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Sustainability in the Italian insurance sector: the role of IVASS

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Sustainable Finance Forum – ANIA - SRI Weeks of Sustainable and Responsible Investment - Presentation of the 3rd edition of the research

Rome, 7 November 2024

Foreword

I would like to thank the organizers for the invitation to take part in this presentation and, above all, for the precise and thorough work they have been doing on the topic of sustainability for many years.

In particular, covering catastrophe risks in the era of climate change represents a significant challenge for the coming years, and a considerable part of our focus and resources is dedicated to this crucial issue.

Sustainable development

I would like to start with the beautiful definition the Brundtland Report provides for sustainable development.

"Sustainable development is a development that allows the current generation to meet their needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Report, "*Our common future*", 1987).

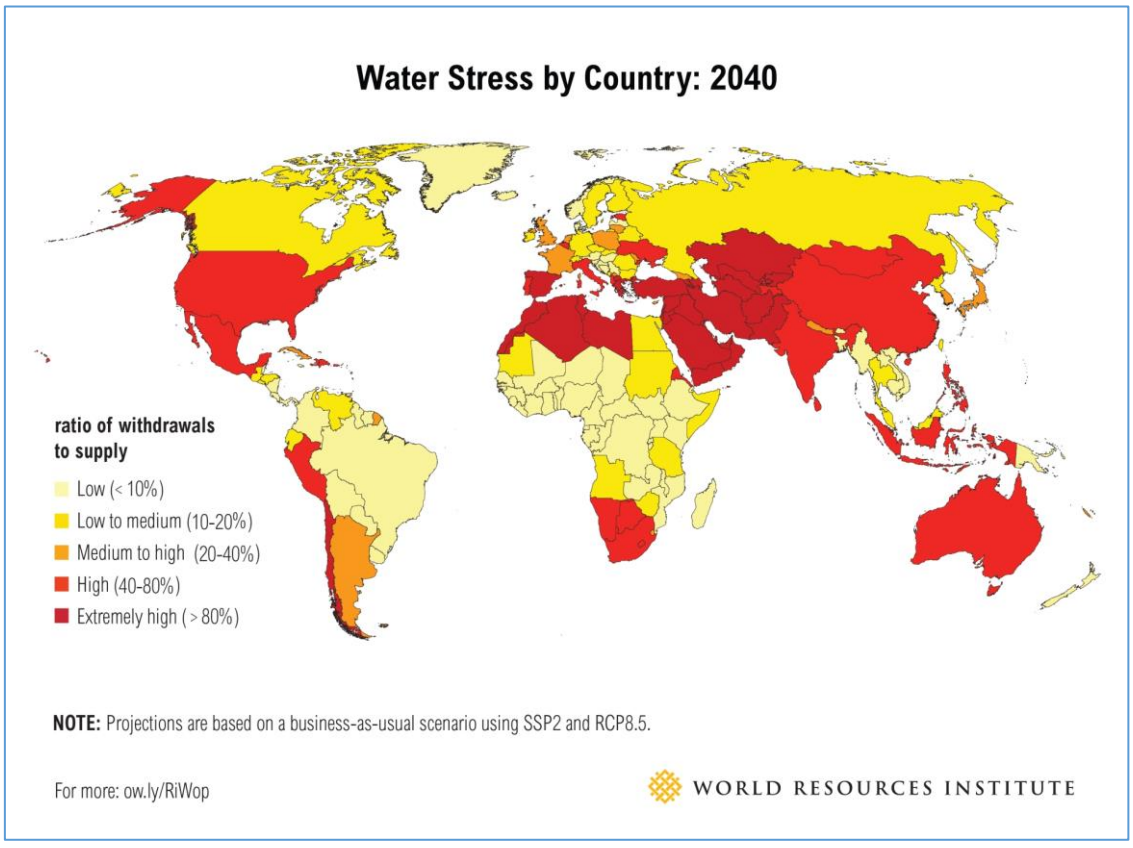
It is a definition that, in essence, can be traced back to the famous report by the Club of Rome, which, over 50 years ago right here, first raised the issue of the "Limits to Development" (Club of Rome, "The limits to growth", 1972) and, if we wish, can be traced back even further to ancient wisdom which warned: "The Earth is not an inheritance received from our fathers, but rather a loan to be repaid to our children".

I will give just one, pivotal, example among many.

In the projections for 2040, the "water scarcity" risk foresees many countries, including Italy, in the "high or extremely high risk" area, which, continuing the ancient metaphor, means that if we do not implement effective measures, we will leave our children a debt in a resource far more essential than money: water.

An integrated vision of a virtuous balance of this development, in its various dimensions—economic, environmental, and social—seems to me to require responsible, effective, and transparent leadership from institutions, both in the policies they set out and in their actions. The 2030 Agenda, signed in 2015, translates the concept of sustainable development into specific environmental, social, and governance objectives aimed at achieving a globally eco-sustainable balance.

