hurricanes Ivan, Charley, Frances
- 6 2005: Hurricanes Katrina, Rita, Wilma
- 7 2008: Hurricanes Ike, Gustav
- 8 2010: Chile, New Zealand earthquakes
- 9 2011: Japan, New Zealand earthquakes, Thailand flood

Source: Swiss Re Economic Research & Consulting

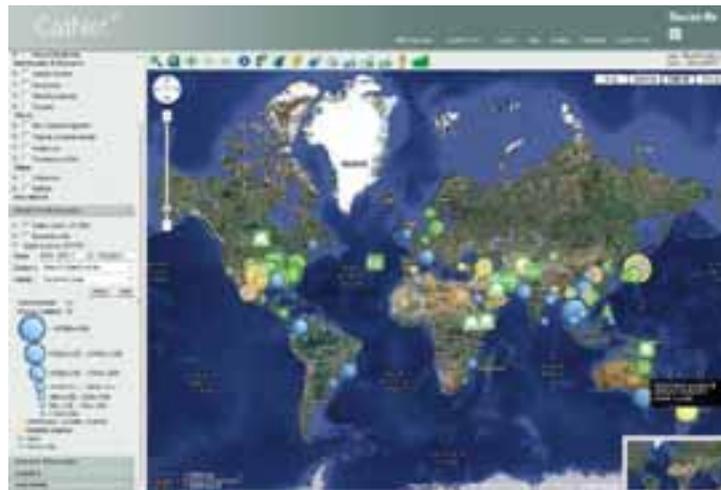
CatNet® @ SwissRe

- Online natural hazard information and mapping system: www.swissre.com/catnet
- Access is free for our clients:
 - Knowledge sharing
 - Raising risk awareness
 - Support underwriting of insurance contracts
 - Enhance exposure data quality
 - 500€/year for third parties
- Professional overview and assessment of natural hazard exposure
- Creation of local, regional and cross-regional risk profiles

