



POLICY BRIEF

TACKLING THE INSURANCE PROTECTION GAP

Leveraging climate mitigation
and nature to increase resilience

Major landslide and flooding in the Blessem district of Erfstadt, Germany, during the 2021 floods. Image: ©Daniel Schlich

Insurance is a cornerstone of today's prosperity. It enables economic actors to transfer risk, protects individuals and businesses from financial uncertainty, supports faster and fairer recovery and enables investment.

The climate and nature crises are rapidly undermining the foundations of the insurance system by increasing the exposure of assets to more severe and frequent storms, floods, droughts, wildfires and heatwaves. Degraded natural protections such as wetlands and forests are compromising our resilience. In 2023, natural disasters cost around US\$2.3 trillion globally – about 2% of global GDP.

The insurance markets are increasingly unable to cover rapidly growing climate and nature risks. Rising premiums, restricted coverage or withdrawal from high-risk areas are financially rational reactions by individual insurers, but they lead to insurance becoming unavailable or unaffordable in a growing number of regions – including in developed countries.

Gaps in insurance protection are widening, leaving people and business with higher bills and/or less

protection from damage to assets such as homes, from impaired business operations, or from lost harvests.

Where insurance is lacking, governments increasingly have to fill the gap. Governments often act as insurers of last resort, providing post-disaster aid or assuming risks on public balance sheets through public insurance and reinsurance schemes. Rising protection gaps are putting already constrained budgets under further pressure and undermining the sustainability of sovereign debt.

What is not insurable is not bankable. Homeowners and businesses in risky areas without insurance coverage will lose access to loans and mortgages.

The combined effects of extreme weather events and protection gaps on income, asset prices, credit and mortgage markets, and public debt threaten economic and financial stability, prosperity and social cohesion.

This policy briefing sets out how we can tackle these challenges.

WWF urges public authorities and policymakers to tackle the insurance protection gap strategically with a disaster risk reduction and resilience strategy, addressing the root causes of increasing risks and using the capabilities of the insurance sector. They should:



1. Undertake a holistic and forward-looking risk and resilience assessment, including direct and indirect losses – while not delaying ‘no-regrets’ actions



2. Reduce greenhouse gas (GHG) emissions and halt and reverse nature loss domestically and through international cooperation to contain mutually reinforcing climate and nature risks



3. Make nature and nature-based solutions (NbS) a centrepiece in adaptation and resilience planning and in response and recovery efforts



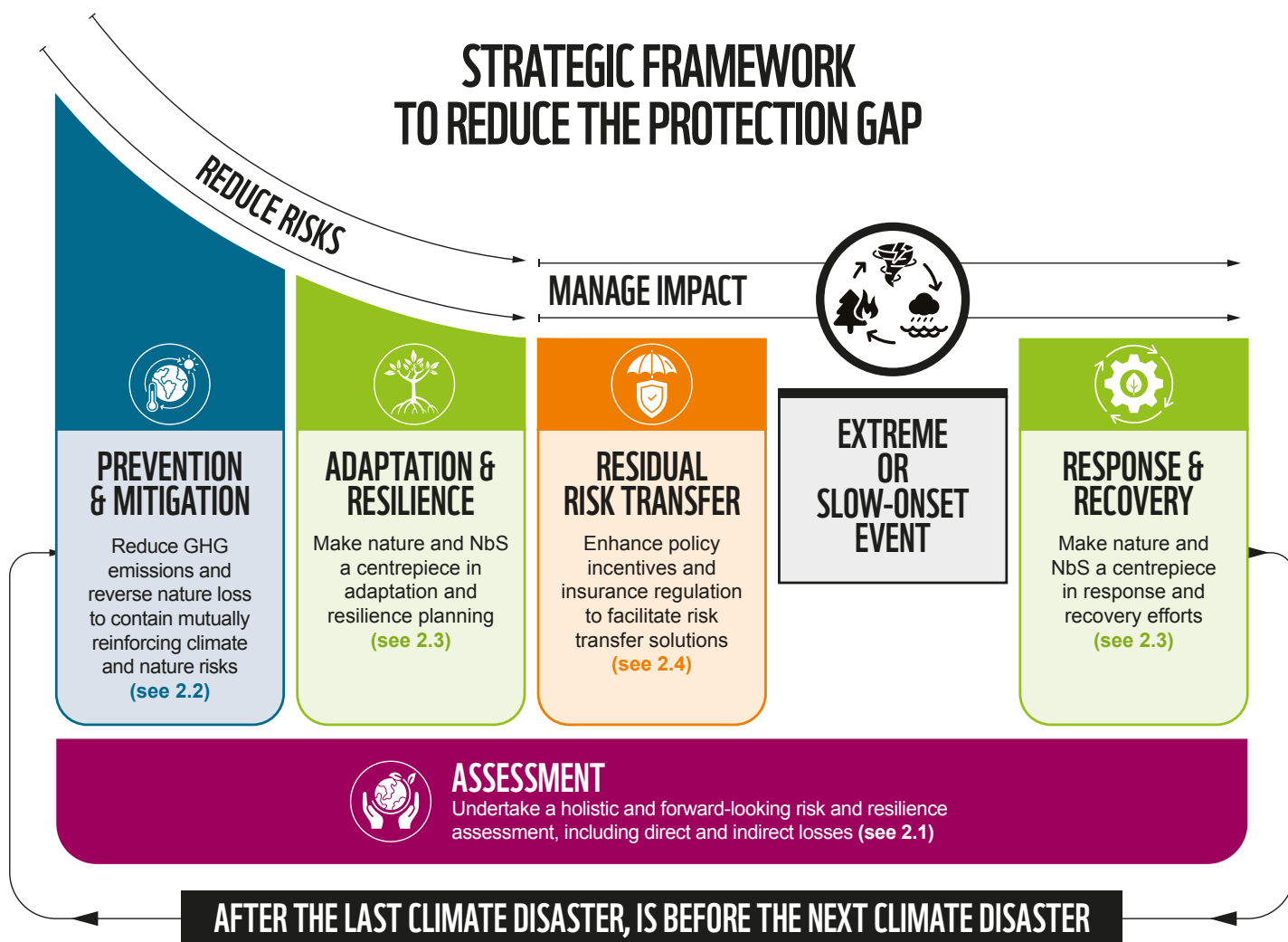
4. Enhance policy incentives and insurance regulation to facilitate risk transfer solutions, ensuring alignment with resilience

The following sections explain the dynamics behind protection gaps and outline a proposed strategic approach designed to close them. Without such an approach, risks and losses will escalate to levels where transfer mechanisms can no longer absorb them.

