

SUSTAINABILITY RISK



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Strong and convergent supervision for a resilient (re) insurance sector

In line with its Strategy Towards 2030, EIOPA aims to support a resilient and thriving insurance sector in the Single Market, through the consistent implementation of regulatory requirements and the promotion of high-quality supervisory practices. To achieve these objectives, EIOPA fosters greater convergence in supervising sustainability risks across the EU and promotes the development of meaningful, forward-looking risk assessments that strengthen insurers' long-term resilience to sustainability risks.

This is an important area, given the increasing volume of insured losses and failures caused by natural catastrophes. Supervisory practices continue to evolve, and different maturities are observed across jurisdictions, therefore improvement of supervisory capacity

and further efforts towards supervisory convergence remain a priority.

EIOPA's objectives are achieved through supervisory activities.

First, in 2024, following up on its Opinion¹, EIOPA conducted a supervisory monitoring exercise focused on climate. It showed that most insurers include climate change scenarios in their Own Risk and Solvency Assessment (ORSA), considering both transition and physical risks. However, less than half consider climate risk material, primarily due to physical risks. Despite this result, EIOPA is of the view that managing transition risks, including through decarbonisation targets, is a core element in ensuring the insurance sector's contribution to the transition to a greener economy. Solvency II requires a clear plan to manage those risks – this can be done within the existing prudential framework.

Second, alongside climate change, biodiversity loss is a significant source of financial risk both on investments and underwriting. In 2025, EIOPA identified that 20% of insurers conduct biodiversity risk assessments, which are mostly qualitative in nature. This is related to the challenges in quantifying such risks because of their complexity and their interconnectedness with climate risk factors. The exposures may arise across a range of sectors, through emerging diseases and the degradation of ecosystem services, which can affect the frequency and severity of insured losses, and lower the value of investment portfolios. EIOPA analysis based on 2023 data shows that around 30% of insurers' direct corporate bond and equity exposures are highly dependent on at least one ecosystem service, such as freshwater availability.

Third, EIOPA recently launched a peer review to be finalised in 2027, as a powerful tool to seek convergence across supervisors and build capacity. It will focus on the integration of the sustainability risks in the governance in (re)insurers and the integration and application of sustainability risks into the prudent person principle.

Fourth, the risk-based approach requires that supervisors build a sufficient understanding of sustainability risks. EIOPA provides national supervisors with a framework for sharing experiences and methodologies and continues its

work on the integration of sustainability risks into the prudential framework or developing tools to support effective supervision. This involves leading capacity building activities, enhancing the availability and quality of climate change-related data and supporting risk-based and forward-looking approach to the supervision of sustainability risks.

Finally, due to the sector's interconnection with banking, cross-sectoral supervision builds upon sectoral supervisory convergence. Covering physical risks in the insurance sector is the foundation for sustainable banking activities, while the management of transition risks by banks provides a solid basis for insurers to cope with their own transition risk.

With regard to data quality and availability, challenges in quantifying sustainability risks remain despite improvements in the disclosure framework. Innovative solutions can support insurers and supervisors. For example, the collaboration between EIOPA and the EU Agency for the Space Programme (EUSPA), which is exploring how Copernicus data could be harnessed to enhance the supervision of natural catastrophes, showcases the value of innovation in addressing the challenges posed by climate-related disasters. Financial supervisors rapidly identify affected areas and exposed insurers using satellite imagery to map disaster-affected areas as events unfold. This granular geospatial data can be matched with Solvency II regulatory reporting to estimate the potential impact of natural catastrophe events on individual insurers (micro-prudential perspective); also, to estimate overall loss-magnitudes early on by scaling up to the sector (macro-level perspective); and improve benchmarking, model validation and scenario and stress test design.

To conclude, as sustainability risks are here to stay, supervision will remain essential to safeguarding insurers' resilience and protect consumers.

1. In 2021 EIOPA issued its Opinion on the supervision of the use of climate change risk scenarios in ORSA.



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Maintaining momentum on climate and nature risks

“European integration is like riding a bike. You either keep moving forward or you fall off.” This quote attributed to Jacques Delors is displayed prominently on a wall at the ECB. It speaks of the importance of making progress on EU integration but can easily apply to our work on climate and nature risk supervision. In a world of rising physical risks and evolving transition dynamics, maintaining momentum helps us stay the course.

Progress in addressing climate and nature risk management is both necessary and happening. Since 2022, European banks have made significant progress in managing climate and nature risks, with the percentage of banks lacking foundational practices decreasing from 25% to 5% by the end of 2024, and those with leading practices increasing from 3% to 56%. And we observe this progress is self-sustaining, given that almost all banks now deem climate risks material and include them in their risk management frameworks.