Fig. 1

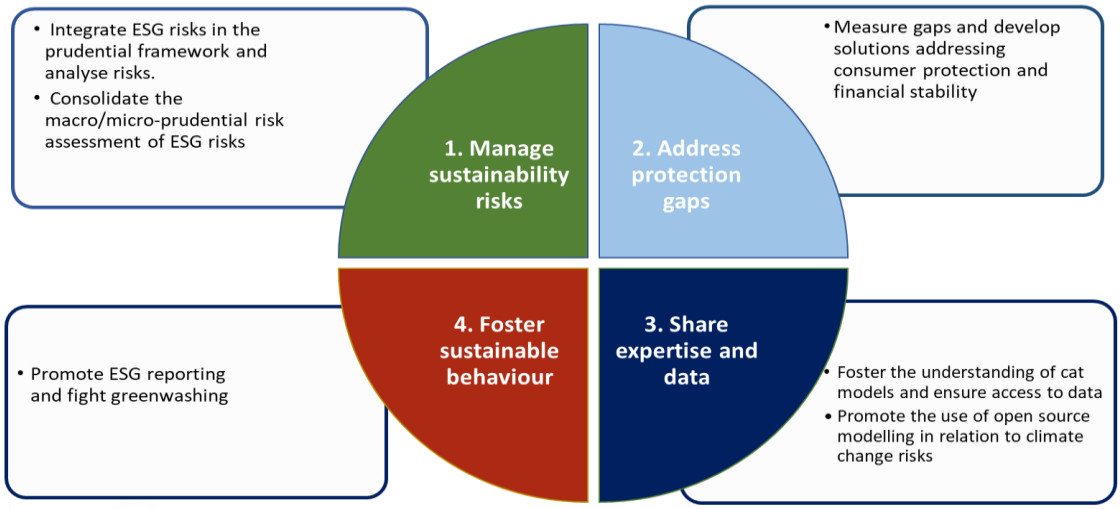


European priorities for sustainable finance

Since 2018, IVASS has actively contributed to the EIOPA Action Plan on Sustainable Finance, which integrates and supports, among other things, activities functional to the pursuit of both the objectives of the Commission to finance sustainable growth and the European Green Deal.

The main contributions made concerned work related to the pursuit of four priorities: 1) managing sustainability risks; 2) focusing on protection gaps; 3) sharing expertise and data; 4) promoting sustainable behaviours (Fig. 2).

Fig. 2 Priorities of the EIOPA agenda on sustainable finance



More specifically:

1. **Managing sustainability risks.** Integration of environmental, social, and governance (ESG) risks into Solvency II prudential requirements, including assessments of insurers' level of adaptation and the consolidation of both macro and microprudential evaluations of these risks by supervisors.

   The regulatory requirements aim to ensure that risks are adequately identified and managed by the insurance sector. In this regard, EIOPA has issued opinions and guidelines to support: i) insurers' management of sustainability risks, addressing governance requirements; ii) the assessment of own risk (ORSA), also in a long-term perspective. Further work involves analyses of a possible differentiated prudential treatment of sustainability risks related to insurers' assets and liabilities and the re-assessment and calibration of the parameters for calculating the capital requirement in the standard formula for catastrophe risks, in order to account for climate change.

2. **Focusing on protection gaps.** Addressing the protection gap for natural catastrophe risks

   In this context, the dashboard on insurance protection gap represents the achievement of one of the main strategic priorities of the European Authority since 2020, when an initial pilot exercise was created, subsequently refined and reworked into the version now made available on the website[1] and updated on an annual basis.

3. **Sharing expertise and data.** Promote the use of open source models and data in relation to climate change risks.

4. **Fostering sustainable behaviours.** Promoting sustainability reporting and fair market conduct (*greenwashing risks*) by companies and distributors, by supporting the supervision of ESG (*environmental, social and governance*) risks and convergence of supervisory approaches within the European Union.

With respect to the last two priorities mentioned, it is observed that a greater availability of user-friendly open-source models has the potential to lower entry barriers and reduce the costs of climate change analyses, which can foster innovation and risk awareness to the benefit of policyholders, the insurance sector, and the supervisory community.

Special attention is given to the climate adaptation measures adopted by the market and to identifying tools that **increase knowledge** of exposure to natural risks, raising awareness in both demand and supply for the relevant risk coverage (*EIOPA Blueprint for an awareness tool for natural catastrophe risks and prevention measures,* to be published soon).

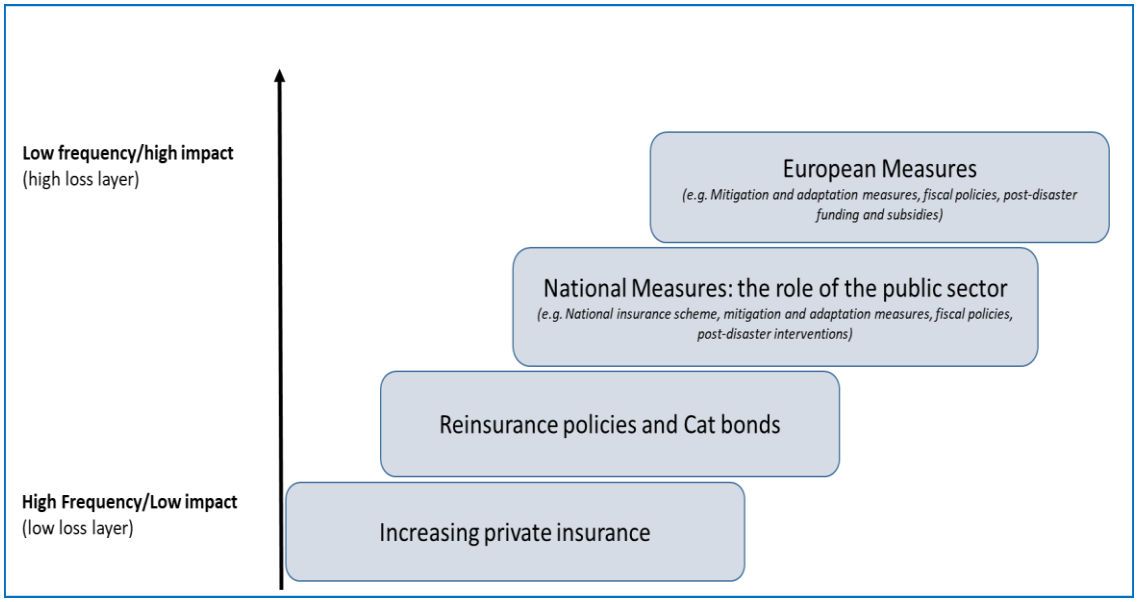
Raising policyholder awareness of risk prevention and the benefits of adaptation measures contributes to promoting a proactive approach that is essential to maintaining the accessibility and availability of insurance coverage against natural catastrophes, for example for buildings.