This policy brief analyses the situation in advanced economies only, with a main focus on the EU, the UK and the US. As challenges related to the protection gap and the respective responsibilities regarding historical GHG emissions differ between advanced and developing economies, addressing the same recommendations to all countries would be of limited relevance.

WWF will publish a full analysis of the dynamics and challenges related to the protection gap in advanced economies and our recommendations to strategically tackle them in early 2026.

STRATEGIC FRAMEWORK TO REDUCE THE PROTECTION GAP



01. EXTREME WEATHER EVENTS AFFECT INSURANCE PROTECTION AND HAVE ECONOMIC AND SOCIAL RIPPLE EFFECTS

The climate and nature crises are driving up losses and damages from extreme weather events

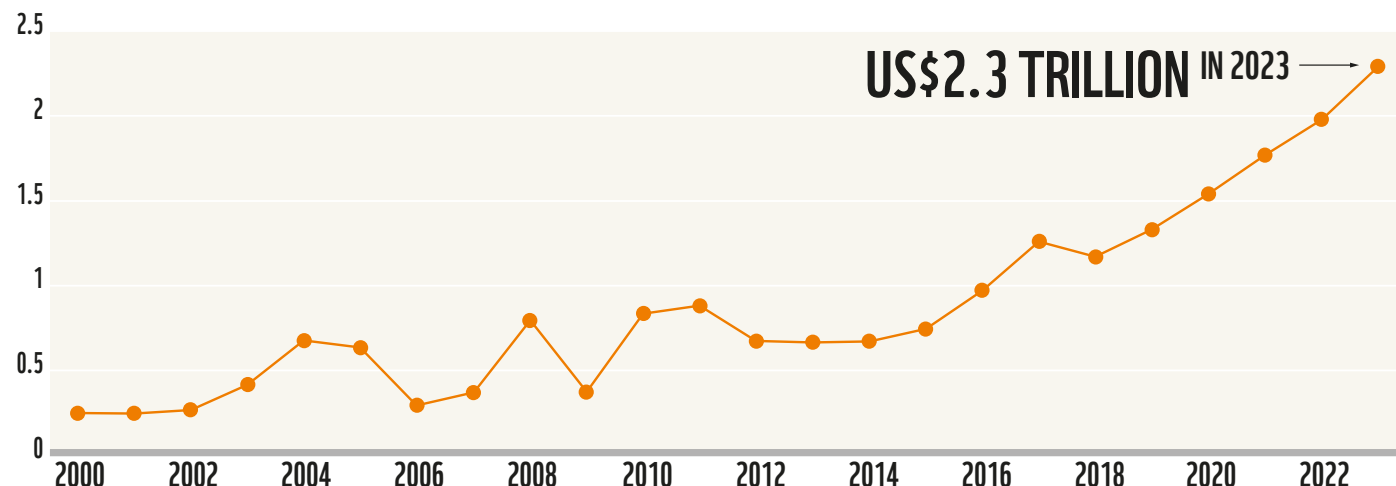
- Extreme weather in the European Union caused an estimated €43 billion in losses in the summer of 2025 alone, due to heatwaves, droughts and floods.¹ By 2029, projected losses could reach €126 billion – around 0.8% of EU GDP, equal to the bloc's current growth rate.²
- The United States spent almost US\$1 trillion (3% of GDP) on disaster recovery and other climate-related needs in the 12 months to May 2025.³
- Overall, according to Swiss Re, insured losses for natural catastrophes (mostly driven by climate-related events) are increasing by 5-7% annually, corrected for inflation.⁴
- Globally, the UN Office for Disaster Risk Reduction estimates the costs of disasters (including but not limited to climate-related disasters) at around US\$2.3 trillion (i.e., about 2% of global GDP), when indirect costs and ecosystem costs are accounted for.⁵

Degraded ecosystems mean that, when extreme weather events hit, the impacts are often more severe and costly

- Since the 1950s, approximately 60% of global ecosystems have been significantly degraded,⁶ directly eroding our resilience in the face of extreme weather events.
- Wetlands avoided more than US\$625 million of property damage during Hurricane Sandy.⁷ When these natural shock absorbers are degraded, coastal communities are left exposed to more powerful, destructive waves and storm surges.
- Floods in the US and Europe, such as the one in Valencia in 2023, are often made worse by the lack of upstream vegetation, the draining of wetlands and channelling waterways into narrow corridors.⁸ The risk of a large-scale flooding event can increase by as much as 700% in areas of widespread deforestation.⁹

FIGURE 1: GLOBAL DISASTER DAMAGE LOSSES (2000-2023)

In US\$ trillion



Source: UNDRR. (2025). Global Disaster Damage Losses (2000-2023). <https://www.undrr.org/gar/gar2025>



Mutually reinforcing physical climate and nature risks affect the availability and affordability of insurance

- Over the last decade, the top 19 global reinsurers have more than halved their exposure to insured catastrophe losses, increasing exposures and costs faced by primary insurers.¹⁰
- In the UK, the average cost per weather-related claim increased by 73% between 2018 and 2023, driving premiums to a new peak value.¹¹ 15% of Australian homeowners are spending over a month's income on annual premiums.¹² Overall, insurance premiums for American homeowners rose 38% between 2019 and 2024, almost twice the rate of inflation.¹³ In all instances, more severe impacts of more frequent extreme weather events play a crucial role in these rising insurance costs.
- Insurers lost money providing insurance to homeowners in 18 US states in 2023 – up from eight states in 2013.¹⁴ In Florida, for example, at least seven large carriers became insolvent between 2021 and 2023 after record hurricanes and flooding,¹⁵ while others are choosing to leave markets, reducing insurance availability.
- Increasing physical climate and nature risks also affect the affordability and availability of liability insurance, commercial insurance and agricultural insurance.