But the story doesn't end here and more needs to be done. For one, sound practices are often only applied to a subset of

relevant exposures, geographical areas or risk categories. Additionally, some of the prudential transmission channels, such as operational or market risk, are not as well addressed as credit risk. Moreover, banks face persisting challenges regarding measuring and managing physical climate and nature-related risks while taking informed credit decisions requires reliable data. However, the needs to finance the green transition in the EU are estimated at around 1.2 trillion per year until 2030¹. And banks that are able to have a sophisticated risk management in place, which features climate and nature risks, are better able to support clients transitioning in sectors they know very well. Banks can capitalise on the dynamic market context by offering advisory services, lending or different financial products.

It is important to point out that the ECB is not a policy maker. The actions we take to address climate and nature-related risks are firmly anchored within our prudential mandate. In the EU, the current regulatory framework sets explicit requirements with respect to climate and nature-related risks for credit institutions and for competent authorities. Some of those requirements relate to prudential transition planning, setting out that banks should base strategic decisions on science-based transition pathways. Thus, they would be better placed to weather a variety of plausible scenarios, including a delayed and disorderly transition scenario, which may lead to higher losses for the financial system².

Progress on addressing climate and nature risks is both necessary and possible.

We are approaching the supervision of transition risks in this area in a gradual and targeted way, focusing on new expectations in the EBA Guidelines³ and maintaining a regular dialogue with supervised banks to understand their challenges. Working together with the banking industry, the ECB is supporting the emergence of a common understanding of implementation challenges and the identification of appropriate workarounds in the case of persisting information and data gaps. This will allow for a sound and gradual implementation of the EBA Guidelines over time.

Turning to nature-related risks, which are deeply intertwined with climate risks, we observe that banks are getting better

at including nature risks in their risk management approaches. We see that the growing materiality of nature-related risks, with water scarcity usually topping the list of most material nature-risk drivers⁴, is increasingly acknowledged. Banks also took steps to advance their risk quantification and risk management in this area, which remains more challenging than for climate risks, with some good practices already observed⁵. The ECB will continue engaging in structured dialogue with the financial sector to ensure continued progress in measuring and addressing nature-related risks by banks and supervisors alike.

1. European Commission, 2024
2. See ECB Occasional Paper “The Road to Paris: stress testing the transition towards a net-zero economy”, Emambakhsh et al., 2023
3. European Banking Authority’s Guidelines on the management of environmental, social and governance risks
4. See ECB Occasional paper Nature at risk: Implications for the euro area economy and financial stability
5. See the ECB Good practice for climate and nature risk management



RUI PINTO

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Closing the gap between ambition and execution in climate related risks

Recent supervisory experience and climate-related events have confirmed a central lesson: climate and nature-related risks are no longer an exercise in regulatory anticipation, but a prudential reality.

As banks have developed governance arrangements and conducted materiality assessments, the challenge is to move from architecture to execution by translating these arrangements into day-to-day risk management: from policies and commitments to effective steering of exposures, counterparties, collateral, capital and business models under uncertainty.

The regulatory framework applicable to climate and nature-related risks continues to evolve. As such, and while relevant progress has been observed, banks' measurement of physical and nature-related risks remains less mature, and these risks are still likely to be underestimated. Accordingly, supervisory priorities continue to keep these risks within the prudential radar.

The urgency is increasing. 2024 was the warmest year on record globally and the first calendar year in which average temperatures exceeded 1.5°C above pre-

industrial levels. For banks, this is not an abstract threshold. A warmer climate increases the frequency and severity of extreme events, affecting credit risk, collateral values, business flows and operational resilience. The storms and floods observed in Portugal in early 2026 illustrate that physical risk is a present-day reality.

One important implementation gap therefore concerns the management of physical risk. Floods, droughts, heatwaves and wildfires are still too often treated as insurance or operational events, rather than as prudential risk drivers. This is particularly relevant for smaller banks or specific business models, with portfolios concentrated in certain geographies, sectors or collateral types.

Banks should continue to develop and refine their methodologies to identify, assess and manage the climate-related risks to which they are exposed. They should identify borrowers, exposures, collateral and infrastructures exposed to acute and chronic hazards, connect this information to credit files and valuations, and define escalation triggers when indicators deteriorate. Where internal data is weak, external hazard maps, emergency data and sectoral proxies should be used, with limitations documented. Granular data on location of counterparties, for example, can be of significant value in identifying vulnerabilities and transmission channels, as shown by the work of Banco de Portugal on rural fire risk.

Resilience will depend less on sophisticated narratives and more on the credibility of execution.

Another important gap is related to the monitoring of nature-related risk. Data, modelling and scenarios still lag behind the climate-risk framework. A layered approach should screen portfolios for sectors and geographies with high dependency or impact, identify counterparties where dependencies on water, soil, biodiversity, or supply chains may affect cash flows, collateral or licenses, and integrate material findings into due diligence, risk classification and capital adequacy.