By understanding the potential impacts of climate change on properties, policyholders should be more inclined to adopt preventive protection measures.

In light of the negative economic implications of the insurance protection gap, the recent report published by EIOPA/ECB (April 2023) underscores the importance of a multi-level approach (Fig. 3) to address the economic losses resulting from the **increasing frequency and impact of catastrophic events associated with climate change,** with the aim of improving the resilience of the European financial system.

[1] Eiopa, Dashboard on insurance protection gap for natural catastrophes, 2023**.** A further update will soon be published.

Fig. 3 The ladder approach to catastrophe insurance



Source: ECB-EIOPA, Policy options to reduce the climate insurance protection gap (2023)

Catastrophe insurance (so-called "First Level") plays a key role in mitigating losses from extreme weather and climate events. There is also documented evidence of a direct relationship between nat-cat coverage and a positive impact on public debt. Catastrophe insurance is an essential tool for mitigating macroeconomic losses following extreme climate-related events, as it provides rapid funding for reconstruction and should incentivise risk reduction and adaptation.

Naturally, this level remains viable as long as catastrophe risks remain within the scope of insurable risks.

Medium- to long-term projections under a "no action" scenario—assuming no effective interventions against global warming—show an increase in the average temperature of +3.2°C and massive wealth losses (Tab. 1) that would be difficult to compensate through market-based policies. To grasp the scale, it is worth noting that 18% of global GDP amounts to nearly 20 trillion dollars, equivalent to the entire GDP of China and just under the GDP of the United States.

Tab. 1 Decline in GDP by 2050 under a no-global-warming scenario

	Temperature rise scenario, by mid-century			
	Well-below 2°C increase	2.0°C increase	2.6°C increase	3.2°C increase
	Paris target	*The likely range of global temperature gains*		*Severe case*
Simulating for economic loss impacts from rising temperatures in % GDP, relative to a world without climate change (0°C)				
World	–4.2%	–11.0%	–13.9%	–18.1%
OECD	–3.1%	–7.6%	–8.1%	–10.6%
North America	–3.1%	–6.9%	–7.4%	–9.5%
South America	–4.1%	–10.8%	–13.0%	–17.0%
Europe	–2.8%	–7.7%	–8.0%	–10.5%
Middle East & Africa	–4.7%	–14.0%	–21.5%	–27.6%
Asia	–5.5%	–14.9%	–20.4%	–26.5%
Advanced Asia	–3.3%	–9.5%	–11.7%	–15.4%
ASEAN	–4.2%	–17.0%	–29.0%	–37.4%
Oceania	–4.3%	–11.2%	–12.3%	–16.3%

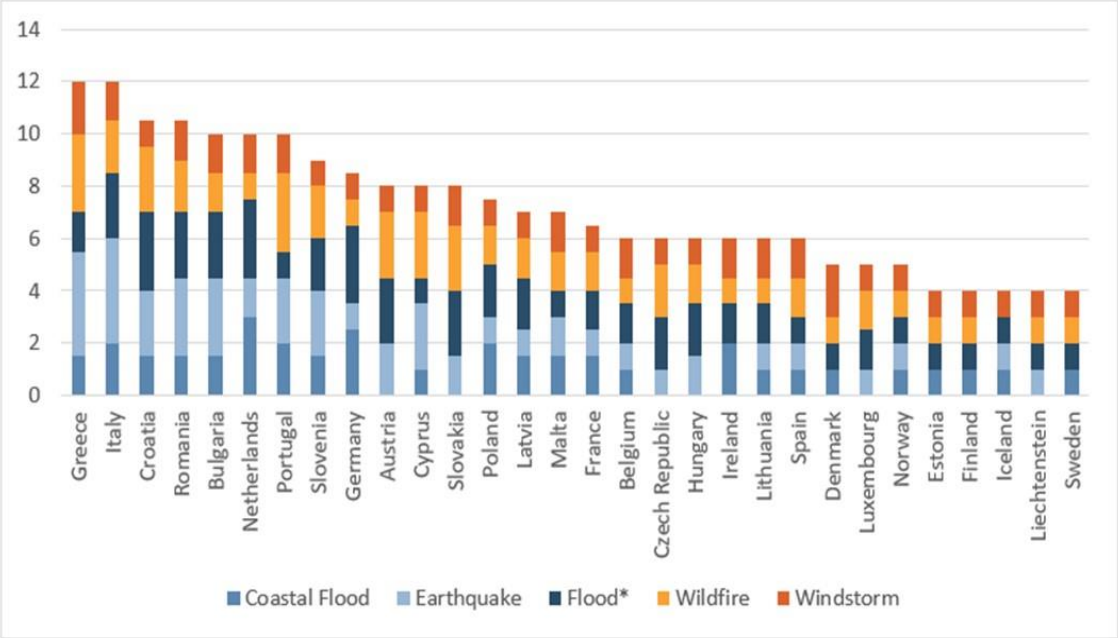
Source: Swiss RE, "The economics of climate change: no action not an option", April 2021
https://www.swissre.com/dam/jcr:e73ee7c3-7f83-4c17-a2b8-8ef23a8d3312/swiss-re-institute-expertise-publication-economics-of-climate-change.pdf

Additional tools for the pre-emptive management of the impacts of catastrophe risk include (so-called "Second Level") reinsurance plans/policies and alternative risk transfer instruments (*Catastrophe Bond*), as well as public intervention (so-called "Third Level") at the national level, through various preventive measures, and at the European level (so-called "Fourth Level").

Actions to reduce the protection gap

According to a well-known result of the EIOPA Dashboard, Italy and Greece have the highest protection gap (high risk exposure and low insurance penetration), in the light of their recorded economic losses and current exposure to the risk of natural disasters (in terms of frequency, exposure and vulnerability). In the case of Italy, earthquakes are the events with the highest protection gap, followed by floods, fires and storms.