Climate-related insurance protection gaps are entrenched or increasing

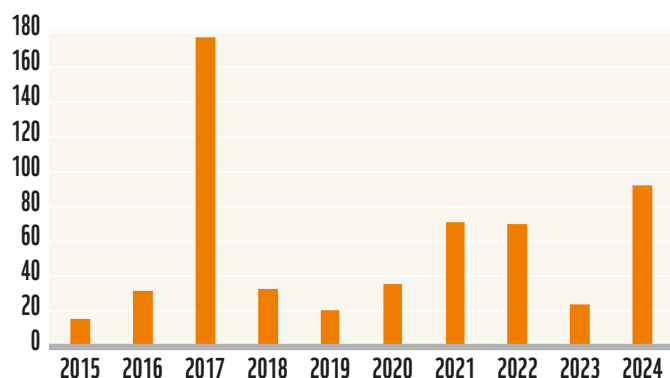
- Swiss Re estimates that less than half of economic losses from natural catastrophes are covered by insurance.¹⁶
- In the US, the share of uninsured homes grew from 5% in 2019 to 12% in 2024,¹⁷ as insurance affordability and availability has deteriorated nationwide.
- In Europe, only around 20-25% of catastrophe losses have been insured since 1980, with the protection gap widening over recent years.¹⁸
- In most emerging economies, the protection gap exceeds 90%.¹⁹

Increasing physical climate and nature risks and rising protection gaps undermine economic and financial stability, social cohesion and public health

- The Bank for International Settlements estimates that major disasters' initial impacts reduce growth by 1–2% and cause longer-lasting GDP losses of 2–4%, mainly due to uninsured damages.²⁰
- Rising premiums and insurance withdrawal are already reshaping mortgage and property markets. US mortgage losses could reach US\$5.4 billion by 2035 in severe weather years, driven by both direct and indirect impacts, according to one financial modelling firm.²¹ US Federal Reserve Chair Jerome Powell warned in February 2025 that, “if you fast-forward 10 or 15 years, there are going to be regions of the [United States] where you can’t get a mortgage.”²²
- Heat-related productivity losses – which are mostly not insured – and health issues reduce income, education²³ and wellbeing.²⁴ Worker productivity drops by 2-3% for every degree above 20°C, the World Meteorological Organization says, and rising temperatures lead to severe health impacts.²⁵
- A lack of insurance protection is widening socio-economic inequalities. Despite facing higher exposure to climate risks, lower-income and marginalised communities remain the least covered.^{26,27}
- Meanwhile, the Institute of Economics and Peace estimates that the number of people at threat of displacement due to extreme weather events and the related social and political impacts could reach over 1 billion by 2050.²⁸

FIGURE 2: U.S. PROTECTION GAP FROM NATURAL CATASTROPHES

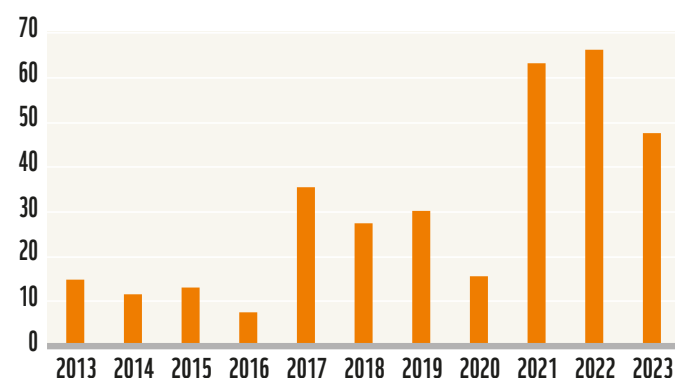
In US\$ billion in 2024 prices



Source: SwissRe. (2025).

FIGURE 3: PROTECTION GAP EU-27 FROM WEATHER & CLIMATE EVENTS

In EUR billion in 2023 prices



Source: European Environment Agency (2025)

Where insurance is lacking, governments increasingly have to fill the gap: public finances are exposed to contingent liabilities through explicit and implicit government aid and guarantees, adding to public debt

- After the 2021 Ahrtal floods, the German government committed €30 billion in reconstruction funds – around 5% of Germany's combined federal and state budgets.²⁹
- In the US, the government granted US\$110 billion in disaster assistance in 2024 for relief efforts in states hit by hurricanes and tornadoes.³⁰
- Public insurance schemes increasingly bear rising contingent liabilities. The US National Flood Insurance Program is expected to absorb over 90% of the insured losses from Hurricanes Helene and Milton in 2024.³¹ Spain's Consorcio de Compensación de Seguros has incurred €3.5 billion in insured losses following the 2024 Valencia floods.³²
- Climate risks and protection gaps can affect public debt and sovereign creditworthiness. The International Monetary Fund found that a country's vulnerability to climate change can have a direct effect on its costs of borrowing.³³ This in turn can affect government capacity for adaptation and resilience spending and coping with the next disaster.
- Overall, rising levels of public debt – mostly held by institutional investors such as pension funds and insurance companies – and consequent downgrades in public creditworthiness further challenge financial stability.

