



GOBIERNO
DE ESPAÑA

MINISTERIO
DE ECONOMÍA, COMERCIO
Y EMPRESA

The experience of the Consorcio de Compensación de Seguros for climate risk management and adaptation in Spain

Enhancing disaster risk management and
climate change adaptation in Cyprus

TAIEX

MOVING FORWARD TOGETHER WITH EU EXPERTISE



CONSORCIO DE
COMPENSACIÓN DE SEGUROS

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1. Risk context
2. The Spanish case
3. The Valencia floods of October 29th 2024





1. Risk context

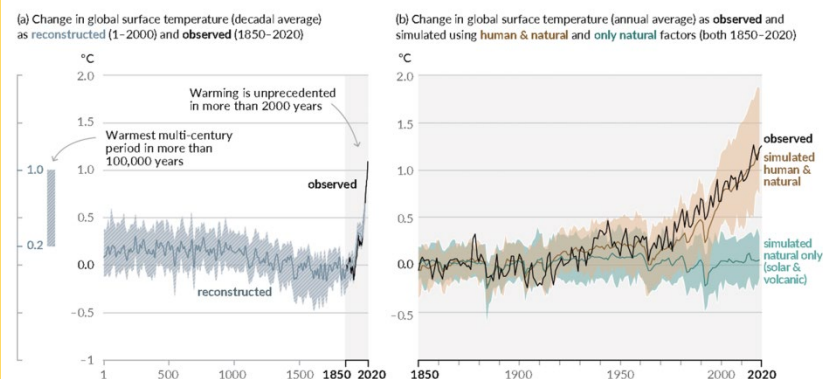


On risk, insurance and insurability

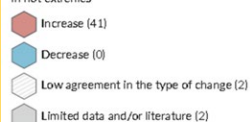
$$\text{RISK} = \text{HAZARD} \times \text{EXPOSURE} \times \text{VULNERABILITY}$$

Composed of
SUSCEPTIBILITY and **RESPONSE CAPACITY**

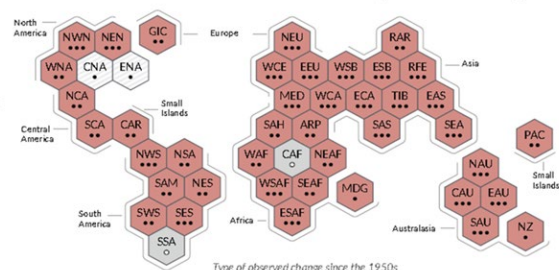
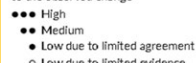
Changes in global surface temperature relative to 1850–1900



Type of observed change in hot extremes

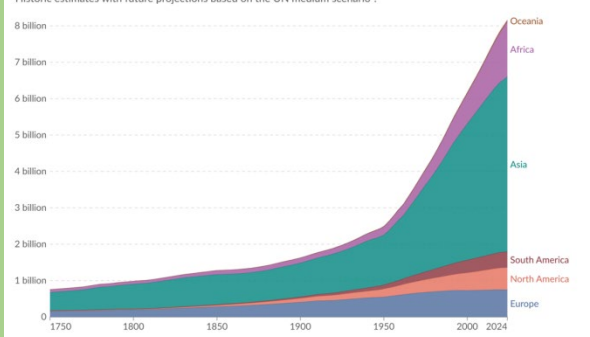


Confidence in human contribution to the observed change



Population by world region

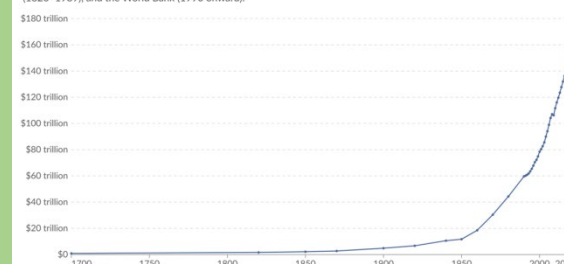
Historic estimates with future projections based on the UN medium scenario¹.



1. UN projection scenarios: The UN's World Population Prospects provides a range of projected scenarios of population change. These rely on different assumptions in fertility, mortality and/or migration patterns to explore different demographic futures. Read more: Definition of Projection Scenarios (UN)

Global GDP over the long run

Total output of the world economy. These historical estimates of GDP are adjusted for inflation. We combine three sources to create this time series: the Maddison Database (before 1820), the Maddison Project Database (1820–1989), and the World Bank (1990 onward).



1. International dollars: International dollars are a hypothetical currency that is used to make meaningful comparisons of monetary indicators of living standards. Figures expressed in international dollars are adjusted for inflation within countries over time, and for differences in the cost of living between countries. The goal of such adjustments is to provide a unit whose purchasing power is held fixed over time and across countries, such that one international dollar can buy the same quantity and quality of goods and services no matter where or when it is spent. Read more in our article: What are Purchasing Power Parity adjustments and why do we need them?