Fig. 4 Protection gap in European countries



Source: EIOPA, The Dashboard on insurance protection gap for natural catastrophes, 13 October 2023, https://www.eiopa.europa.eu/document/download/bbdc653b-e335-41f0-8293-0d8280a09855_en?filename=EIOPA-BOS-23-418%20Dashboard%20on%20insurance%20protection%20gap%20in%20a%20nutshell.pdf

Italy's presence in the Top 10 of the most significant global loss events of 2023 (Tab. 2) is further evidence of the serious risks the country faces.

In addition, a recent publication by AON highlighted a clear upward trend in the number of events with losses exceeding one billion dollars, which reached a record high of **66 cases** in 2023 (Fig. 5). Earthquakes have caused the greatest economic losses, whereas convective storms have been the most expensive for insurers. As previously mentioned, **Italy**, with the flood in **Emilia-Romagna** in May 2023, recorded the **sixth-largest global catastrophic event in terms of economic loss,** amounting to 9.8 billion dollars, and insured losses of 600 million dollars, highlighting a significant protection gap.

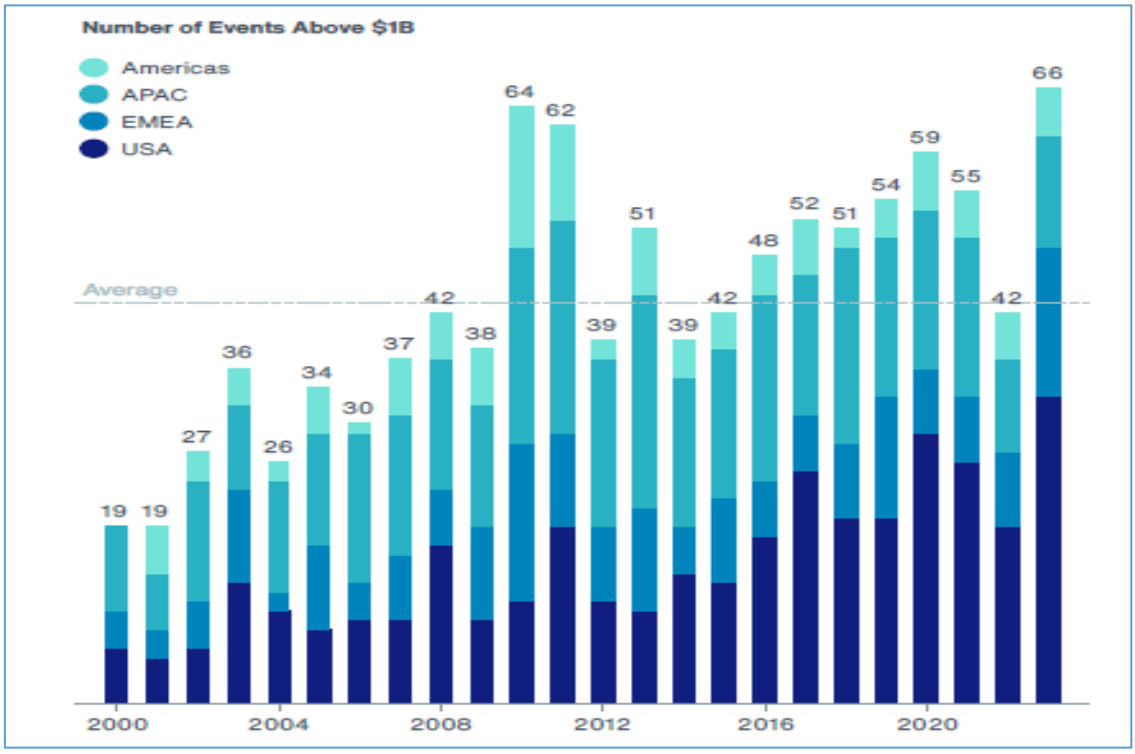
However, the data published by AON do not indicate an increasing trend in the number of catastrophic events with losses above 10 or 20 billion dollars.

Tab. 2 Top 10 global economic loss events in 2023

Date	Event	Location	Deaths	Economic Loss ($ billion)	Insured Loss ($ billion)
02/06-02/20	**Turkey and Syria Earthquakes**	Turkey and Syria	59,272	**92.4**	5.7
05/22-09/30	**China Floods**	China	370	**32.2**	1.4
10/25-10/26	**Hurricane Otis**	Mexico	52	**15.3**	2.1
01/01-06/30	**La Plata Basin Drought**	Brazil, Argentina, Uruguay	N/A	**15.3**	1.0
01/01-12/31	**U.S. Drought**	United States	N/A	**14.0**	6.5
05/13-05/17	**Emilia-Romagna Floods**	Italy	15	**9.8**	0.6
03/01-03/03	**Severe Convective Storm**	United States	13	**6.2**	5.0
07/21-07/26	**Severe Convective Storm**	Europe	11	**5.8**	3.0
08/08-08/17	**Hawaii Wildfires**	United States	100	**5.5**	3.5
03/31-04/01	**Severe Convective Storm**	United States	37	**5.5**	4.4
All other events			~35,100	**178.0**	84.8
Totals			**~95,000**	**380**	**118**

Source: Aon, Climate and Catastrophe insight, 2024 https://assets.aon.com

Fig. 5 Number of global catastrophic events with losses exceeding one billion dollars



Source: Source: Aon, Climate and Catastrophe insight, 2024

In this context, recent government initiatives under development hold strategic importance:

- the ministerial decree implementing the requirement to take out insurance referred to in the 2024 Budget Law, with its text currently being finalised with the technical input of IVASS;

- the framework Bill on Post-Disaster Reconstruction, on which the Institute is following progress (Bill AC 1632), providing the Government with the mandate to define insurance schemes aimed at indemnifying individuals and businesses. Currently, the Bill has passed its first reading in the Chamber (6 November) and is awaiting transmission to the Senate for the second reading. The hope is for a swift approval.