Investment in cost-efficient, forward-looking risk mitigation and prevention measures has to compete with urgent disaster and recovery spending

- The US Chamber of Commerce found that every dollar spent on climate resilience and preparedness can save communities up to US\$13 in damages, cleanup costs and economic impact.³⁴
- NbS often offer cost-efficient opportunities for risk mitigation.³⁵ In Switzerland, for instance, the protective function of forests is valued at around CHF4 billion (US\$4.5 billion) annually³⁶ and is up to 25 times more cost-effective than equivalent technical measures.³⁷

Overall, with physical earth systems approaching and crossing tipping points,³⁸ adaptation becomes an increasingly shifting and elusive target, and insurance becomes increasingly difficult to price and to offer, undermining the foundations of the modern economy

“Once we reach 3°C of warming, the situation locks in [...] risk cannot be transferred (no insurance), risk cannot be absorbed (no public capacity), and risk cannot be adapted to (physical limits exceeded) [...] and with it, capitalism as we know it ceases to be viable.”

GÜNTHER THALLINGER,
MEMBER OF BOARD OF MANAGEMENT OF ALLIANZ.³⁹

Public authorities in various countries have started to respond, yet their reactions to the protection gap are uneven and do not match the challenge in scale and scope

- Governments have started to **expand risk transfer mechanisms** through public–private partnerships and mandatory insurance or premium subsidies, particularly in agriculture. However, the incentives within such schemes are often not aligned with necessary risk reduction measures.
- **Some preventive measures have been introduced**, such as updating building codes, zoning laws and climate adaptation plans, but a holistic perspective is missing and funding for adaptation remains low – it is often less than 1% of national budgets, despite rapidly rising climate losses. Moreover, nature protection and NbS are not well integrated into these efforts.
- **Leading supervisors, regulators and central banks are incorporating climate risk into oversight**, including through climate stress-tests and protection gap dashboards. However, coordinated policy frameworks and requirements are underdeveloped and forward-looking risk assessment tools are not comprehensively applied. A true macroprudential perspective, focusing on threats to financial stability rather than on individual insurers' solvency, is largely absent.
- **International forums** such as the G20 and the Coalition of Finance Ministers for Climate Action are increasingly emphasising the need for better data, risk modelling and collaboration across finance, insurance and environment ministries – but so far without implementing forceful measures.

“The insurance protection gap leaves people vulnerable as extreme weather events hit people hard. Half of climate-related losses globally, and more than 90% in developing countries, are uninsured. This is no longer just an insurance market issue, but a systemic threat to people's livelihoods, economic resilience and even financial and fiscal stability.”



LAURENCE TUBIANA,
SPECIAL ENVOY TO EUROPE FOR COP30

Flood damage in Ahrtal and Eifel. Reconstruction after cleanup. Image: Adobe Stock



02. WWF RECOMMENDATIONS: HOW TO CLOSE THE PROTECTION GAP AND BENEFIT PEOPLE, NATURE, BUSINESS AND GOVERNMENT

Danube floodplain forest. Image: Adobe Stock

2.1 UNDERTAKE A HOLISTIC AND FORWARD-LOOKING RISK AND RESILIENCE ASSESSMENT, INCLUDING DIRECT AND INDIRECT LOSSES – WHILE NOT DELAYING NO-REGRETS ACTIONS



Climate and nature-related losses threaten to outpace the capacity of existing risk prevention and insurance systems. The costs of inaction are increasing and system-wide interventions to build resilience can have multiple benefits. The following Action Areas should inform government action. However, the recommended assessments should not delay action, but be undertaken in parallel.

KEY ACTION AREAS

1. A holistic and forward-looking risk and resilience assessment should reflect the combined effects on the economy of climate change, nature loss and the insurance protection gap

Public authorities should broaden risk and resilience assessments and scenario analyses of extreme weather events beyond immediate physical damage. These should include indirect impacts, such as on insurability, business interruption, credit and mortgage markets, public budgets and sovereign debt sustainability. Assessments, including climate stress tests, should be cross-sectoral (e.g., covering banking and insurance), consider cross-border implications, and take a macroprudential perspective, focused on system-wide financial stability and risks that accumulate across institutions and markets.

Assessors should apply a precautionary approach in response to uncertainties such as Earth-system tipping points and challenges with quantification, as outlined by the UK Institute and Faculty of Actuaries.⁴⁰



2. Nature and nature-based solutions should be valued in policymaking alongside built infrastructure to ensure they are adequately prioritised

Decision-making and accountability frameworks must value the economic and social contribution of nature. They should emphasise the importance of natural assets in reducing disaster risk and in contributing to collective health and prosperity. To strategically address the protection gap, scenario analysis, loss and damage assessments and recovery investments must also include the impacts of climate change and extreme weather events on ecosystems and natural capital. For example, the EU Solidarity Fund reimburses member states for restoring natural heritage alongside public infrastructure repairs.⁴¹



3. Incorporate insurance dynamics into resilience planning

Public authorities must collect and use information from the insurance sector to identify how insurance provision is changing, the implied exposure of sectors and locations, and the most important resilience measures. The EU's Climate Resilience Dialogue between policymakers and insurers offers a platform and template for this.⁴² The EU's *Insurance and Risk Management Tools for Agriculture in the EU* report provides another illustration.⁴³



2.2 REDUCE GHG EMISSIONS AND HALT AND REVERSE NATURE LOSS DOMESTICALLY AND THROUGH INTERNATIONAL COOPERATION TO CONTAIN MUTUALLY REINFORCING CLIMATE AND NATURE RISKS



To keep climate and nature risks insurable, governments must address the root causes of the twin crises by cutting emissions, restoring nature and aligning finance with global sustainability goals.