On risk, insurance and insurability

To be transferred to insurance



RISK = HAZARD x EXPOSURE x VULNERABILITY



Composed of
SUSCEPTIBILITY and RESPONSE CAPACITY

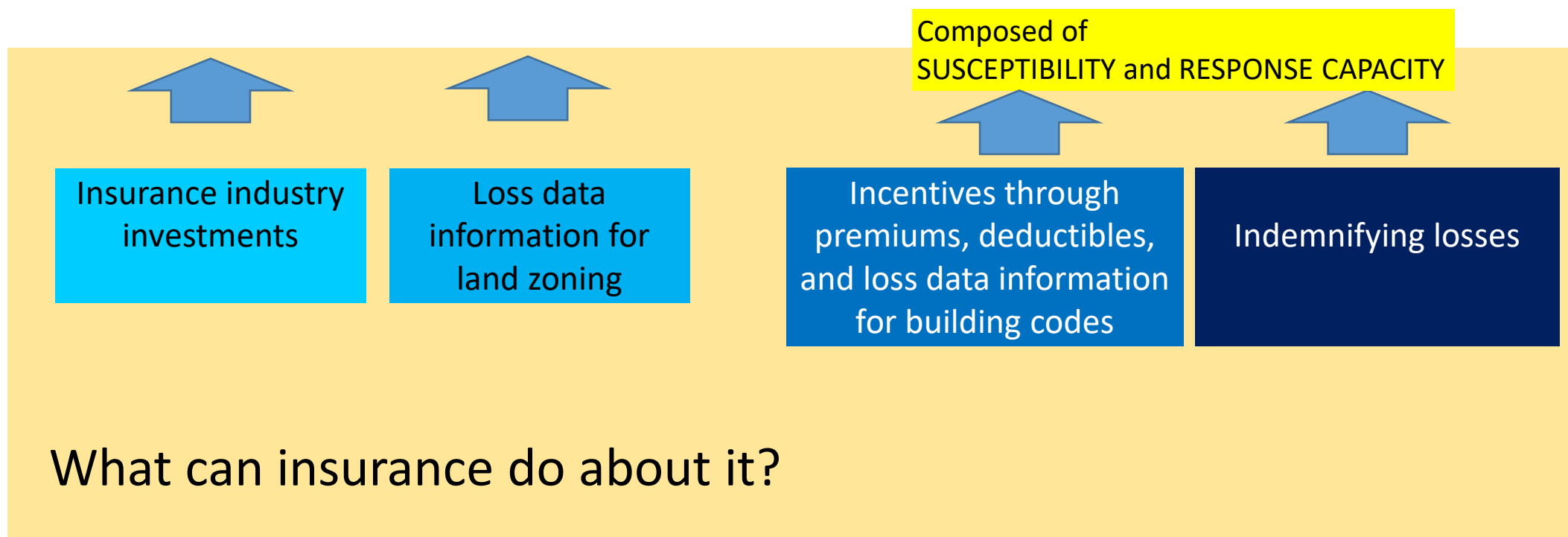
With both **hazard and exposure on the rise**, probably the best option to keep the risk to be insured within acceptable levels, is to **reduce vulnerability**, by means of:

- **Rising response capacity** (for instance, by maximising insurance take-up rates and providing more capable and responding insurance schemes)
- **Reducing susceptibility**

On risk, insurance and insurability

To be transferred to insurance


$$\mathbf{RISK = HAZARD \times EXPOSURE \times VULNERABILITY}$$

What are the challenges for catastrophe risk insurance?

Catastrophe risk violates some principles for insuring risks: non-correlation, randomness, ease to estimate... therefore catastrophe risk has to be insured with specific mechanisms: coinsurance, reinsurance, PPP, ILS...

Most jurisdictions arrange solutions based on their socio-economic and also their cultural contexts.

The main problem is to conciliate these three issues:

Availability – Affordability – Risk reduction indication

And solutions have generally to choose between two of them, as meeting all three at the same time is complicated and almost contradictory.

Not meeting these three points usually conducts to a wider **Insurance Protection Gap**.

Ideally, a balance should be found among: **take-up rate, and control of both adverse selection and moral hazard**.

This gap is a matter of particular concern with **the growing exposure and climate change exacerbated hazards** and therefore, with the **rising losses**.



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2. The Spanish case



Consorcio de Compensación de Seguros (CCS): a tool at the service of the insurance market in which it is integrated

CCS Legal Statutes(1991)

Own legal nature



State-owned Company
Attached to the Ministry of Economy

Full operational
capability



Subjected to laws regulating
private insurance companies

Own assets independent
from those of the State



Premiums, surcharges and
investment returns

Multi-function



Managing several insurance
and non-insurance solutions

Board of Directors



Equal private-public
composition

A single institution with many different functions at the service of the Spanish Insurance Industry

PERMANENT INSURANCE FUNCTIONS

- **Extraordinary Risk Insurance**
 - Property loss
 - Personal injury
 - Business interruption
- **Third-Party Motor Car Liability Insurance**
 - Direct insurance
 - Warranty fund
- **Multi-peril Agricultural Insurance**
 - Coinsurance
 - Reinsurance
 - Loss adjust assessment
- **Nuclear risks** (reinsurance)
- **Wildfire Fighting Accident Insurance**



OTHER (TEMPORARY) INSURANCE FUNCTIONS

- **When required by public interest or market circumstances** (approved by 2/3 majority of the Board of Administration)
- **Reinsurance operations.** Examples:
 - Reinsurance of risks of war and terrorism to air navigation after 9-11-2001 (2001-2002)
 - Reinsurance of business interruption arising from terrorist attacks (until permanently included into the extraordinary risks insurance system -2004)
 - Credit Risk Insurance (2009-2010; 2020-2021)

NON-INSURANCE FUNCTIONS

- **Winding-up activity of insurance undertakings**
- **Informative functions in Motor Car Insurance**
 - Insured Vehicle Informative File (FIVA)
 - Information Centre (cross-border accidents)
- **Other informative functions** (Management of the Compulsory Insurance Register)
- **Export Credit Insurance** (Management of the Reserve Fund)
- **Environmental liability** (Pool* and Compensation Fund management)
- **Prevention, dissemination, communication**

* The participation of CCS in the Environmental Liability Pool is an insurance function



HOW DOES INSURANCE COVER NATURAL HAZARDS IN SPAIN?