IVASS is also participating in the Sustainable Finance Platform chaired by the Ministry of Economy and Finance (MEF) (see MEF's Annual Report[2]), whose current priority topics include:

- identifying and making climate and natural risk data available by mapping and overcoming fragmentation of existing databases, both local and national, private and public;

- preparing sustainability reports for unlisted small and medium-sized enterprises (including financial education on sustainability);

- providing insurance coverage for environmental and climate risks, which is the subject of a working group coordinated by IVASS.

IVASS monitoring of natural catastrophe risks and sustainability

In July 2024, IVASS published the results of the second annual monitoring of natural catastrophe risks and sustainability[3], targeted at all the companies pursuing insurance business in Italy. The goal of the survey is to facilitate, over time, the construction of a system of data on ESG risks, which is robust and functional for the achievement of institutional objectives.

The survey, which involved all the supervised undertakings, consists of a quantitative section (data referring to 31 December 2022) and a qualitative section (data updated to 2023), aimed at monitoring the materiality of both physical risks from natural catastrophes (linked to climate-related events and seismic events), and transition risks. The survey also collects information on sustainability risks (related to environmental, social and governance factors) in the insurance industry.

[2] MEF, Table for Sustainable Finance, Annual Report-2023, https://www.dt.mef.gov.it/export/sites/sitodt/modules/documenti_it/sistema_bancario/MEF-Relazione-annuale-sul-2023.pdf

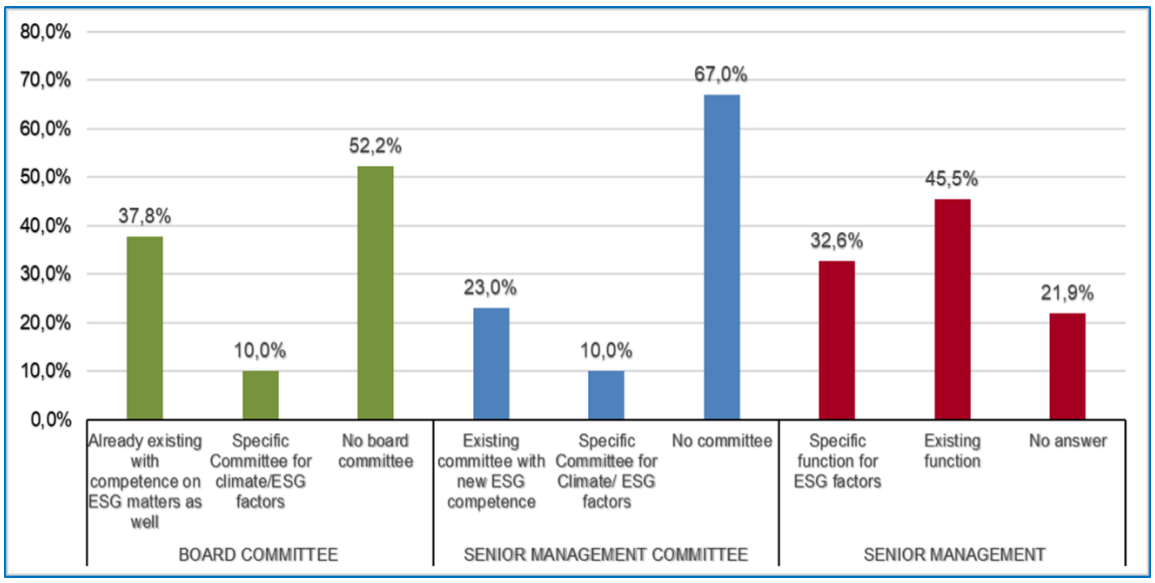
[3] IVASS, Report 2024 Risks from natural catastrophes and sustainability: annual monitoring, July 2024 https://www.ivass.it/pubblicazioni-e-statistiche/pubblicazioni/stabilita-finanziaria/2024/rapp_2024_rischi_cat_nat_sost/index.html

The monitoring aims to contribute to a better understanding of the possible implications of physical and transition risks on the financial stability of the insurance industry, as well as the role of insurance in facilitating the reduction of the protection gap and the transition to a sustainable economy.

The main outcomes can be summarized as follows:

- Almost all insurance companies (90%, equal to 81 companies) have either integrated (77% of companies) or plan to integrate sustainability risks into their governance system within the current year (13% of companies);

Fig. 6 Governance structures under ESG



In 16 cases, two or more structures coexist. In over half of the cases, there is no committee with ESG expertise.

- The evidence confirms an **uneven** market situation in terms of awareness, preparedness and contribution of companies to a fair and sustainable transition.

- Despite the progress that has been made, **medium-sized, and especially small companies, still appear to be lagging behind the larger companies**, which claim to have adopted (or initiated) most of the activities necessary to fully integrate ESG factors into their strategies, practices, corporate governance structures, risk management, investment and underwriting activities.