KEY ACTION AREAS

4. Deliver on climate and nature commitments

To maintain long-term insurability, governments must urgently enhance and implement their strategies to mitigate climate change and halt and reverse nature loss. For example, parties to the UN conventions on climate and nature should strengthen and deliver on their Nationally Determined Contributions (NDCs) under the Paris Agreement, informed by the outcomes of the Global Stocktake, and implement their National Biodiversity Strategies and Action Plans (NBSAPs) under the Kunming–Montreal Global Biodiversity Framework.⁴⁴ This should include setting specific emission mitigation targets for ecosystems, halting and reversing deforestation, forest degradation and land conversion, and the orderly phasing out of fossil fuel and related subsidies.



5. Deepen international coordination

Global institutions and forums such as the G20, the Financial Stability Board and the International Association of Insurance Supervisors (IAIS) should embed climate change and nature loss mitigation, adaptation and resilience within global financial stability agendas and efforts to reduce the protection gap. The Compendium of the Coalition of Finance Ministers for Climate Action on tools and models to support financial decision makers provides an example.⁴⁵



6. Develop national transition pathways and require private sector transition plans to unlock private investments

Governments must establish detailed national and sectoral pathways for achieving net-zero and nature-positive outcomes.⁴⁶ These should align regulatory frameworks, tax reforms and concrete incentives to build confidence and unlock private capital. Large companies and financial institutions should develop credible and science-based climate and nature transition plans. (Spain, for example, requires emission reduction plans as a response to frequent extreme weather events.⁴⁷) For insurers, this must include both their underwriting and investment activities. Access to state-backed insurance facilities and public reinsurance schemes should be conditional on insurance and reinsurance companies adopting and implementing robust transition plans.



Bamboo and mangrove coastal flood protection. Image: Adobe Stock

“The exponentially growing losses and damages from extreme weather events that are undermining the insurance market are caused both by increasing temperatures and the destruction of ecosystems that are protecting us. Forests, mangroves or wetlands are crucial for reducing the devastating impact of these extreme events and therefore need to be at the heart of strategies to increase our resilience and keep regions insurable.”



KIRSTEN SCHUIJT,
DIRECTOR GENERAL OF WWF INTERNATIONAL

7. Mobilise private capital for nature-based and green solutions

Governments should also use (blended) finance instruments – e.g., guarantees and first-loss tranches – to de-risk and catalyse investment in climate and nature projects within a proof-of-concept approach for innovative solutions. This should include targeted public insurance mechanisms or public-private partnerships for activities that are currently hard to insure, such as transitioning to regenerative agricultural practices,⁴⁸ or traditional burning for land and ecosystem management,⁴⁹ as well as for public projects, such as local ecosystem protection and restoration, where public self-insurance is often most efficient. Coordinated action among public authorities, investors and insurers can scale green and nature-based solutions globally, unlocking new opportunities for innovation, partnerships and generating resilience dividends.



2.3 MAKE NATURE AND NATURE-BASED SOLUTIONS A CENTREPIECE IN ADAPTATION AND RESILIENCE PLANNING AND IN RESPONSE AND RECOVERY EFFORTS



Nature must be positioned at the core not just of climate mitigation (i.e., reduction of greenhouse gas emissions), but also of climate adaptation, disaster risk reduction and resilience. Doing so offers a cost-effective, systemic pathway to prevent and mitigate disaster losses, enhance social and ecological stability and maintain the insurability of climate risks in the decades ahead.

KEY ACTION AREAS

8. Integrate nature into building codes, zoning and land-use planning

Construction standards for new buildings and renovations should require NbS such as green roofs, rain gardens and living walls to mitigate floods and heat. Governments should update zoning codes to reflect climate and nature risks. Land-use planning should restrict land conversion, create buffers against floods or wildfires, and preserve green spaces for cooling and water retention. For instance, Norfolk, Virginia in the US has developed one of the most climate-resilient zoning codes, encouraging building on higher ground, requiring elevated foundations in vulnerable areas and providing incentives for relinquishing land in flood-prone zones to conservation easements.⁵⁰ In Europe, the city of Amsterdam is developing a comprehensive approach to prevent losses from increased temperatures, drought, extreme rainfall and flooding.⁵¹



9. Accelerate and coordinate integrated landscape management and national adaptation planning

Governments must deliver on national adaptation plans (NAPs), as required by the UN climate convention.⁵² To do so, they should use their convening power to align public and private actions, across sectors and in collaboration with insurance market participants, based on integrated landscape management. This is a collaborative, long-term approach where diverse stakeholders work together to manage a specific area to achieve multiple, often competing goals for society and the environment. Following examples like the Netherlands' Delta Programme,⁵³ adaptation planning should be participatory, science-based and multi-level. Adaptation planning must include NbS. Examples such as Japan's Eco-DRR (Ecosystem-based Disaster Risk Reduction)⁵⁴ and California's NbS strategy⁵⁵ show how natural defences can strengthen resilience and lower long-term costs. The UN Office for Disaster Risk Reduction⁵⁶ and the Partnership for Ecosystem for DRR and Adaptation provide comprehensive guidance for using NbS.



10. Embed nature in disaster recovery frameworks for the benefit of people and nature

Post-disaster recovery must embed nature-based restoration – such as wetland recovery after Hurricane Katrina or the restoration of natural areas for the prevention of soil erosion after the 2020 earthquake in Croatia⁵⁷ – and reform aid criteria to favour NbS over grey infrastructure where appropriate. Nature must also be mainstreamed in post-disaster updates of building codes, zoning and land-use planning, and in physical risk prevention and mitigation, and follow an integrated landscape management approach. Local communities must have streamlined access to recovery funding.



