



Disaster Risk Financing

Evidence from the EU and Member States

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EUROPEAN COMMISSION

Directorate General for Economic and Financial Affairs

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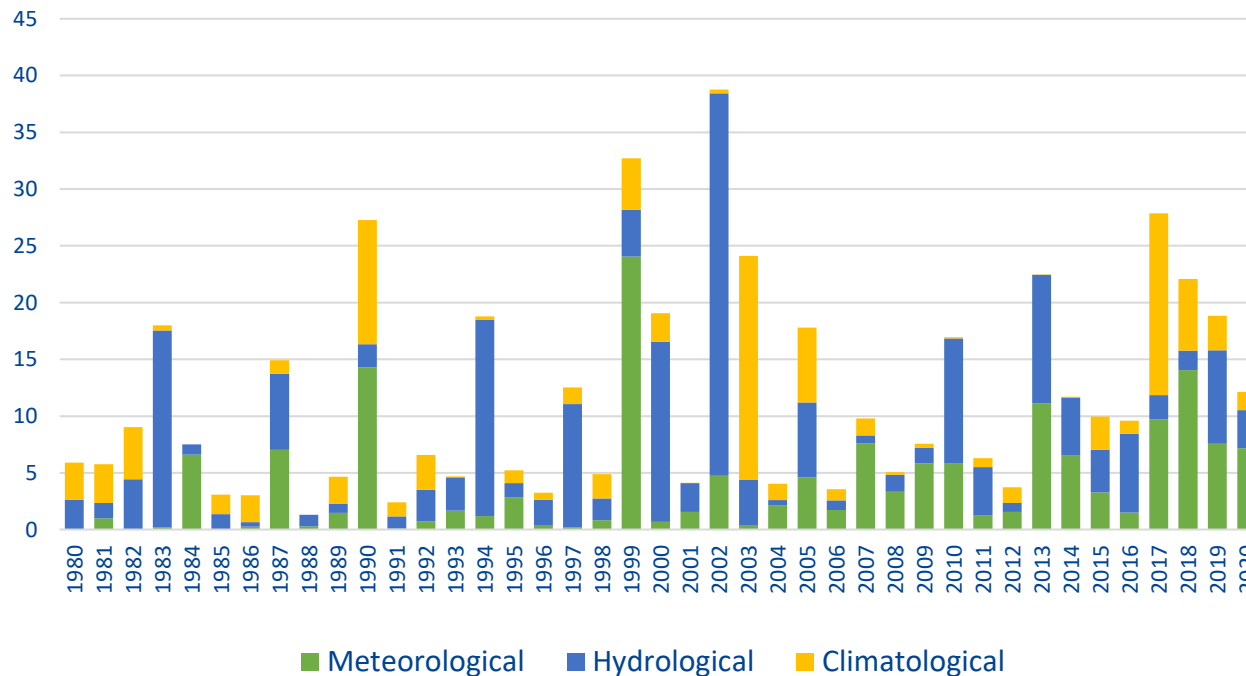
Rationale

- **Disaster Risk Financing contributes to achieving multiple policy objectives:**
 - to reduce the fiscal impacts of disasters and increase financial resilience
 - to protect the most vulnerable (households, economic sectors)
 - to ensure an efficient allocation of resources between short-term and long-term needs
 - to be financially prepared so as to speed up post-disaster recovery and limit the economic cost of disasters for future generations (higher deficits and debt)
- A role for the **public sector**, complemented by the private sector

Climate - related losses in the EU

EUR 487 billion => 80% of total economic damages from natural hazards

Annual economic damage from climate-related disasters
(EUR billion)