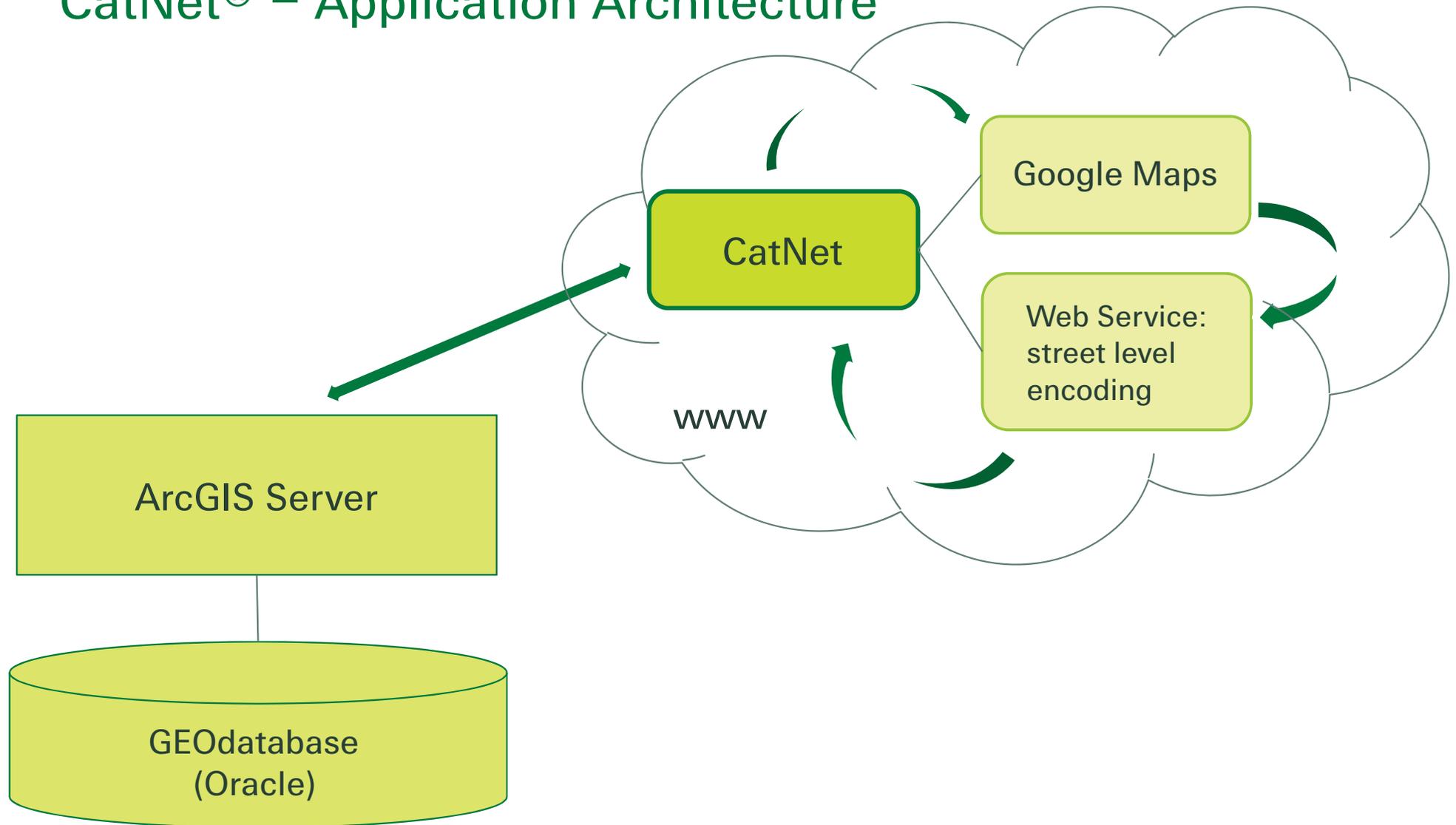


CatNet® History

- 2001: 1st inhouse release (GEOportal)
- 2003: 1st client release (CatNet)
- 2008: complete system overhaul
- Since then: regular updates of both applications



CatNet® – Application Architecture



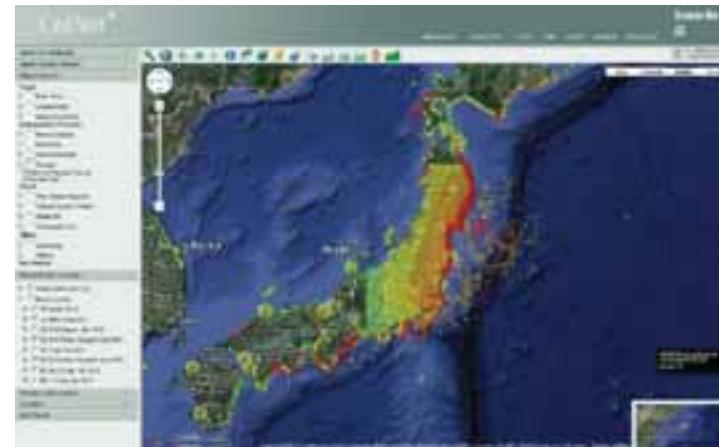
CatNet® Key Features

- One-stop-shop for global natural catastrophe information
- Natural hazard atlas
- Country-specific insurance data
- Included disaster statistics
- Risk profiles for your locations



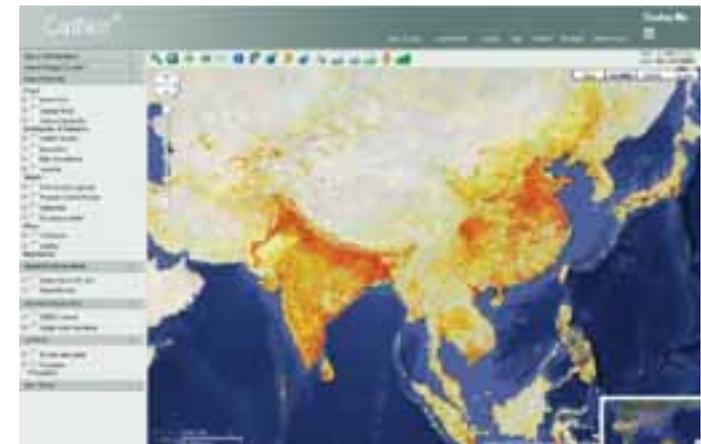
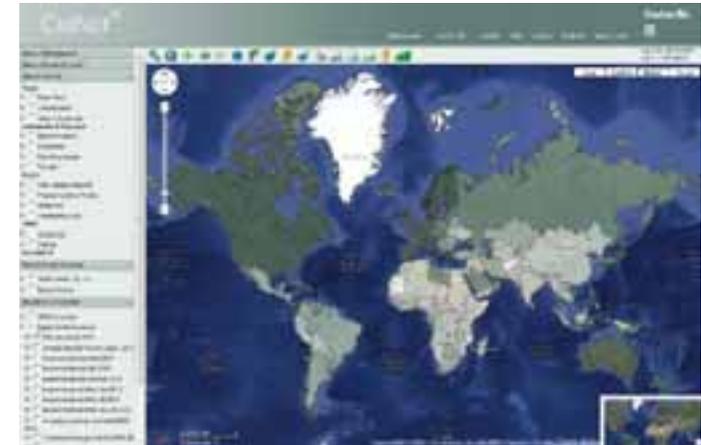
Benefits of CatNet®