HAZARDS

AFFECTING PROPERTIES AND PERSONS

WILDFIRE

RAIN. SNOW. HAIL

AVALANCHES AND LANDSLIDES

WINDSTORM (<120 Km/h)

FLOOD (RIVERINE. PLUVIAL AND COASTAL)

WAVE BATTERING

WINDSTORM (>120 Km/h) AND TORNADO

EARTHQUAKE AND TSUNAMI

VOLCANIC ERUPTION

METEORITE FALLING

AFFECTING THE AGRICULTURAL SECTOR

FLOOD

DROUGHT

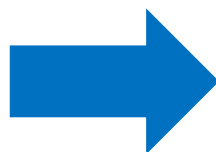
WINDSTORM

FROST AND HEATWAVE

HAIL

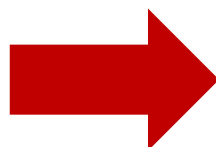
WILDFIRE

...



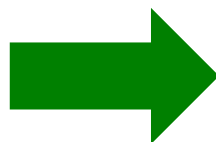
ORDINARY INSURANCE

These hazards are covered by private undertakings, on a free tariff basis.



EXTRAORDINARY RISK INSURANCE

Compulsory extension of most policies contracted with private undertakings to cover the *Extraordinary Risks*. Consorcio de Compensación de Seguros provides this cover on a subsidiary basis.



MULTIPERIL AGRICULTURAL INSURANCE

Cover provided by an insurance pool (AGROSEGURO) of private undertakings and CCS. with CCS also as reinsurer. Insureds (farmers and stock breeders) enjoy public grants (from national and regional administrations) to pay their premiums.



2. The Spanish case

THE “EXTRAORDINARY” RISKS

Natural

Flood
(riverine or flash-flood)



Coastal flood
(+ wave battering)



Windstorms
(>120 Km/h and tornado)



Earthquake and tsunami



Volcanic eruption



Meteorite falling



Human - made

Terrorism



Riots, civil commotion



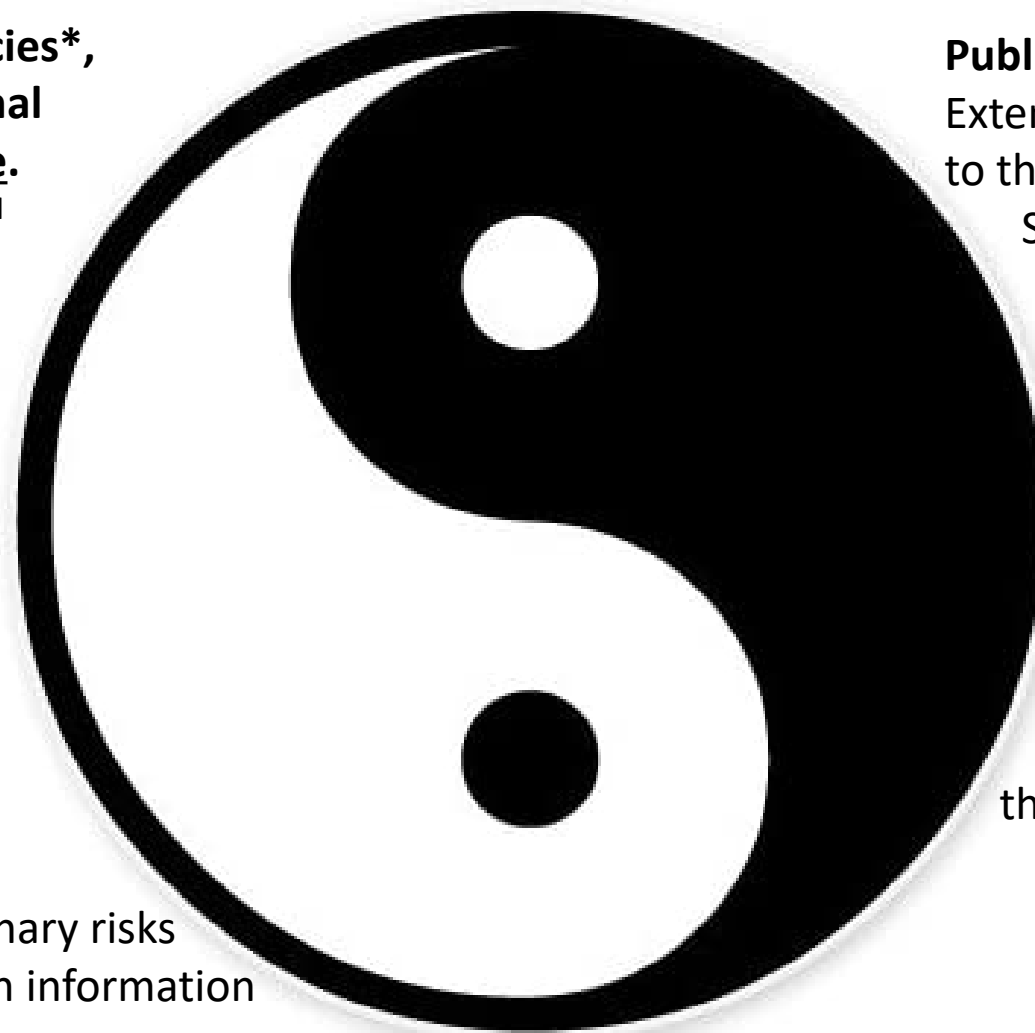
Actions of Armed Forces and Law
Enforcement Agencies in peacetime



