

## INTERNATIONAL CONFERENCE

“Towards an European  
common approach for Natural Hazards”

### *Italian natural hazards insurance problems*

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ROME, ITALY - 25th OF MAY 2007 - TEMPIO DI ADRIANO

**In October 2005 CINEAS (Consorzio per l'Ingegneria nelle Assicurazioni) of Milan Politecnico, with the National Civil Protection Department, held a conference in Rome on the Insurance of Cat Nat damages.**

**The following slides (an extract of that conference) illustrate the situation, unfortunately unchanged since then**

**In the next slide a list of severe events in Italy since 1994**

# CALAMITA' NATURALI: EVENTI DI MAGGIORE ENTITA'

**Fig. 1 CALAMITÀ NATURALI: ALCUNI TRA GLI EVENTI DI MAGGIORE ENTITÀ**

Anno	Evento	Vittime	Zona	Danno economico*
1994	alluvione	70	Nord Italia	5.500
1996	alluvione	-	Calabria	100
1996	alluvione	14	Versilia	-
1997	terremoto	11	Umbria e Marche	8.000
1998	frana	-	Sarno-Campania	380
1998	alluvione	-	Liguria	10
2000	alluvione	-	Nord Italia	5.000
2000	alluvione	-	Calabria	50
2000	terremoto	-	Emilia	50
2000	terremoto	-	Lazio	-
2002	alluvione	-	Liguria	12
2002	terremoto	29	Molise e Puglia	5
2002	alluvione	-	Lombardia	500
2002	frana/maremoto	-	Stromboli	-
2003	alluvioni e frane	1	Molise, Puglia, Abruzzo, Basilicata	800
2003	alluvione	3	Friuli, Valcanale, Canal del Ferro	519
2004	terremoto	-	Nord Italia	20
2005	frana	-	Calabria	-

Fonte: Cineas

\*in milioni di euro

Risk is generally defined as “a possible danger the size of which is expressed using the formula: loss potential x occurrence frequency, i.e.:

$$R = f (M,P)$$

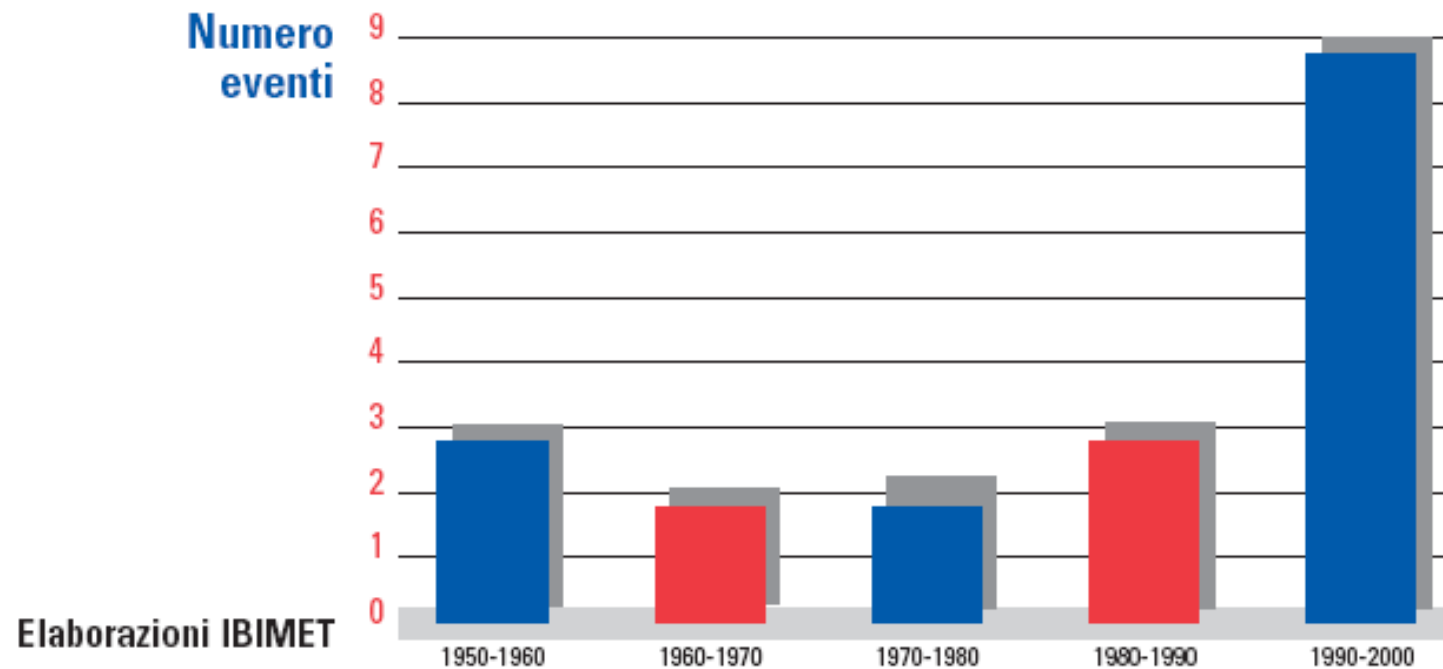
Where **M** is Magnitudo and **P** is the Frequency