An additional gap is transition execution risk. Many banks have climate strategies, but it is important to demonstrate how these translate into client engagement, portfolio decisions, risk appetite

and capital planning. A share of the Portuguese banking sector's corporate loan book remains carbon-intensive, even if there is no evidence of excessive concentration in transition-sensitive sectors. This underlines the need to assess not only sectoral exposure, but the credibility of borrowers' transition capacity and milestones.

These challenges are compounded by a more fragmented policy environment, a dominant simplification agenda and increasing climate backlash.

Prudential supervision, however, should not change course with political cycles and should remain anchored in materiality, sound governance and resilience. If floods, fire risk, heat stress, biodiversity loss or transition failures can impair repayment capacity, collateral values or operational continuity, they shall be considered material risks and must be managed as such.

This stance is compatible with proportionality. Smaller banks should not build the same models as global banks, but they should understand their exposures, use available tools, explore collaboration with peers and improve progressively. Shared data, common templates and collaboration with insurers, supervisors and climate agencies can reduce costs and strengthen consistency.

In conclusion, as methodologies and data continue to evolve, banks should progressively enhance their ability to identify, measure and manage climate and nature-related risks. The most resilient banks will be those embedding environmental risk into ordinary prudential management, acting proportionately and learning collectively. Ultimately, resilience will depend less on the sophistication of the narrative and more on the credibility of execution.



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Managing the climate-nature nexus: data, engagement and transition

Under its Purpose, “Dedicated to sustaining all life,” Norinchukin Bank, a cooperative financial institution rooted in agriculture, forestry and fisheries, supports nature and local communities. In summer 2025, Japan’s average temperature was 2.36°C above the 1991–2020 norm. High temperatures may reduce yields and quality, increase heat stress and heighten water, pest and disease risks. Adaptation is advancing through heat-tolerant varieties, revised planting schedules and smart farming.

Agriculture, forestry and fisheries depend on natural capital, including climate, water, land and ecosystems. Its degradation affects the Bank’s business foundation, food systems and livelihoods. Despite policy uncertainty, changes on the ground continue. Japan continues to pursue carbon neutrality by 2050 and a nature-positive society by 2030. Mitigation remains essential, but adaptation is urgent as changes affect production and communities.

The climate-nature nexus helps unlock synergies and reduce trade-offs

Climate change, biodiversity loss and natural capital degradation affect entire supply chains. They pose risks, but also offer transition opportunities. We work with members and clients to develop pathways reflecting regional characteristics.

The Bank emphasizes the “nexus approach” and the “landscape/seascape approach.” The former considers interrelated issues such as climate, nature, biodiversity, water and food together to unlock synergies and minimize trade-offs. Based on this approach, the Bank is examining integrated climate-nature transition planning. It has also developed narrative scenarios for the food, agriculture and beverage sector that consider climate-nature interconnections and identify possible patterns through which transition risks may materialize, as a step toward integrated climate-nature scenario analysis.

The latter takes a regional view of economic activity and nature across regions, watersheds or seascapes. Through collaboration, the Bank supports ecosystem restoration and local resilience. Details are in the Climate & Nature Report.

Better data and client engagement are key to managing climate- nature risks and financing transition.

Better data and client engagement are key to managing climate-nature risks

Climate- and nature-related risks should not be standalone categories, but drivers of existing credit, market, liquidity and operational risks. Integrated assessment is needed because rising temperatures and ecosystem degradation are interdependent. Drawing on TCFD and TNFD concepts, the Bank is making these issues more visible. The challenge is to locate risks and reflect adaptation appropriately in credit assessments. We combine data and dialogue to strengthen risk analysis and management.

For example, even producers of the same crop face different climate, water, soil and ecosystem conditions. Resilience also varies with varieties, water management, planting periods,

facilities and sales channels. Financial institutions therefore need location-specific information, not only sector averages.

Adaptation investment may nevertheless increase short-term debt and costs and initially destabilize yields or quality. The mere existence of adaptation measures should not automatically be interpreted as evidence of lower risk. Assessment should consider investment size, technological maturity, local suitability, implementation capacity, insurance, public support and the ability to pass costs through to prices, weighing short-term burdens against longer-term resilience.

Data and practices remain insufficient. Engagement is essential to understand clients’ responses, adaptation effectiveness and support needs. Dialogue also distinguishes temporary pressure arising from credible transition investment from deterioration caused by weak implementation.