THE EXTENSION OF THE COVER IS COMPULSORY

In Spain almost all property policies*, business interruption and personal injury policies have a dual nature.

*Exceptions: ships and airplanes, construction and erection, transport and liability policies.



Private sector (private insurers)

Choose the risks to insure.

Underwrite the policies.

Apply premium prices freely.

Cover non extraordinary hazards (including some natural hazards).

Collect the surcharge for extraordinary risks and transfer it to CCS together with information about the policies.

Is in charge of handling some extraordinary events (windstorms).

Public sector(CCS)

Extends the cover of underwritten policies to the extraordinary risks.

Surcharge is universal and depends only on the kind of risk and sum insured.

Covers properties and individuals affected by any listed extraordinary hazard (handles the claim, assess the loss and indemnifies the policyholder directly).

Generates information about catastrophic losses that is shared with bodies competent in risk reduction and the academic sector.



2. The Spanish case

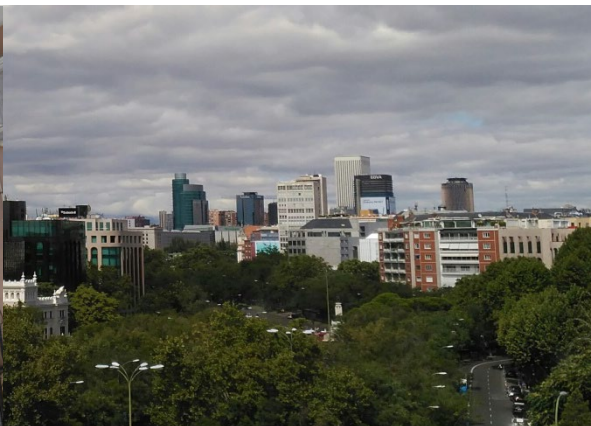
SURCHARGE TARIFF

APPLIED ON THE INSURED CAPITAL



RESIDENTIAL 0.07 %

i.e., a house insured for 300,000 € would pay a premium surcharge of 21€



OFFICES 0.12 %



SHOPS, INDUSTRIES AND OTHER SINGLE RISKS 0.18 %



MOTOR VEHICLES FLAT RATE *i.e. cars 2.1 €;*



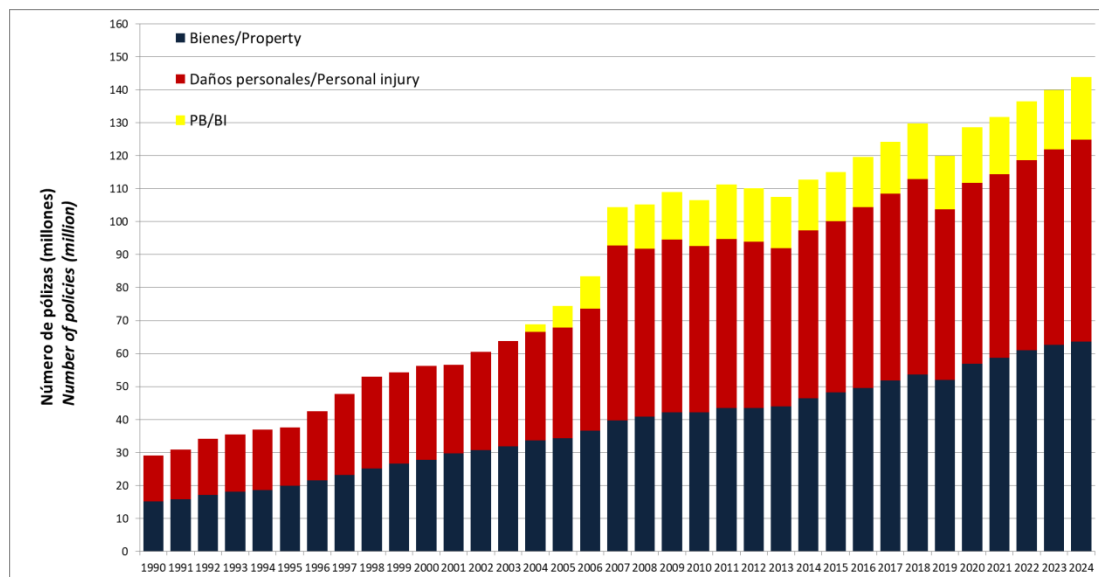
CIVIL WORKS from 0.28 ‰ to 1.63 ‰



BUSINESS INTERRUPTION: (dwellings. 0.0035 ‰; other risks. 0.18 ‰) PERSONAL INJURY: 0.003 ‰