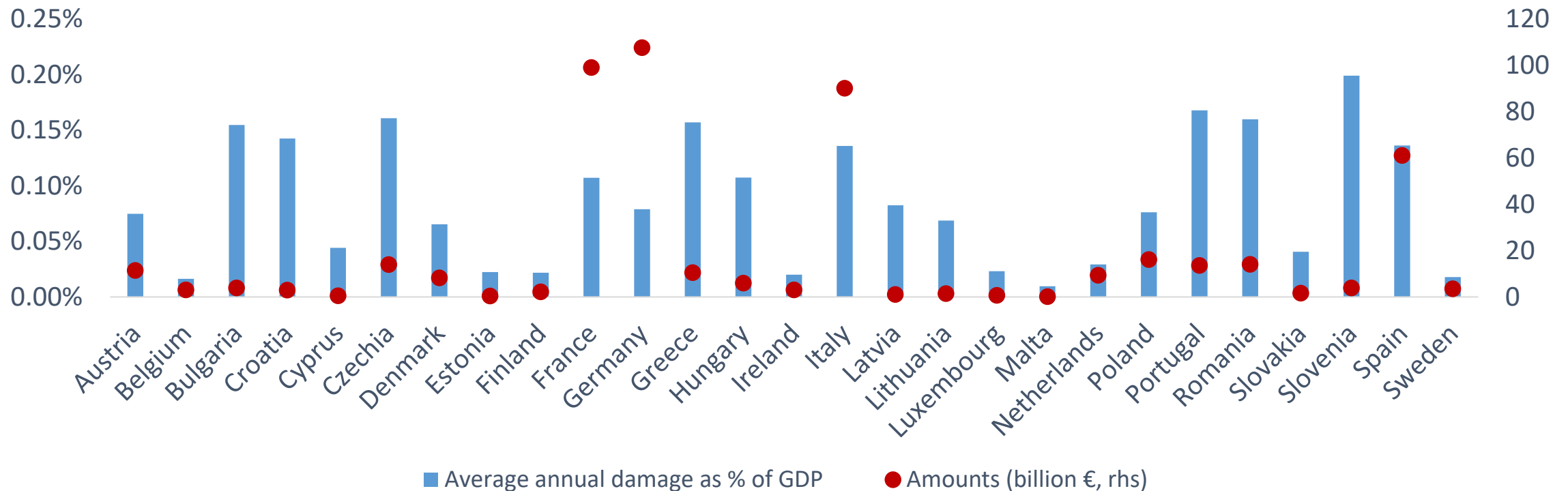


Climate-related disasters:

- **meteorological** (storms)
- **hydrological** (floods, mass movements)
- **climatological** (heatwaves, cold