Conclusion

In light of the above, integrating climate and nature into financial practice requires accelerated public-private action. Particularly in sectors such as food, agriculture and energy, transition, physical and nature-related risks should be assessed together, reflecting sector characteristics and geographic granularity. This requires better data on asset locations, varieties, water, soil, land use, biodiversity and adaptation responses, as well as the accumulation of practical methods for linking these data to financing and investment decisions and engagement.

Supervisors can play an important role by providing clearer guidance on how sustainability-related factors should be incorporated into existing risk-management frameworks, while ensuring flexibility in light of each financial institution’s materiality assessments and data constraints. Closing data gaps through stronger data infrastructure, enhanced corporate disclosure and enhanced public-private collaboration is essential both to addressing climate- and nature-related risks and to continuously supporting the investment needed for a sustainable transition.



FRANCESCA MONTI

Group Head of Climate Hub – Generali

Insurability: the missing link in Europe's climate resilience

Climate-related losses are no longer an actuarial abstraction. Rating agencies have begun incorporating **physical climate risk into sovereign assessments of EU Member States**. Nat Cat events **erode fiscal headroom** and constrain governments' ability to service debt. A country repeatedly hit by floods or wildfires faces **structurally weakened creditworthiness** — and markets are beginning to price it. The loop between physical risk, public finance, and sovereign ratings is now a material consideration for European policymakers. According to EIOPA, **only around 20% of economic losses from Nat Cat in the EU are insured**. The retreat of private insurance from climate-exposed assets amplifies this dynamic.

When cover becomes unavailable or unaffordable, **uninsured physical risk migrates silently into governments and banks' balance sheets**, as governments and banks absorb disaster costs that insurance markets no longer intermediate. Insurability is therefore the missing link between physical climate risk and financial stability. **Closing the protection gap is thus a precondition for macro-financial resilience**, not an act of social policy alone.

The ECB-EIOPA two-pillar architecture is the right conceptual framing. Its calibration, however, requires sequencing. Pooling logic at European level can only function where national markets have achieved **minimum insurance penetration thresholds**. Mutualising risk across Member States with uneven coverage does not spread risk — it obscures it. The priority is **closing gaps at country level**, through 3 instruments:

1. **Fiscal incentives:** exempting nat cat premiums from taxation, as Italy has partially done for households, reduces price barriers; extending relief to business covers is the next step.
2. **Systematic coverage design:** in a context of nat cat mandatory scheme (as in France), embedding catastrophe cover in all property policies creates structural demand; indirect levers such as making nat cat cover a prerequisite for public procurement can complement it.
3. **Awareness:** as seatbelt campaigns shifted driving behaviour, structured risk communication reaches what lower pricing alone cannot.

Insurability is the missing link between physical risk and financial stability.

Closing the protection gap is only part of the solution; reducing the underlying risk is equally important. On loss prevention, the scale is quantified: the European Commission estimates the EU must invest around **EUR 70 billion per year in adaptation until 2050**. The EU has an underutilised instrument to finance it: issuing resilience-linked bonds at scale, channelling low-cost capital into infrastructure that reduces expected losses before events occur. This is a sovereign function. French experience shows that post-event funds fail when operational complexity prevents households from accessing them. The EU should also develop a harmonized methodology for **quantifying avoided losses**; without it, prevention investments remain economically invisible. The EU Solidarity Fund requires parallel reform: faster disbursement, capitalisation scaled to realistic loss scenarios, and clearer articulation with the Solidarity and Emergency Aid Reserve, so that support is predictable for populations and markets alike.

Solvency II should ensure that sustainability risks are appropriately reflected in insurers' risk management and supervisory frameworks. Enhanced scenario analysis and stress testing for physical and transition risks, calibrated to IPCC-consistent pathways, would help align risk assessment with evolving climate realities. The Own Risk and Solvency Assessment (ORSA) already provide a framework to identify and assess physical and transition risks, as increasingly done by industry. That said, prudential frameworks are necessary but not sufficient. Expectations exceeding supervisory mandates produce misplaced accountability and unmanaged vulnerabilities. The foundational work—closing the protection gap, financing prevention and increasing insurance penetration—should not be replaced by supervisory measures alone.

The **data foundation remains the binding constraint**. Granular, geocoded data, covering insured and uninsured assets, is a public good no single institution can produce alone. A shared EU infrastructure for physical risk data would lower underwriting costs, support supervisory stress-testing, and enable cross sector analysis.

Two layers matter most: local risk data details (e.g., construction materials for building) and high-resolution climate data of which platforms such as ECMWF's **climate services offer the scientific foundation**; what is needed is the institutional architecture to translate available data into relevant decisions.

The protection gap is a systemic vulnerability requiring sequenced action: national penetration first, EU-level prevention infrastructure second, and data architecture that makes risk visible across the financial system. **Closing the loop requires acting upstream—reducing risk before it materializes—rather than relying on financial shock absorbers once losses have occurred.**