- Swift hazard checks for regions you are not familiar with
- Tailor made maps and satellite images
- Import your location data to illustrate risk exposures combined with natural hazard data
- Country-specific insurance conditions, claims experience and natural disaster loss dimensions
- Footprints of major catastrophes



CatNet[®] Datasets

- Swiss Re Global Flood Zones
- Official flood zones (e.g. USA, Germany)
- Global coastal flood risk layer
- Seismic Risk
- Earthquake Epicentres
- Tropical Cyclone Tracks
- Storm, Hail and Tornado risk
- Recent Events & Global alerts
- Population
- sigma World Insurance & sigma loss data 1970off
- CRESTA zones





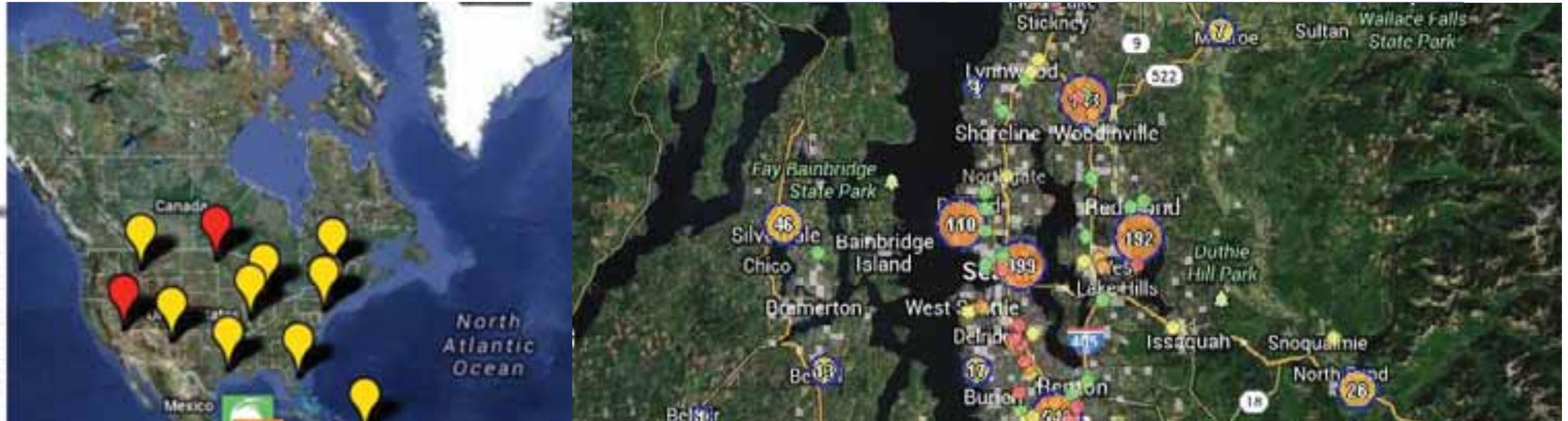
CatNet® Functionality

- Google Street View & Search
- Import of Excel, TXT and KML
- Editing and Export of locations
- Risk look-ups
- Measurement and elevation tool
- Printing and sharing bookmarks