11. Incorporate ecosystem services into insurance models and link insurance and risk reduction incentives

Governments must support insurers in valuing nature, including NbS, within catastrophe models through publishing or funding relevant data, pilot programmes and validation analysis based on damage data. Incentives and regulations, such as Colorado's wildfire-mitigation law, should link premiums to verified landscape management measures.⁵⁸

Public or publicly backed insurance schemes must reward local risk-reduction and NbS investment. An example is the Community Rating System, a voluntary FEMA (Federal Emergency Management Agency) programme in the US. It incentivises communities to exceed minimum requirements for federal flood insurance by offering flood insurance premium discounts based on their floodplain management practices.⁵⁹ Innovations in analysis and product design, such as those highlighted by the EU's Naturance project or the Ocean Risk and Resilience Action Alliance initiative, also show what is possible and set out what is needed to scale and mainstream nature-based insurance solutions.⁶⁰



12. Strengthen the resilience of ecosystems to climate change

Governments must support nature's own adaptive capacity to shocks and stresses linked to climate change. Climate-smart planning needs to be integrated into protected-area management. Habitat connectivity needs to be promoted and best practices on adaptive ecosystem management shared.



HEALTHY ECOSYSTEMS STRENGTHEN RESILIENCE

Intact and healthy ecosystems such as wetlands, forests and mangroves provide vital services, including water purification, climate regulation and soil stabilisation. By acting as regulators and buffers, reducing flood, heat and storm impacts, they can save lives and billions of dollars in damages.⁶¹

However, since the 1950s, approximately 60% of global ecosystems have been significantly degraded.⁶² This creates a vicious cycle. Ecosystems become less resilient and more vulnerable to extreme weather events, which then further weaken these systems, pushing them closer to tipping points where they can no longer provide their vital ecosystem services. This in turn exacerbates climate change, which feeds back into further ecosystem decline and the loss of their protective functions.⁶³ The World Bank estimates that the loss of selected ecosystem services (wood provision, pollination and marine fisheries) will lower global annual GDP in 2030 by US\$2.7 trillion, if major ecosystems continue to collapse.⁶⁴

HAZARD	NATURE'S PROTECTIVE ROLE	NBS ILLUSTRATION
 DROUGHT	Intact wetlands, peatlands, vegetation, and healthy soils improve water retention and regulate water flows.	UK peatland restoration in Yorkshire improves summer groundwater flows and pluvial water retention. ⁶⁵ Alpine meadow conservation in Canada enhances water storage. ⁶⁶
 WILDFIRE	Mixed and well-managed native forests show higher moisture retention and slower ignition spread versus monocultures.	Aspen stands in California reduce fire intensity. ⁶⁷ Cork oak landscapes in Portugal support natural fire breaks. ⁶⁸ Sustainable forest management programmes in Germany, Portugal and Spain enhance resilience against wildfires and water scarcity. ⁶⁹
 EXTREME HEAT	Urban trees, green roofs, parks and vegetation lower air and surface temperatures through shading and evapotranspiration, providing health benefits.	London's citywide planting programmes, ⁷⁰ Barcelona's Trees for Life Masterplan, ⁷¹ New York City's Million Trees initiative ⁷² and green roof initiatives in Berlin, ⁷³ Chicago, ⁷⁴ Paris, ⁷⁵ Warsaw ⁷⁶ and Toronto ⁷⁷ all reduce peak urban temperatures and summer heat stress.
 FLUVIAL FLOODS AND SURFACE RUN-OFF	Forest canopies, root systems, wetlands and floodplains slow runoff and store floodwaters.	Swiss Alpine reforestation reduces snowmelt flood risk. ⁷⁸ Floodplain reconnection on the Danube restores natural overflow capacity. ⁷⁹ Hedgerow networks in southern England ⁸⁰ and Elbe dyke relocation in Lenzen, Germany, increase water retention. ⁸¹
 LANDSLIDES	Vegetation root systems anchor soil, intercept rainfall and improve slope stability.	Forests in Alpine regions like Switzerland stabilise slopes and provide physical barriers. ⁸²
 TROPICAL CYCLONES, HURRICANES AND WINTER STORMS; COASTAL FLOODS AND EROSION	Mangroves, seagrass meadows, coral reefs, dunes, wetlands and other coastal habitats offer buffers against storm surges and wave energy, reconnect water flows, stabilise sediments and reduce shoreline erosion.	Wetlands along the US Atlantic coast reduced damages during Hurricane Sandy in 2012. ⁸³ Restored salt marshes in New England reduce storm impacts. ⁸⁴ Restoration of former saltworks into functional coastal wetlands in the Rhône Delta (Camargue, France) serve as buffer zones to enhance inland flood protection. ⁸⁵ Mangroves protect coastlines in Florida. ⁸⁶

2.4 ENHANCE POLICY INCENTIVES AND INSURANCE REGULATION TO FACILITATE RISK TRANSFER SOLUTIONS, ENSURING ALIGNMENT WITH RESILIENCE



In addition to the policy measures above to address risk and resilience, residual risks from extreme weather events need to be managed through insurance or similar risk transfer mechanisms to decrease the financial vulnerability of people, businesses and governments. Targeted public interventions in insurance markets should be expanded to perils and regions where protection gaps are most acute, and such interventions must incentivise greater resilience.

A more in-depth discussion of the aspects of residual risk transfer solutions not directly related to climate and nature were intentionally not covered in this policy brief. Interventions to create risk transfer solutions are often central to public debates about protection gaps, such as in Italy, where mandatory insurance coverage for businesses

was recently introduced, or in Germany, where discussion about mandatory flood insurance is ongoing. The related analyses and proposals are therefore already advanced, including in WWF's own Greening Financial Regulation and Sustainable Financial Regulations and Central Bank Activities initiatives,⁸⁷ and in the work of other organisations, such as the IAIS,⁸⁸ the European Central Bank,⁸⁹ the US National Association of Insurance Commissioners⁹⁰ or the Council on Economic Policies.⁹¹

This policy brief argues that, while improving risk transfer solutions is a crucial part of tackling the protection gap, these efforts need to be implemented in the context of a strategic approach to reducing risks and safeguarding insurability.