From (Re)Insurers studies (e.g Swiss Re “Cat Nat and man-made disasters”) a clear trend emerges indicating that insurance losses caused by Cat/Nat have risen dramatically,

There are of course huge annual fluctuations, but the trend is of a continuous increase in frequency, as shown in the next slide

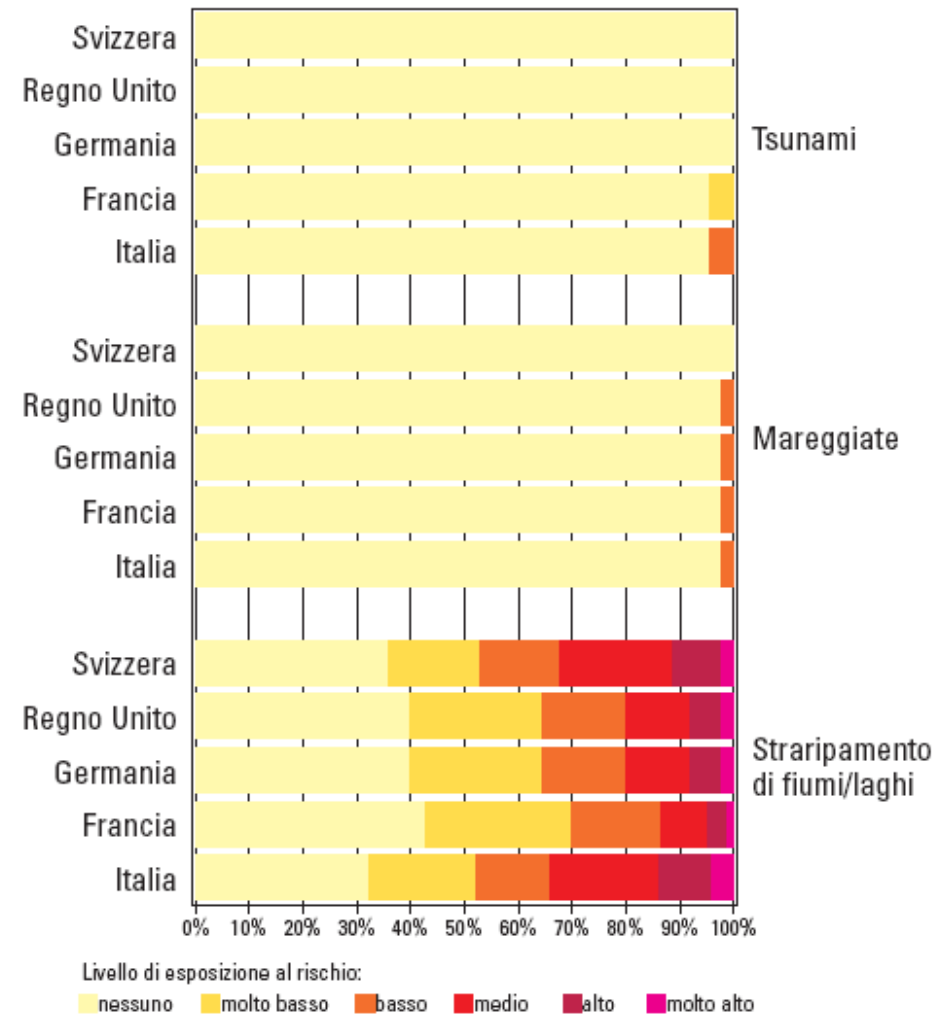
# AUMENTANO GLI EVENTI ESTREMI / severe events are increasing