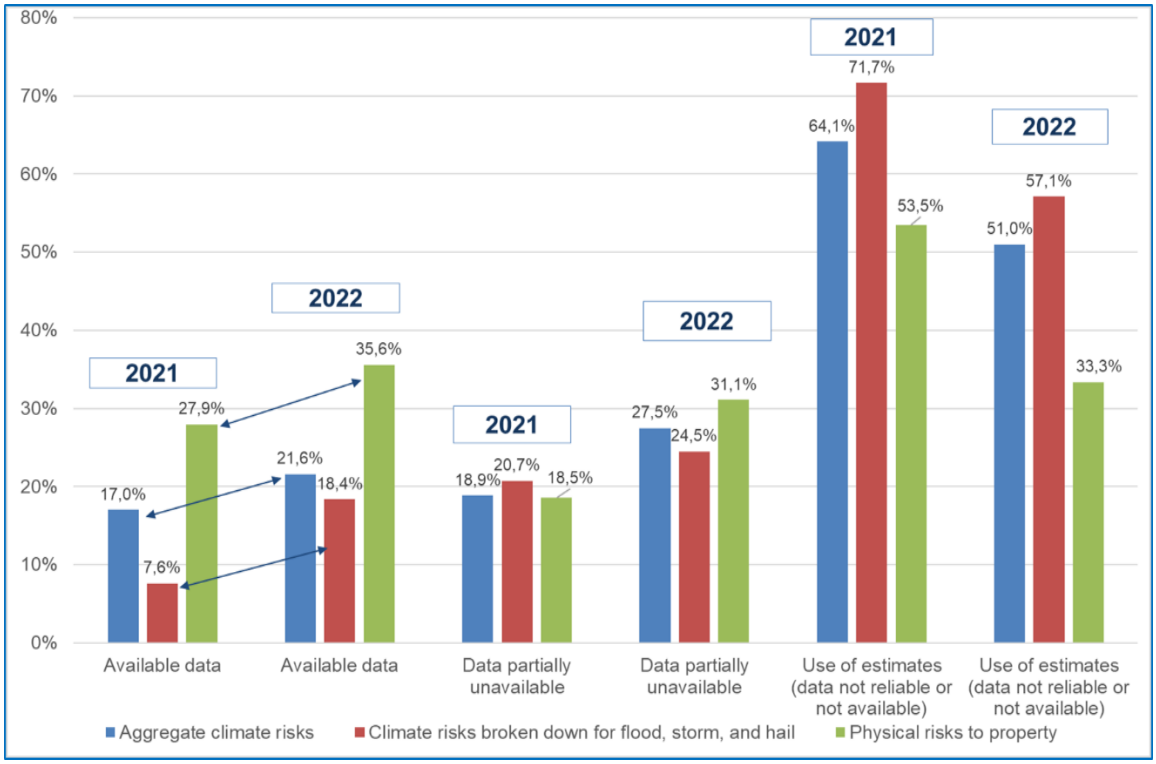
- Although characterised by different levels of preparedness for the new European provisions, all companies continue to report difficulties in obtaining information and data on investments and underwriting of sustainability risks, mainly because of the new aspects of the provisions in question and their constant evolution.

- As regards ESG data quality (Fig. 7):

  - with respect to the coverage of physical risks, there is an improvement in the quality of data submitted by companies, particularly in the allocation of premiums collected to individual lines of business; this will allow greater compliance with European regulations on EU Taxonomy and non financial Disclosure; the percentage of companies using estimates to provide disaggregated data (premiums, claims and sums insured) for climate risk has decreased from 72% in 2021 to 57% in 2022.

  - with respect to investment and transition risk, the quality and quantity of data on the carbon footprint of investments and their sustainability has improved significantly.

Fig. 7 Evolution of data quality: 2021-2022



- Underwriting activity

Non-life premium income for insurance coverage of catastrophe risks (including earthquake risks) was 6.6% of total non-life premium income in 2022 (compared to 6% in 2021). Gross premiums exceeded 2.1 billion euro (1.6 billion net of reinsurance).

With specific reference to climate risks, premiums accounted for 5.7% of total gross market premiums, up 16% from 2021. Premium income for flood, storm, and hail covers accounted for 98.2% of total premiums for all climate risks.

Tab. 3 Premiums, claims and performance indicators

Climate risk data (premiums, claims, and expenses) with performance indicators	2021		2022		Variation 2022/2021
	Total *(in million euro)*	% with respect to **total non-life market**	**Total** *(in million euro)*	% with respect to **total non-life market**	
Gross premiums	1.836	5,2%	2.121	5,7%	15,5%
Premiums net of reins.	1.405	4,6%	1.631	5,1%	16,1%
Gross premiums earned	1.678	4,8%	1.933	5,3%	15,2%
Premiums earned net of reins.	1.296	4,2%	1.505	4,8%	16,1%
Claims (paid and outstanding) gross of reins.	1.728		1.895		9,7%
Claims (paid and outstanding) net of reins.	1.339		1.512		12,9%
Expenses incurred	470		555		18,1%
Performance indicators *(%)*	**2021**		**2022**		Variation 2022/2021 *(percentage points)*
Combined ratio = Loss ratio + expense ratio	131,0%		126,7%		-4.3
Loss ratio = Gross claims / premiums earned	103,0%		98,0%		-5.0
Expense ratio = Expenses incurred/ Premiums earned	28,0%		28,7%		0,7

(a) Calculations net of outlier data from three companies in 2021, and of one company in 2022.

The weight of total claim costs (paid and reserved) and operating expenses was far higher than 100% of the related premium income.

Premiums for climate risks are attributable to covers for hail (65%), storm (22%), and flood (12%) risks (Table 4); the latter is the type of coverage that has shown the largest increase in premium income since the end of 2021 (24%).