03. CONCLUSION

Considering the escalating and reinforcing risks from climate change and nature loss, it is essential that policymakers act now to implement a strategic approach to closing the insurance protection gap, as outlined here.

Complementing WWF's work here, an advisory group, comprised of re/insurance companies, brokers, insurance associations, NGOs, think tanks, an insurance regulator and researchers, contributed to this project. This demonstrates the relevance of this topic and a willingness across sectors and geographies to support solutions. Policymakers are urged to collaborate with these actors to strengthen risk reduction, preserve insurability and better protect communities.

FIGURE 4: LEVERS OF INSURANCE UNDERWRITING TO SUPPORT GLOBAL CLIMATE & BIODIVERSITY GOALS



Source: WWF Switzerland. (2023)

BEYOND RISK TRANSFER: THE CRUCIAL ROLE OF INSURERS TO ACCELERATE THE TRANSITION TO NET ZERO AND NATURE POSITIVE TO MAINTAIN INSURABILITY

In addition to government action, re/insurance companies and brokers have an important part to play in the strategic approach to maintaining insurability and reducing the insurance protection gap. Their investments and underwriting decisions must not contribute to the growing risks from extreme weather events that they then struggle to cover without government intervention. Instead, they must play a proactive role in integrating climate and nature risks and impacts into their policies and processes, supporting NbS and advocating for science-based policies.

WWF and Deloitte laid out in our 2023 *Underwriting our Planet report*⁹² the **multiple levers that insurance companies can pull in their underwriting businesses to contribute to climate and nature goals:**

- **The activities that an insurer chooses to underwrite or not.** Coal mining or freight shipping would not take place in the way they do today without insurance coverage, for example, while renewable energy needs tailored and affordable insurance coverage to keep growing in line with net-zero objectives.
- **Product design and claims management.** The incentives created by insurance products are important. Insurance companies could better design products to prevent moral hazard and promote green choices, such as repair over replace, and build-back-better and green-for-old approaches to claims settlements.
- **The supportive activities that insurers engage in.** Insurance companies are important stakeholders for businesses and public authorities. They can leverage that position to: undertake engagement and advocacy with clients, peers and policymakers; share research and data; and finance projects to directly protect and restore nature and the climate.⁹³

Political advocacy and the defence of science-based policies are especially important in the current political environment. Based on their understanding of physical climate risks, insurers can effectively advocate for systemic change that aligns policy frameworks, financial markets and industry practices with urgent climate and nature goals as well as adaptation and resilience measures to maintain insurability. Laurence Tubiana, one of the architects of the Paris Agreement, highlights the important role of insurance companies for the adoption of the Paris Agreement, and she urges the industry to find its voice again in the run-up to COP30.⁹⁴

Recently, industry-related initiatives have provided additional specific guidance for insurance companies regarding their own transition plans.

- The reports of the **Forum on Insurance Transition** provide in-depth guidance and examples of best practices to insurance companies of how to develop and design **climate transition plans**.⁹⁵
- The **Principles for Sustainable Insurance** have published detailed guidance for insurance companies regarding **priority actions for nature**⁹⁶ and **nature-related assessments**.⁹⁷
- The **Science Based Target initiative's recent net-zero standard** includes a standard for insurance underwriting.⁹⁸

These frameworks and guidance can help the insurance sector play its part in the transition to a net-zero, nature-positive global economy.