**Fig. 2 AUMENTANO GLI EVENTI ESTREMI**



**Fig. 3 GRADO DI ESPOSIZIONE AL RISCHIO ALLUVIONE**

**GRADO DI  
Exposure to  
ESPOSIZIONE  
RISCHIO  
ALLUVIONE  
Flood**



Fonte: Munich Re

## Insurers are requested of more CAPACITY

In the formula

$$R = f (M,P)$$

Not only the frequency, but also the Magnitudo is increasing, due to:

- **Higher population densities**
- **A rise in insurance density (\*)**
- **High vulnerability of some modern materials and technologies**

(\*) the term expresses the ratio between insured and existing insurable values

# COMUNI A RISCHIO IDROGEOLOGICO

**Fig. 4 COMUNI A RISCHIO IDROGEOLOGICO**

Regione	Numero comuni a rischio elevato	Percentuale dei comuni a rischio sul numero totale dei comuni della regione
Lombardia	687	44,4%
Piemonte	651	53,8%
Campania	291	52,8%
Abruzzo	208	68,2%
Emilia Romagna	200	58,7%
Liguria	169	71,9%
Toscana	168	58,5%
Calabria	164	40,1%
Sicilia	155	39,7%
Marche	142	57,7%
Lazio	123	32,6%
Molise	117	86%
Basilicata	114	87%
Veneto	107	18,4%
Trentino Alto Adige	92	27,1%
Umbria	82	89,1%
Puglia	64	24,8%
Valle d'Aosta	53	71,6%
Friuli Venezia Giulia	49	22,4%
Sardegna	35	9,3%