Tab. 4 Premiums, claims and performance indicators by type of risk

Climate risk data by perils (premiums, claims and expenses) - year-end 2022	**Flood** *(in million euro)*	% with respect to total climate risks 2022	Variation 2022/2021	**Windstorm** *(in million euro)*	% with respect to total climate risks 2022	Variation 2022/2021	**Hail** *(in million euro)*	% with respect to total climate risks 2022	Variation 2022/2021
Gross premiums	260	12,5%	24,4%	468	22,5%	14,4%	1.354	65,0%	10,9%
Premiums net of reins.	206	13,2%	90,7%	351	22,4%	18,2%	1.009	64,4%	59,4%
Gross premiums earned	247	13,0%	25,4%	434	22,9%	13,0%	1.214	64,1%	10,2%
Premiums earned net of reins.	195	13,7%	25,8%	326	22,9%	10,5%	905	63,5%	9,4%
Claims (paid and outstanding) gross of reins.	162	8,6%	72,3%	373	19,8%	21,1%	1.346	71,6%	-0,3%
Claims (paid and outstanding) net of reins.	138	9,2%	58,6%	327	21,8%	34,6%	1.035	69,0%	2,2%
Expenses incurred	68	12,6%	25,9%	100	18,6%	5,3%	371	68,8%	19,7%
Performance indicators *(%)*									
	2022	2021	Variation 2022/2021 *(percentage points)*	2022	2021	Variation 2022/2021 *(percentage points)*	2022	2021	Variation 2022/2021 *(percentage points)*
Combined ratio=Loss ratio + expense ratio	93,1%	75,0%	18,1	109,0%	105,1%	3,9	141,5%	150,7%	-9.2
Loss ratio = Gross claims / premiums earned	65,4%	47,7%	17,8	86,0%	80,4%	5,6	110,9%	122,5%	-11.6
Expense ratio = Expenses incurred/ Premiums earned	27,7%	27,4%	0,3	23,0%	24,7%	-1.7	30,6%	28,2%	-1.9

(a) Calculations net of outlier data from one company.

Premium income for earthquake risk (€336 million in 2022) increased by 22% compared to 2021 (€276 million) and by 26% compared to the previous three-year period 2019-2021.

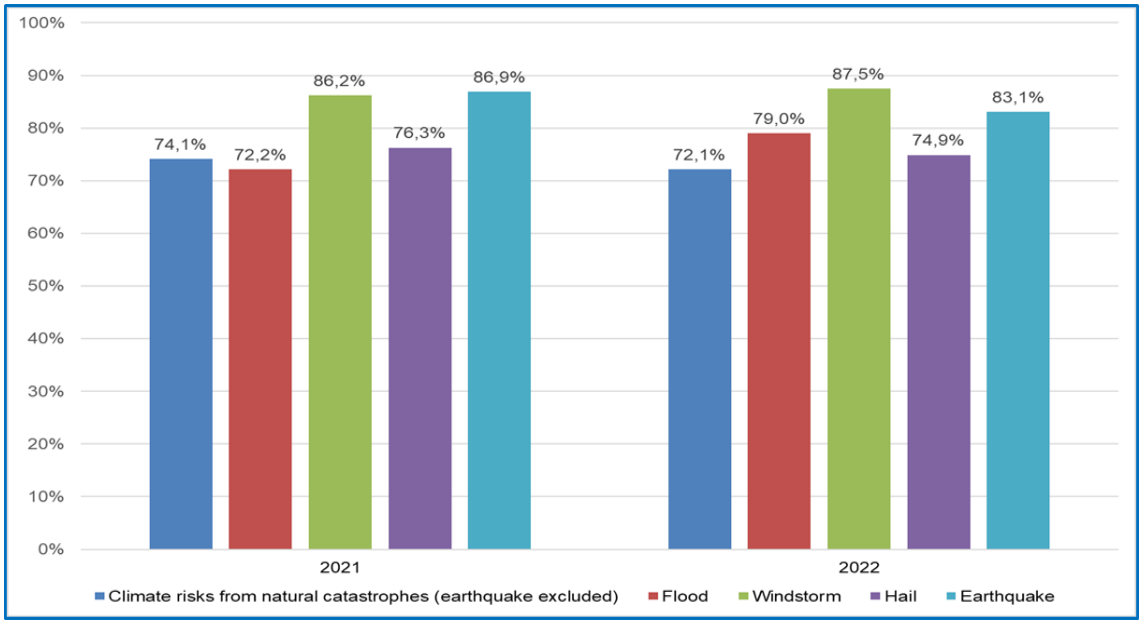
Tab. 5 Premiums, claims and performance indicators by earthquake risk

Earthquake risk data (premiums, claims and expenses)	**2021**		**2022**		Variation 2022/2021
	Total *(in million euro)*	% with respect to **total non-life market**	**Total** *(in million euro)*	% with respect to **total non-life market**	
Gross premiums	276	0,8%	336	0,9%	21,7%
Premiums net of reins.	143	0,5%	210	0,7%	46,9%
Gross premiums earned	262	0,7%	320	0,9%	22,1%
Premiums earned net of reins.	159	0,5%	197	0,6%	23,9%
Claims (paid and outstanding) gross of reins.	2		12		500,0%
Claims (paid and outstanding) net of reins.	2		9		350,0%
Expenses incurred	73		83		13,7%
Performance indicators *(%)*	**2021**		**2022**		Variation 2022/2021 *(percentage points)*
Combined ratio = Loss ratio + expense ratio	28,4%		29,6%		1,2
Loss ratio = Gross claims / premiums earned	0,8%		3,9%		3,1
Expense ratio = Expenses incurred/ Premiums earned	27,7%		25,8%		-1,9

(a) Calculations net of outlier data from three companies in 2021, and of one company in 2022.

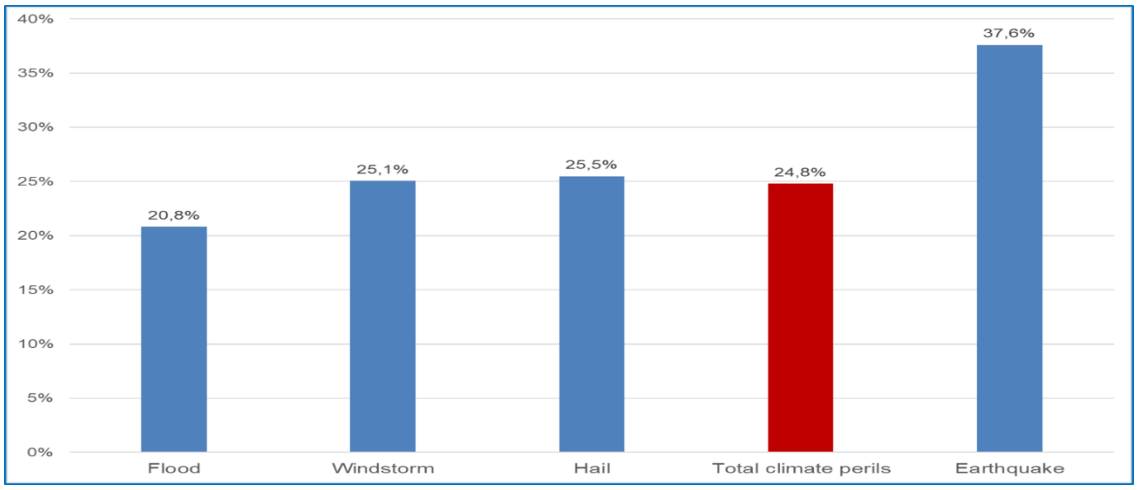
Catastrophe risk insurance coverage shows a high market concentration, being offered primarily at the national level by five groups that cover approximately 80% of the total premiums collected (Fig. 8).