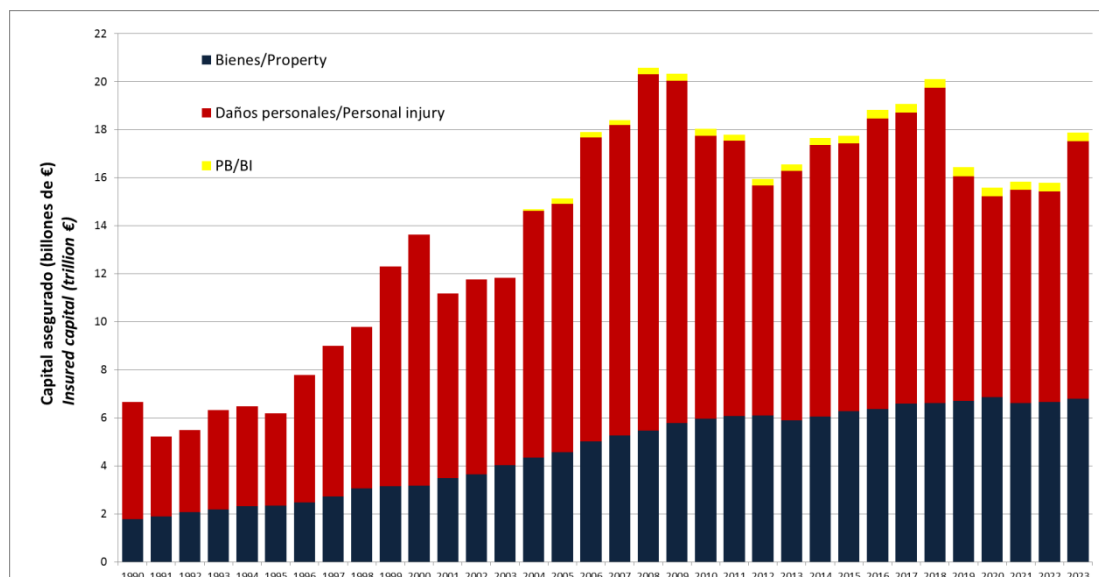
2. The Spanish case



EXPOSURE

TOTAL
144 million policies covered

PROPERTY
63.6 million policies covered

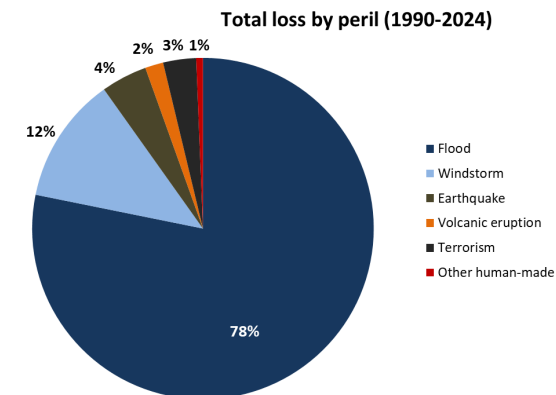
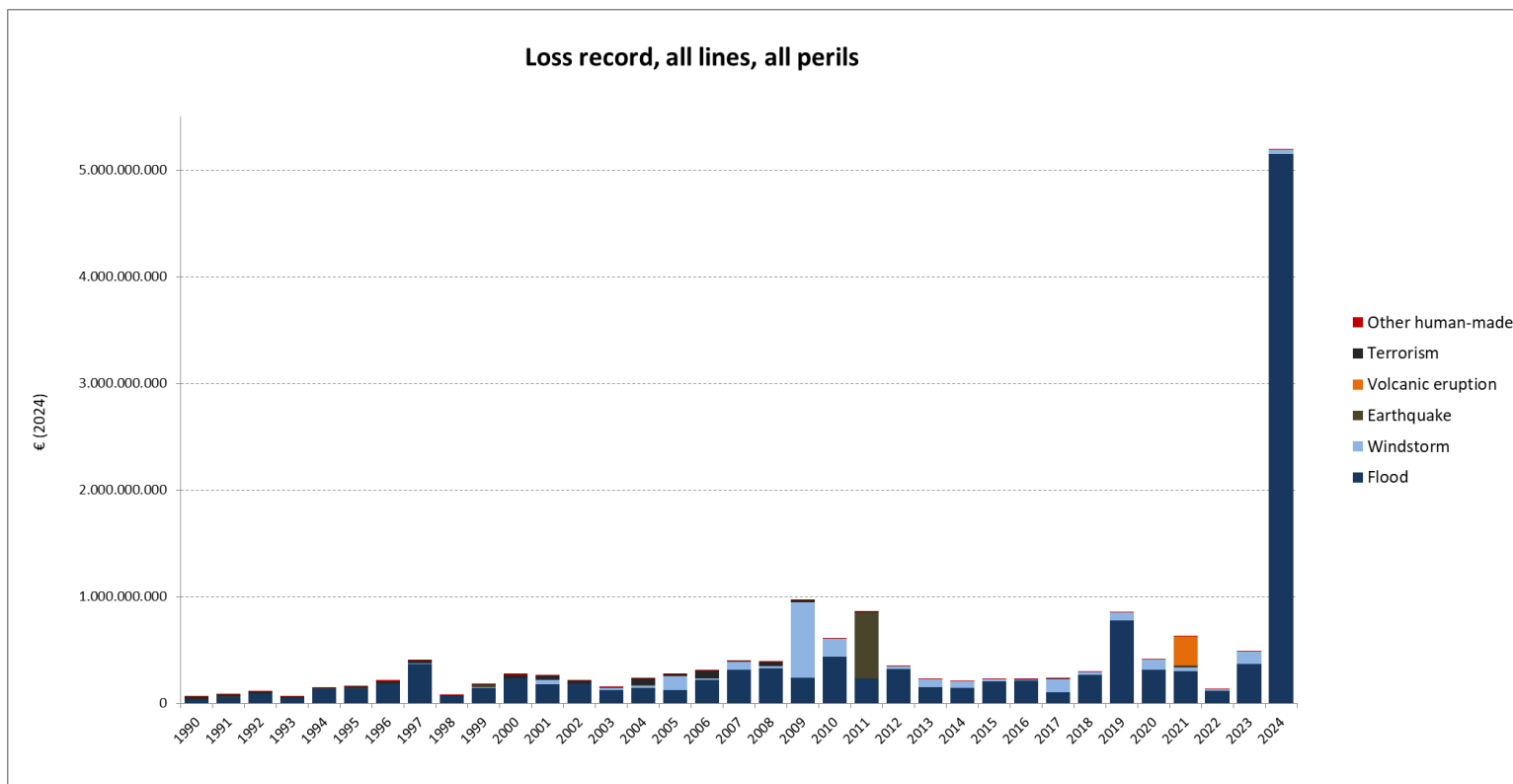