waves, droughts, forest fires)

Climate-related damage in the EU Member States

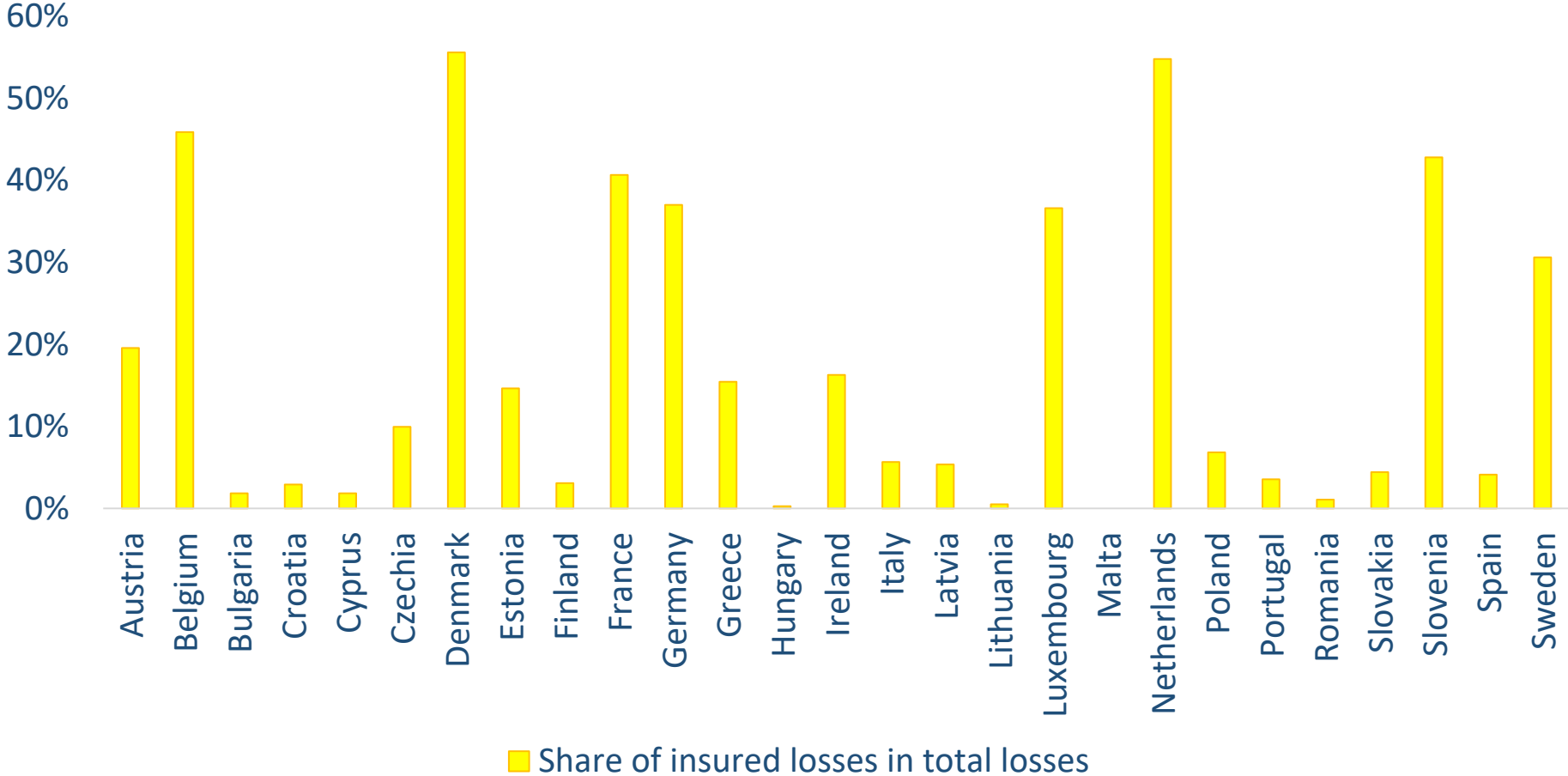
Average annual economic damage between 1980 and 2020