Typical CatNet® Use Case I Portfolio Import & Risk look-up



ID	Name	Value	Latitude	Longitude	Coastal Flood Risk	EQ 475y MMI	EQ PGA m/s2	Flood Return Perio-	Hail days/year	Hazard Zone Code	Hazard Zone Scher	Tornado's/year
50	Church of the Holy	72.0	47.596975	23.7645944	No Data	VII-	0.9	No Data	No Data	No Data	No Data	No Data
49	Torre della Lantern	77.0	44.4045139	8.9046306	Very high	VII-	1.3	No Data	6	No Data	No Data	No Data
48	Ericsson Globe	85.0	59.2935889	18.0829972	No Data	V	0.2	No Data	No Data	No Data	No Data	No Data
47	Glacial Aerial Tram	113.6	47.1996167	12.6880444	No Data	VII-	0.9	No Data	4	No Data	No Data	No Data
46	Spire of Dublin	120.0	53.3498	-6.2602583	No Data	V	0.2	500	No Data	No Data	SR_GFZ	No Data
45	Henninger Turm	120.0	50.0972722	8.6935583	No Data	VI	0.6	No Data	4	No Data	No Data	No Data
44	Phra Pathom Ched	127.0	13.81972	100.06028	No Data	VII-	0.9	No Data	No Data	No Data	No Data	No Data
43	Spring Temple Bud	128.0	33.77515	112.451016	No Data	VI	0.6	No Data	No Data	No Data	No Data	No Data

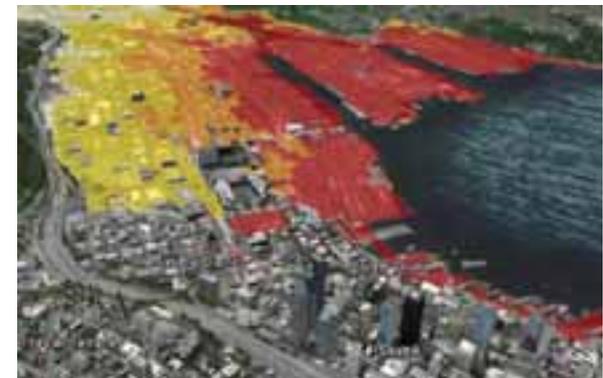
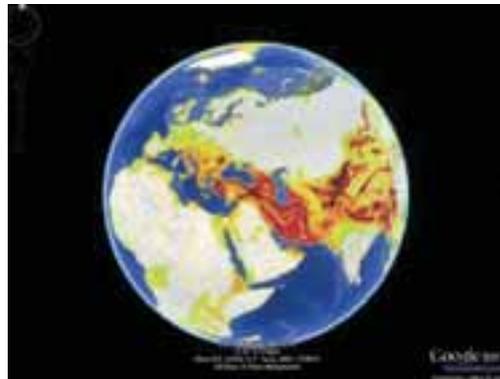
LocationCity	Country	City	State	Zip	Country	City	State	Zip
Algiers	Algeria	Algiers	Algiers	00000	Canada	Edmonton	Alberta	T5C 0A8
Algiers	Algeria	Algiers	Algiers	00000	Canada	Edmonton	Alberta	T5C 0A8
Algiers	Algeria	Algiers	Algiers	00000	Canada	Edmonton	Alberta	T5C 0A8
Algiers	Algeria	Algiers	Algiers	00000	Canada	Edmonton	Alberta	T5C 0A8
Algiers	Algeria	Algiers	Algiers	00000	Canada	Edmonton	Alberta	T5C 0A8
Algiers	Algeria	Algiers	Algiers	00000	Canada	Edmonton	Alberta	T5C 0A8
Algiers	Algeria	Algiers	Algiers	00000	Canada	Edmonton	Alberta	T5C 0A8
Algiers	Algeria	Algiers	Algiers	00000	Canada	Edmonton	Alberta	T5C 0A8
Algiers	Algeria	Algiers	Algiers	00000	Canada	Edmonton	Alberta	T5C 0A8
Algiers	Algeria	Algiers	Algiers	00000	Canada	Edmonton	Alberta	T5C 0A8