TOTAL SUM INSURED
18.3 trillion (10^{12}) euros

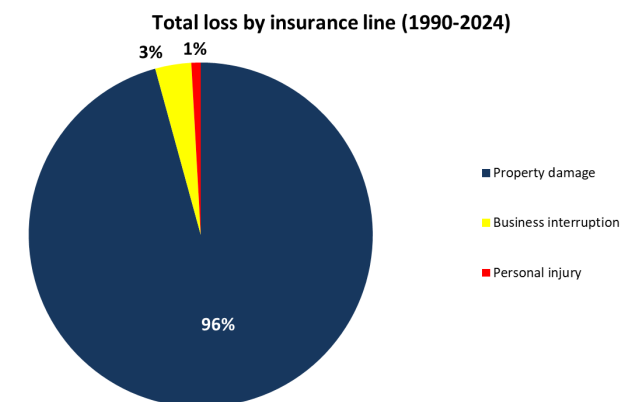
PROPERTY INSURED CAPITAL
7.1 trillion euros

2. The Spanish case

LOSS COMPOSITION



> 3/4 caused by flood
90 % hydrometeorological hazards
6 % geological hazards
96 % natural hazards





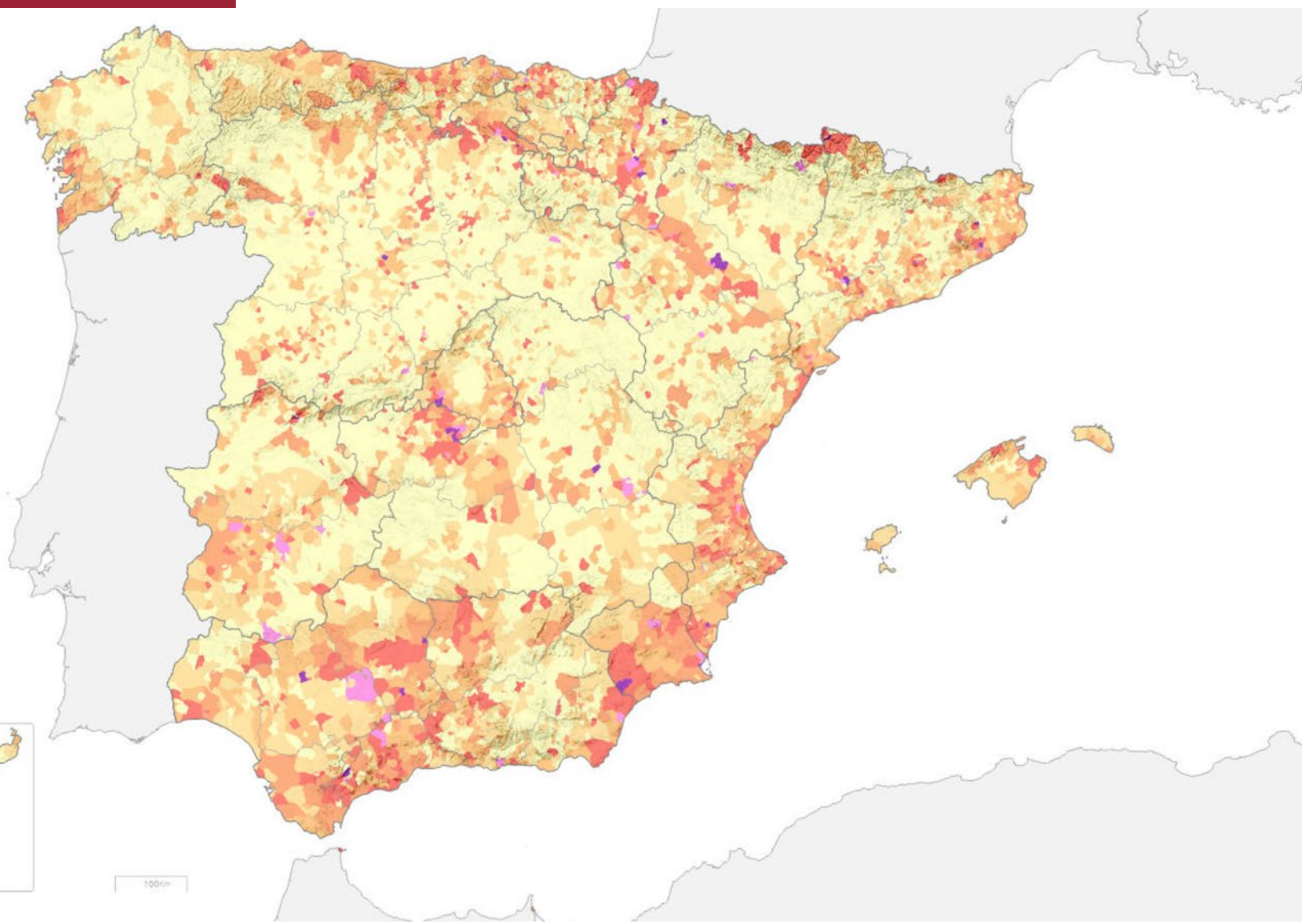
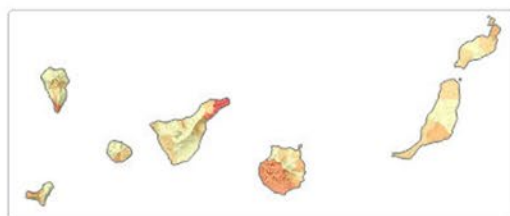
2. The Spanish case