- Past events have had **uneven impacts** across EU Member States in absolute terms and as % of GDP
- Need to distinguish between **smaller scale** and “**recurrent**” **disasters** and **extreme events**
- **Geographical situation** and **GDP level** influence the size and type of financing arrangements

Disaster insurance

Share of insured losses (1980-2020)



The disaster insurance protection gap

COUNTRY	All Peril		Flood				Wildfire				Windstorm				
	Historical Protection gap	Estimate of protection gap today	Historical Protection gap	Estimate of protection gap today	Exposure to hazard	Insurance coverage	Historical Protection gap	Estimate of protection gap today	Exposure to hazard	Insurance coverage	Historical Protection gap	Estimate of protection gap today	Exposure to hazard	Vulnerability	Insurance coverage
EU	1.4	1.0	1.5	1.0	2.0	2.0	1.7	1.6	2.0	3.0	1.4	1.0	2.0	2.0	1.0
Austria	1.5	2.0	2.0	3.4	3.0	4.0	2.0	2.6	2.0	4.0	2.0	0.0	2.0	2.0	0.0
Belgium	1.0	1.7	1.0	1.9	3.0	1.0	1.0	2.0	2.0	n/a	1.0	1.6	2.0	2.0	1.0
Bulgaria	1.8	2.0	3.0	1.7	1.0	4.0	1.0	2.0	1.0	4.0	2.0	1.2	1.0	2.0	n/a
Croatia	2.3	2.4	3.0	2.0	2.0	2.0	3.0	3.0	2.0	4.0	1.0	1.6	1.0	2.0	3.0
Cyprus	1.3	1.9	1.0	1.0	1.0	n/a	2.0	3.0	3.0	4.0	1.0	1.0	1.0	1.0	n/a
Czech Republic	1.8	1.9	3.0	2.0	2.0	2.0	2.0	2.0	1.0	4.0	1.0	1.6	2.0	2.0	1.0
Denmark	1.5	0.0	1.0	0.0	1.0	0.0	2.0	0.0	1.0	0.0	2.0	0.0	4.0	2.0	0.0
Estonia	0.5	1.1	0.0	0.0	1.0	0.0	1.0	3.0	2.0	4.0	1.0	1.5	2.0	n/a	1.0
Finland	1.0	0.7	1.0	1.0	1.0	n/a	2.0	0.0	1.0	0.0	1.0	1.8	2.0	4.0	1.0
France	1.3	0.5	1.0	0.0	2.0	0.0	1.0	2.0	2.0	n/a	2.0	0.0	1.0	2.0	0.0
Germany	1.5	1.6	2.0	2.6	3.0	2.0	1.0	1.0	1.0	2.0	2.0	1.1	1.0	2.0	1.0
Greece	2.8	2.2	2.0	1.7	1.0	4.0	3.0	2.0	1.0	4.0	2.0	1.6	1.0	1.0	4.0
Hungary	1.8	1.3	2.0	1.9	3.0	1.0	3.0	1.0	1.0	n/a	1.0	1.1	1.0	2.0	1.0
Ireland	0.8	0.7	1.0	0.0	1.0	0.0	1.0	1.0	1.0	n/a	1.0	1.9	3.0	2.0	1.0
Italy	2.0	2.4	2.0	1.7	1.0	4.0	2.0	2.0	2.0	n/a	1.0	2.5	2.0	2.0	4.0
Latvia	1.3	0.9	1.0	1.0	1.0	n/a	2.0	1.0	1.0	n/a	2.0	1.7	2.0	1.0	n/a
Lithuania	1.0	1.3	1.0	1.0	1.0	n/a	2.0	2.0	2.0	n/a	1.0	2.0	2.0	2.0	n/a
Luxembourg	1.0	1.6	1.0	2.0	2.0	n/a	1.0	2.0	2.0	n/a	2.0	1.1	1.0	2.0	1.0
Malta	0.5	2.3	1.0	1.7	1.0	4.0	0.0	3.0	3.0	4.0	1.0	1.6	1.0	1.0	4.0
Netherlands	1.0	1.9	1.0	4.0	4.0	4.0	1.0	0.0	1.0	0.0	1.0	1.6	2.0	2.0	1.0
Poland	1.5	1.6	2.0	1.0	1.0	1.0	2.0	1.0	1.0	n/a	1.0	2.3	3.0	1.0	n/a
Portugal	1.5	2.0	1.0	1.6	1.0	3.0	3.0	3.0	3.0	n/a	1.0	1.7	2.0	1.0	n/a
Romania	1.8	1.7	2.0	1.6	1.0	3.0	3.0	1.0	1.0	n/a	1.0	1.2	1.0	2.0	n/a
Slovakia	1.3	2.4	2.0	3.0	3.0	3.0	1.0	3.0	2.0	4.0	2.0	1.6	1.0	2.0	3.0
Slovenia	1.8	1.5	2.0	1.3	1.0	2.0	2.0	1.0	1.0	n/a	2.0	1.2	1.0	2.0	n/a
Spain	1.3	0.9	1.0	0.0	1.0	0.0	2.0	2.0	2.0	n/a	1.0	1.4	2.0	1.0	1.0
Sweden	1.0	0.4	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	2.0	1.6	2.0	2.0	1.0