**Fonte: Ministero dell'Ambiente**

# CENSIMENTO DELLE FRANE DAL 1918 AL 1994

## Landslides survey

number of landslides

number of location

fatalities

average annual loss

**Fig. 5 CENSIMENTO DELLE FRANE DAL 1918 AL 1994**

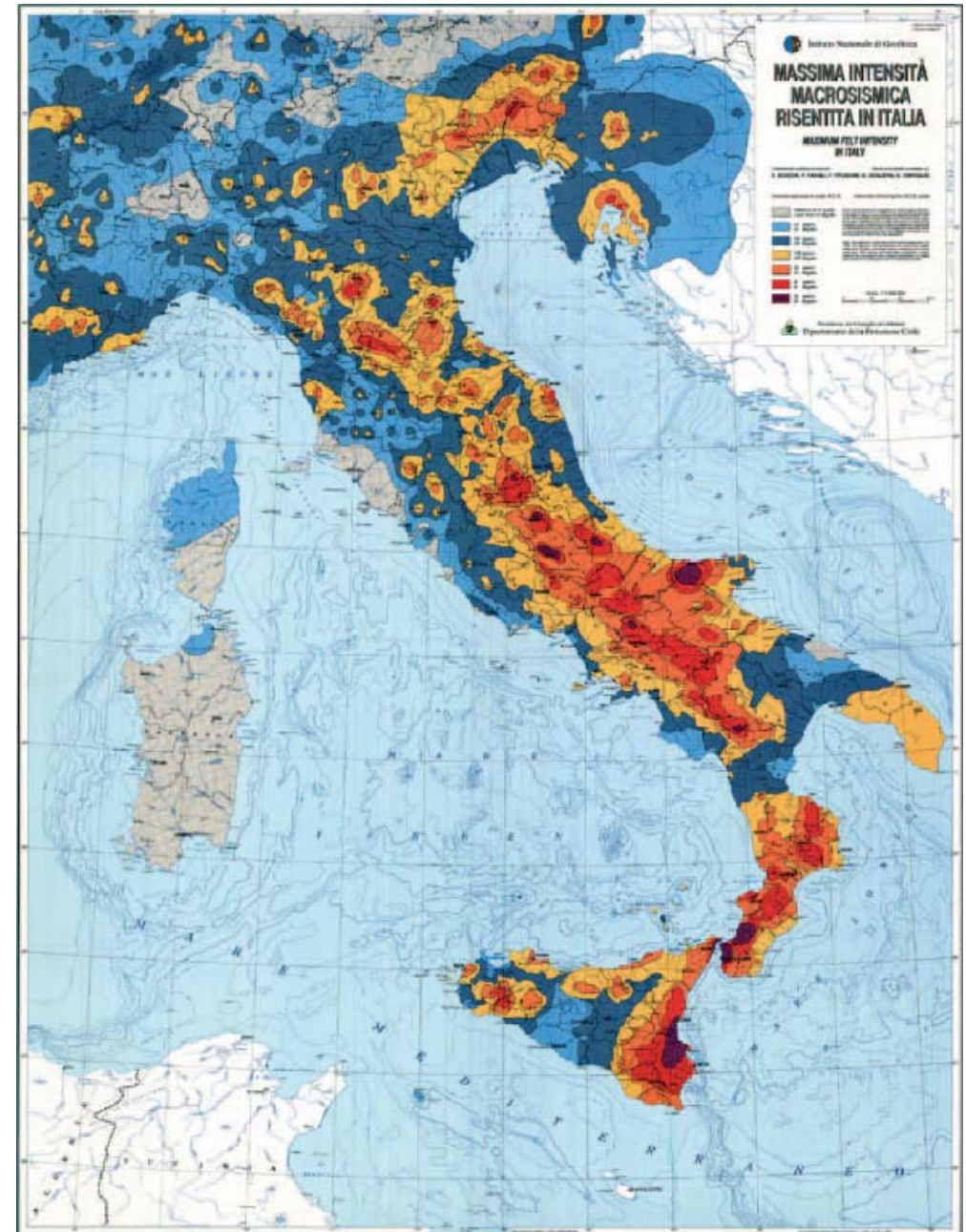
Frane censite	32.000
Località interessate	21.000
Vittime e dispersi	5.939
Stima dei danni provocati mediamente ogni anno	1-2 miliardi di euro

**Fonte: Gruppo Nazionale Difesa dalle Catastrofi idrogeologiche CNR**

# CARTA DELLA SISMICITA'

Fonte: Istituto nazionale di geofisica e vulcanologia

## Earthquake Risk Map



## CAT/NAT Insurance in Italy

Insurance schemes in which the State as the role of “Last Insurer” are in force in:

Spain, France, Norway, USA

In Italy a bill or a draft bill have been presented first in 1993 and then in 1996, 1999, 2001, 2002, 2004, and 2005

Notwithstanding all the mentioned bills no insurance scheme is in force.

Anyway Cat/nat insurance is available on the market

# CAT/NAT Insurance market

## Traditional Market :

After the substantial increase at the end of 2005,  
(Re)Insurance rates are stable or lowering due to absence  
of severe events in 2006

**CAT BONDS** market has reached the higher value ever  
since, the total value insured at the end of 2006 is in the  
range of US\$ 8,5 billion, due to the lack of capacity for  
Hurricanes coverage following huge losses in 2004 and  
2005

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