LOSS COMPOSITION: FLOOD

Loss ratio by municipality

Floods 1996-2023 (n)

Mean yearly loss (€) / Insured capital
(M€)





3. The Valencia floods of October 29th 2024



3. The Valencia floods of October 29th 2024

Between 26 October and 4 November 2024 a cut-off low (DANA in Spanish) caused heavy precipitation and numerous floods in many parts of Eastern and Southern Spain. The worst floods happened to the West and South of the Valencia metropolitan area (which is the third city in Spain) on the afternoon and evening of 29 October. In total, 236 people died.

This situation:

- Was the result of the combination of a **large exposure in a well-known flood-prone area together with the rising intensity in extreme rainfall** very likely caused by global warming.
- Caused the **largest loss event in the 70 years of history of CCS** and extraordinary risk insurance, with more than 250,000 claims and an estimate loss likely to be around €4.8 billion.
- Immediately implied changes in the system for better and quicker response:
 - Enlargement of the expert pool working with CCS, of the web and customer line capacities and of CCS's staff and functions.
 - Agreement with the private sector for their cooperation in filing claims and assessing loss. 38 companies adhered to this agreement. Claims handled are sent to CCS for final check and payment to the policyholder.
 - These measures have been key for the speed gained in the process: after 11 months 97.6% of the claims are completed.