Typical CatNet® Use Case II Hazard Information For Single Location

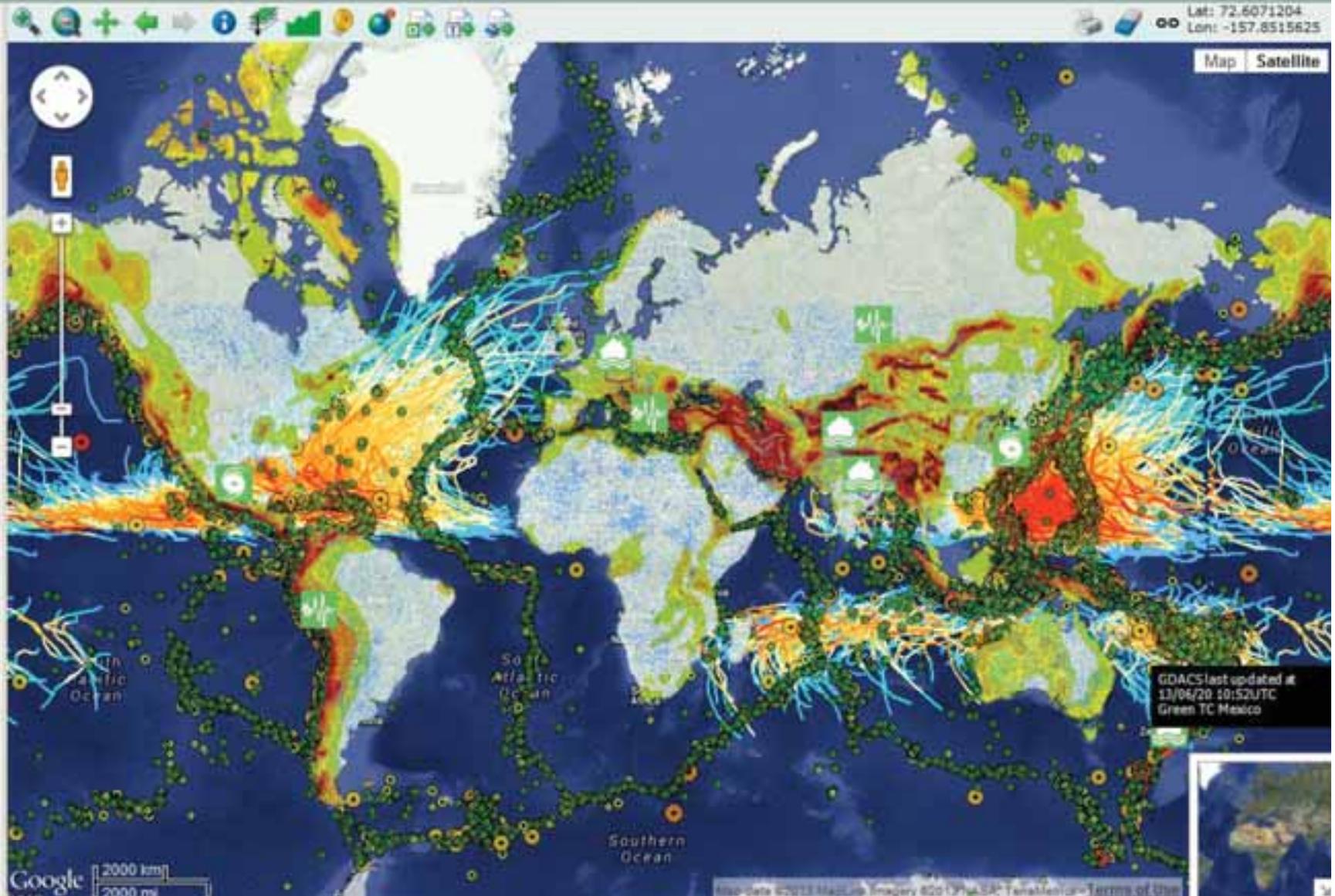


CatNet® Outlook

- CatNet services
- Additional data: Metropolitan Hotspot areas, Industrial areas, 2012 loss events, recent events, ...
- New functionality: batch encoding, 3D, animations, ...
- Support material: demo videos, ...



- Historic Footprints
- Earthquake & Tsunami
 - Seismic Hazard
 - Seismic Hazard
 - MMI - return period 475 years
 - Very high (MMI IX)
 - Very high (MMI IX)
 - Very high (MMI IX-)
 - High (MMI VIII+)
 - High (MMI VIII)
 - Significant (MMI VII+)
 - Moderate (MMI VI+)
 - Moderate (MMI VI-)
 - Low (MMI V)
 - Very low (MMI V)
 - Epicenters
 - Epicenters
 - Magnitude
 - >= 9.0
 - 8.5 - 8.9
 - 8.0 - 8.4
 - 7.5 - 7.9
 - 7.0 - 7.4
 - 6.5 - 6.9
 - 6.0 - 6.4
 - < 6.0
 - Plate Boundaries
 - Tsunami
 - Storm
 - Wind Speed (regional)
 - Tropical Cyclone Tracks
 - Atlantic Ocean
 - Indian Ocean
 - Pacific Ocean
 - Helstorms



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Thank you

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