Fig. 8 - Concentration of premium income in 5 insurance groups (% of premiums)



Outward reinsurance premiums (Fig. 9) account for a share of premiums written ranging from a low of 20.8% for flood risk to a high of 37.6% for earthquake risk. The share for the three climate risks as a whole amounts to 24.8%, which is more than 7 percentage points higher than that for total non-life business (amounting to 17.1%).

Fig. 9 Share of written outward reinsurance premiums



- Climate adaptation measures: contribution of non-life insurance

At the national level, only a minority of non-life companies (13%, or 7 large non-life companies), are using climate risk modelling and pricing techniques that jointly reflect three profiles referred to in the regulations:

1. risk level;

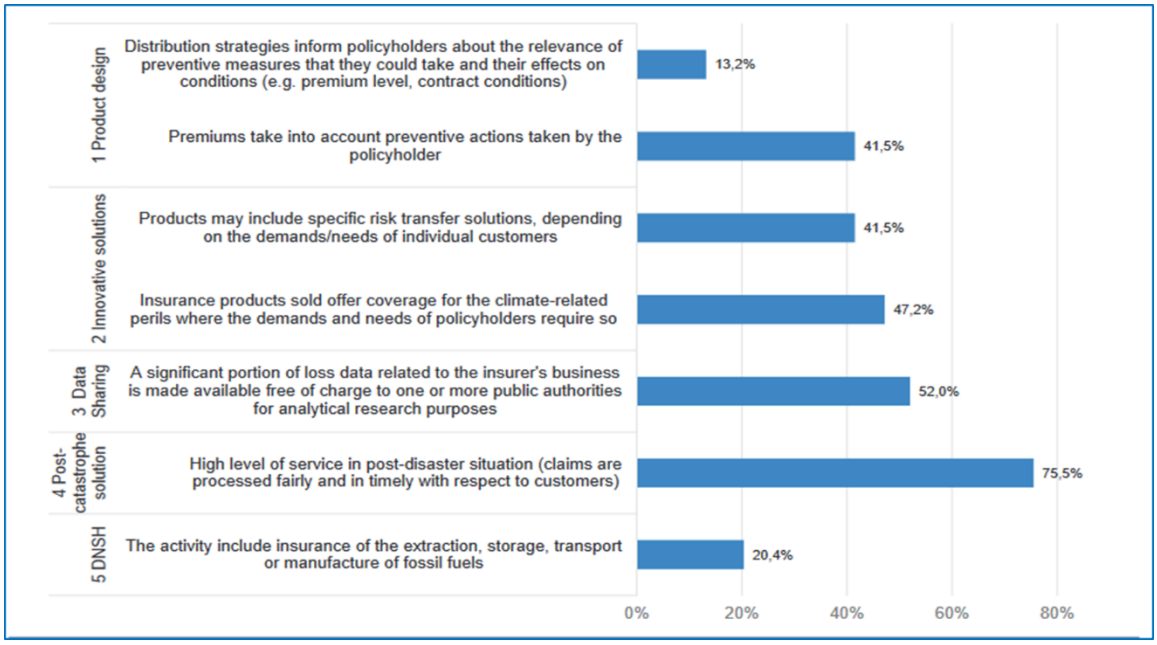
2. the use of historical (e.g. claims data) and expected data (e.g. frequency, intensity and vulnerability);

3. the use of forward-looking scenarios.

This circumstance is attributable to a number of factors, including: the strong concentration of the climate risk business; the difficulties for small and medium-sized undertakings to access advanced data and models (e.g., due to high costs); and limited availability of specialized know-how.

With regard to product design (Fig. 10) it has come out that:

Fig. 10 Climate risks and product design



- less than half of non-life companies offer cover at the customer's request with a high degree of customisation (41.5% of non-life companies, 22 out of 53 reporting companies);

- three quarters of the companies include specific services in their covers for handling damage caused by natural disasters with a dedicated team, a network of specialised partners and mobile units to promptly assist clients who have suffered damage;

- few companies (13%) promote dedicated initiatives to make customers understand that policy conditions improve if the policyholder takes preventive measures to limit risks;

- 22% of companies said they offer nat-cat policies to companies operating in the fossil fuel sector.

Conclusions

The analysis presented suggests three final considerations:

- climate risks impact the insurance market at various levels (assets and liabilities) given that companies play a triple role as risk insurers, asset investors, and market operators. Consequently, it is particularly important that climate risks be fully integrated into the governance processes and policies of insurance companies.

- The prospective growth of such risks raises sensitive issues of stability (solvency) that must be well considered by all market players.

- The climate challenge involves many institutions and breaks down all boundaries. In an international climate marked by limited cooperation, this is a highly collaborative matter. Regulatory and supervisory authorities and government institutions are actively cooperating in various capacities according to their mandates.

The periodic monitoring conducted by IVASS will continue in the coming years, and increasingly precise and timely results are expected thanks to the active collaboration of all insurance companies.