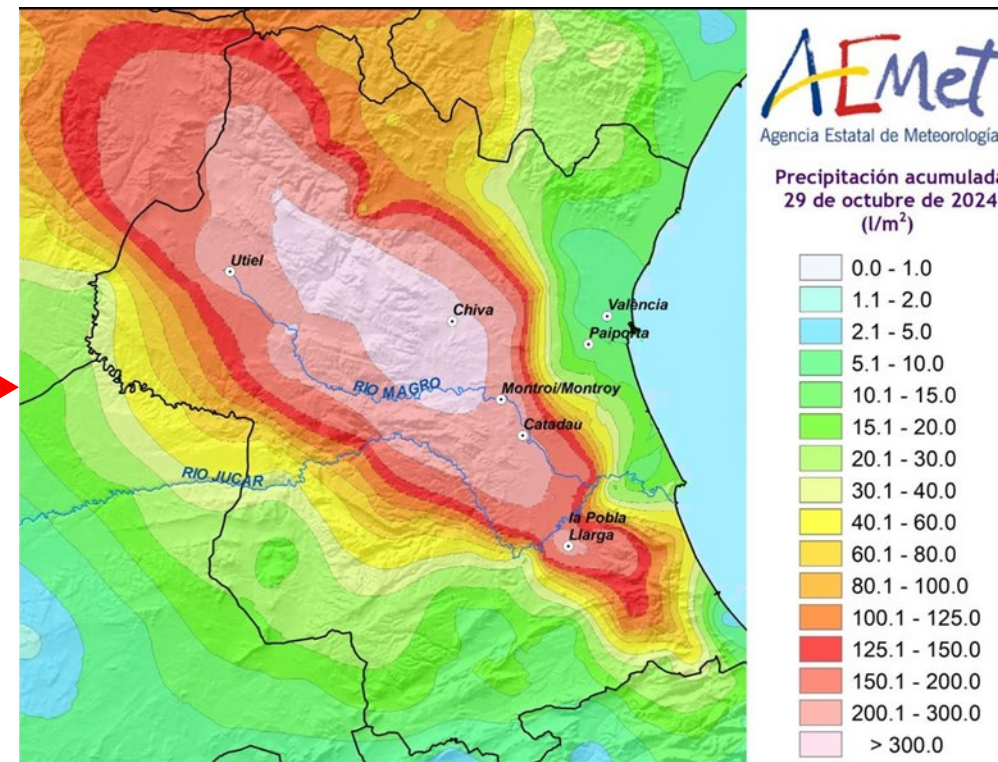
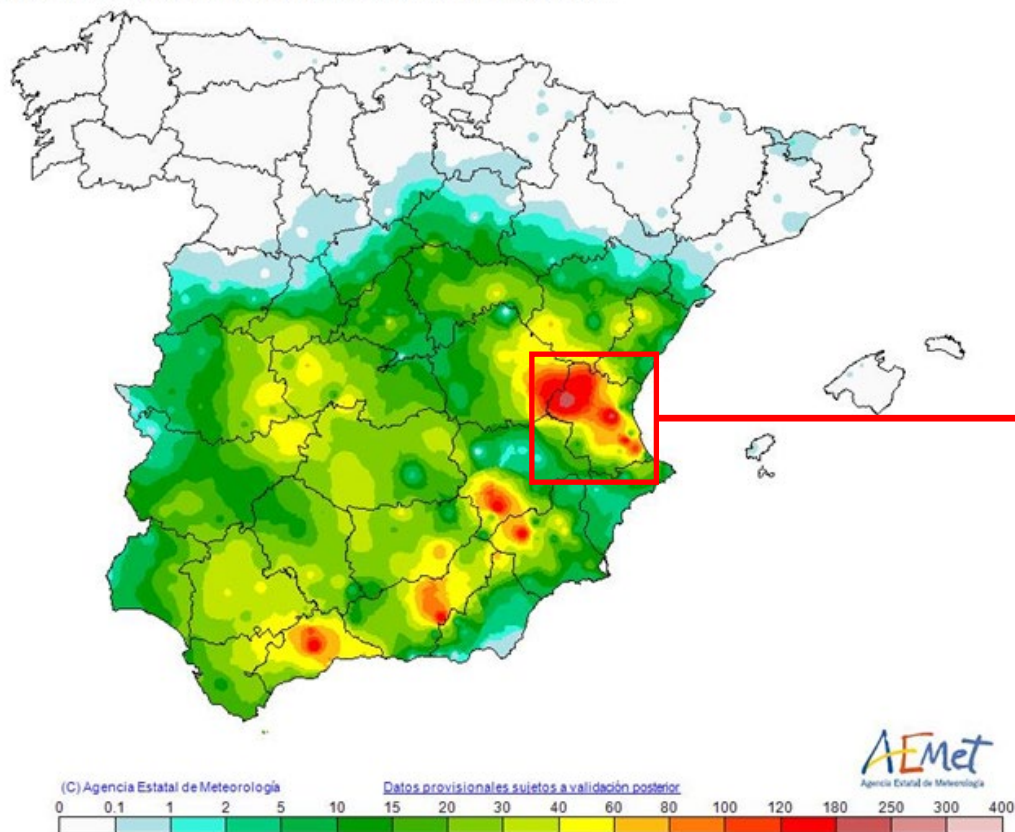
Key takeaways:

- The extraordinary risk insurance has been tested and, in spite all difficulties, is providing and exemplary answer.
- About 90% of the residential properties (and likely, higher shares of commercial and industrial properties) and 100% of the 144,000 vehicles affected, were insured and are to be indemnified. Should the country not count with this insurance scheme, the number of insured properties would have been much lower and this event would have been a heavier burden on public budgets.
- Agreement with the private sector was fundamental and the fabric of collaborative work and mutual confidence along the decades has allowed for finding new ad-hoc ways for collaboration in a matter of days.



3. The Valencia floods of October 29th 2024

Precipitación (mm) entre las 23:10UTC del día 28/10/2024 y las 23:00UTC del día 29/10/2024



Accumulated rainfall of the 29th October 2024



3. The Valencia floods of October 29th 2024



South of Valencia 1956



3. The Valencia floods of October 29th 2024



South of Valencia 2023

Solicitudes registradas por código postal

Afectación de la póliza en todos los riesgos

- > 70 %
- 60 a 70 %
- 50 a 60 %
- 40 a 50 %
- 30 a 40 %
- 20 a 30 %
- 10 a 20 %
- 1 a 10 %
- ≤ 1 %
- en revisión

Actualización: 10/06/2025 8:00

IN CONCLUSION

- The **compulsory nature of the cover extension** (to common policies: multi-risk home insurance, MTPL, etc.):
 - maximises mutualisation,
 - guarantees affordability,
 - eliminates adverse selection.
- **Private market involvement** is essential because:
 - private undertakings sell the policies (and cover extension is a selling point),
 - private undertakings can choose insurable risks (as the private part also bears certain hazards).
 - a culture of cooperation with the public sector is in place.
- **Inclusion of several hazards into the binding covers:**
 - justifies application of a rate independent of the risk level,
 - simplifies operation.
- **Data collection** by a single organisation:
 - Eases putting available information at the disposal of risk managers in view of disaster risk reduction, climate change adaptation, etc.



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Thanks for your attention!

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