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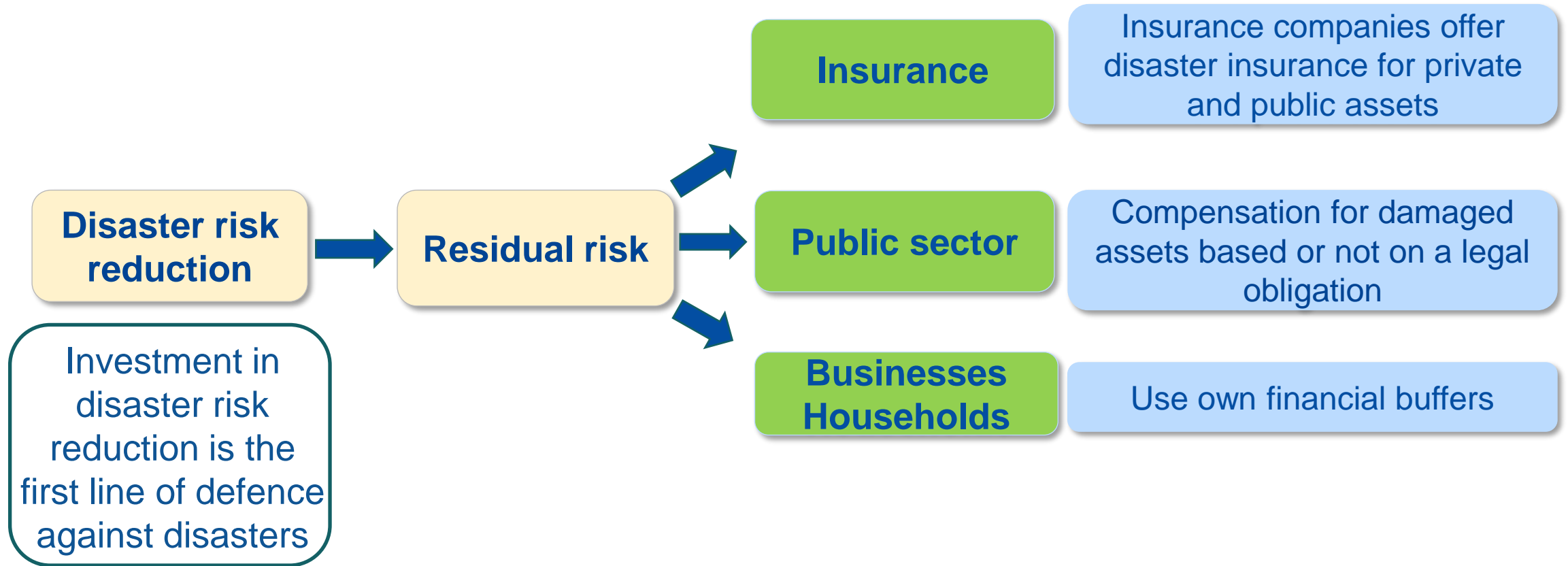
The insurance protection gap:

- Is the share of uninsured losses in total disaster losses
- Informs the authorities about some issues on which they can act: exposure, vulnerability, insurance

Some caveats:

- low exposure does not mean low protection gap
- lacking regional dimension
- some types of climate-related disasters missing (droughts)
- not forward looking (Historical gap vs present gap vs future gap)
- limited use for fiscal policy as no clear insights on government contingent liabilities

Mapping disaster risk ownership



Policies at EU level

Legal EU framework: EU Climate Law (2021), 2021 EU Climate Adaptation Strategy, Decision on the Union Civil Protection Mechanism

EU budget climate mainstreaming : 30% of EU spending on climate issues under the 2021-2027 budget

EU instruments – solidarity principle

- *Union Civil Protection Mechanism* – cooperation on civil protection and in-kind support
- *EU Solidarity Fund* – supporting disaster recovery
- *EU Cohesion policy* - funds for investment in prevention, early warning, preparedness, management

Policies at national level

Elements of Disaster Risk Financing – public sector



Evidence of practices in EU Member States shows that:

- disaster risk financing is more or less developed and mostly ad-hoc
- recurrent events require a different treatment to the black swan type events
- disaster insurance follows different models (optional / mandatory, private / public / PPPs)
- there are common challenges: complexity, uncertainty, data availability, moral hazard, financial stability related to the insurance sector

1. Quantification of past and future climate disaster impacts

Empirical methods and modelling to determine the fiscal cost of disasters: narrow approach (ex. DE, UK); new directions (e.g. BE, FR)

Disclosure of contingent liabilities in budgetary documents: Directive 2011/85 provisions

2. Risk transfer

Disaster insurance schemes: mandatory (RO, NO) / optional (ES, BE)

Public assets insurance: stock and value of public assets exposed and vulnerable to disasters (LV)

3. Public sector arrangements

Public insurance schemes self-sustaining (e.g. ES, FR);

National budgets budgetary reallocations, explicit provisions for emergency situations (escape clauses), dedicated funds (budget reserves, contingency reserves, disaster funds), special taxes

4. Compensation rules and beneficiaries

Provide an incentive to improve disaster protection (e.g. NL, Federal State of Saxony)

Target specific beneficiaries farmers (e.g. FR)

5. Transparency and monitoring

Involvement of other bodies – *French High Climate Council*

Conclusions

- Different needs across EU Member States but reflection emerging across the board
- EU instruments available, but face challenges related to size, timing and moral hazard
- National fiscal frameworks can play a key role: multiannual plans, transparency but...
- Need to take into account the role of disaster insurance: economic advantage, moral hazard when the government acts as the *de facto* insurer
- Low disaster insurance coverage entails costs: short-term needs vs long-term investments, optimal size of pre-arranged funds



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