LIST OF REFERENCES

- Usman, S., Parker, M., & Vallat, M. (2025). Dry-roasted NUTS: early estimates of the regional impact of 2025 extreme weather. <https://dx.doi.org/10.2139/ssrn.5484206>
- Tubiana, L. (2025). €43 billion. <https://www.linkedin.com/posts/laurencetubiana-43-billion-thats-the-estimated-cost-of-activity-7374097544374579201-a3jU/>
- Roston, E. (2025). U.S. spending on climate damage nears \$1 trillion per year. <https://www.bloomberg.com/news/articles/2025-06-17/us-spending-on-climate-damage-nears-1-trillion-per-year>
- Swiss Re Institute. (2025). sigma 1/2025: Natural catastrophes: insured losses on trend to USD 145 billion in 2025. www.swissre.com/institute/research/sigma-research/sigma-2025-01-natural-catastrophes-trend.html
- United Nations Office for Disaster Risk Reduction (2025). Global Assessment Report on Disaster Risk Reduction 2025: Resilience Pays: Financing and Investing for our Future. <https://www.undrr.org/gar/gar2025#download>
- Wang, H., Zhang, X., Zhang, J., Yin, J., & Bao, W. (2025). Assessing ecosystem service losses - A review of progress and problems. *Resources, Environment and Sustainability*, 19(100194), 100194. <https://doi.org/10.1016/j.resenv.2025.100194>
- University of California, Santa Cruz, The Nature Conservancy, Wildlife Conservation Society, & Lloyd's Tercentenary Research Foundation. (2016). Coastal Wetlands Provide Significant Flood Damage Reduction. <https://coastalresilience.org/coastal-wetlands-provide-significant-flood-damage-reduction/>
- Bonati, S.; Fernández, A.; Seiz, R. y cols. (2024). Cómo adaptarnos a los efectos extremos del cambio climático: inundaciones y sequías. WWF España. <https://wwf.es/awssassets.panda.org/downloads/adaptacionefectosc.pdf>
- Kang, T.-H., Sharma, A., Marshall, L., & Kim, Y.-O. (2025). Interception reduction from deforestation and forest fire increases large-scale fluvial flooding risk. *Communications Earth & Environment*, 6(1), 1–9. <https://doi.org/10.1038/s43247-025-02748-6>
- Kaufman, L., & Millan, L. (2025). Reinsurers in Monaco place their climate bets. <https://www.bloomberg.com/news/newsletters/2025-09-10/reinsurers-in-monaco-place-their-climate-bets>
- Fisher, R. (2024). How the Climate Crisis is Impacting the UK Property Insurance Market. <https://www.propertyinsurancecentre.co.uk/how-the-climate-crisis-is-impacting-the-uk-property-insurance-market/>
- Geneva Association. (2025). Safeguarding Home Insurance: Reducing exposure and vulnerability to extreme weather. https://www.genevaassociation.org/sites/default/files/2025-06/safeguarding_home_insurance_040625.pdf
- Greater Phoenix In Business Magazine. (2024). Arizona Leads the Nation with 62% Surge in Home Insurance Rates over 5 Years. <https://inbusinessphx.com/economy-trends/arizona-leads-the-nation-with-62-surge-in-home-insurance-rates-over-5-years>
- Flavelle, C., & Rojanasakul, M. (2024, May 14). As insurers around the U.S. bleed cash from climate shocks, homeowners lose. *The New York Times*. <https://www.nytimes.com/interactive/2024/05/13/climate/insurance-homes-climate-change-weather.html>
- Climate Cosmos. (2025). Top 10 states where home insurance is disappearing due to climate risk. <https://climaticocosmos.com/world-weather/top-10-states-where-home-insurance-is-disappearing-due-to-climate-risk/>
- Swiss Re Institute. (2025). sigma 1/2025: Natural catastrophes: insured losses on trend to USD 145 billion in 2025. <https://www.swissre.com/institute/research/sigma-research/sigma-2025-01-natural-catastrophes-trend.html>
- USA Today. (2024, June 23). Americans not buying homeowners insurance. <https://www.usatoday.com/story/money/2024/06/23/americans-not-buying-homeowners-insurance/74144566007/> (only accessible from the US)
- European Environment Agency. (2025, July 2). Economic losses and fatalities from weather- and climate-related extremes. <https://www.eea.europa.eu/en/analysis/publications/economic-losses-from-climate-extremes>
- South African Reserve Bank. (2025). Addressing the natural catastrophe insurance protection gap. <https://www.resbank.co.za/en/home/publications/publication-detail-pages/media-releases/2025/g20-natural-catastrophe-insurance>
- von Goetz, P., von Dahlen, S., & Saxena, S. (2024). Unmitigated disasters? Risk sharing and macroeconomic recovery in a large international panel. <https://www.bis.org/publ/work1175.pdf>
- First Street Technology, Inc. (2025, May 18). Climate as the sixth C of credit: Scientific evidence that climate risk now drives mortgage foreclosure and loan viability. <https://firststreet.org/press/climate-as-the-sixth-c-of-credit-scientific-evidence-that-climate-risk-now-drives-mortgage-foreclosure-and-loan-viability>
- Sellers, M. (2025). Insurance could kill mortgages in some of the US – Powell. *Insurance Business*. <https://www.insurancebusinessmag.com/us/news/catastrophe/insurance-could-kill-mortgages-in-some-of-the-us--powell-524516.aspx>
- Sidik, S. (2025). Climate change impacts have potentially big repercussions for kids' education. *Proceedings of the National Academy of Sciences of the United States of America*, 122(13), e2505073122. <https://doi.org/10.1073/pnas.2505073122>
- Crowfoot, T. (2025, July 30). Extreme heat: What to know about the deadliest climate risk of our time. *World Economic Forum*. <https://www.weforum.org/stories/2025/07/what-to-know-about-extreme-heat/>
- World Meteorological Organization. (2025, August 22). Climate change and workplace heat stress. <https://wmo.int/publication-series/climate-change-and-workplace-heat-stress>
- Birkmann, J. et al. (2022). Poverty, Livelihoods and Sustainable Development. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, UK and New York, NY, USA, doi:10.1017/9781009325844.010.
- Gropper, M. J., & Kuhnen, C. M. (2025). Wealth and insurance choices: Evidence from US households. *The Journal of Finance*. <https://dx.doi.org/10.2139/ssrn.3888422>
- Institute for Economics & Peace. (2020). Over one billion people at threat of being displaced by 2050 due to environmental change, conflict and civil unrest. <https://www.economicsandpeace.org/wp-content/uploads/2020/09/Ecological-Threat-Register-Press-Release-27.08-FINAL.pdf>
- Deutsche Welle. (2021, October 10). German leaders agree on €30 billion for flood-hit regions. <https://www.dw.com/en/german-floods-leaders-agree-on-30-billion-reconstruction-fund/a-58822602>
- Scholtes, J. & Tully-McNanus, K. (2024, December 21). Congress clears government shutdown patch following Trump, Musk disruptions. *Politico*. <https://www.politico.com/news/2024/12/21/congress-clears-government-shutdown-patch-00195785>
- Claims Journal. (2024, November 14). Analysis of Hurricanes Helene and Milton Provide Insights on Public and Private Flood Market. <https://www.claimsjournal.com/news/national/2024/11/14/327381.htm>
- Bray, S., Nieto, A., & Wilson, E. (2024). CAT Resource Center Post-Event Report EASTERN AND SOUTHERN SPAIN: OCTOBER 2024 DANA FLOODS. <https://www.guycarp.com/content/dam/guycarp-rebrand/insights-images/2024/11/spain-dana/11082024-valencia-dana-flooding.pdf>
- Cevik, S., & Jalles, J. T. (2020). Feeling the Heat: Climate Shocks and Credit Ratings. <https://doi.org/10.5089/9781513564548.001>
- Swanek, T. (2024). Being prepared for the next disaster pays off, new study shows. [uschamber.com; U.S. Chamber of Commerce. https://www.uschamber.com/security/being-prepared-for-the-next-disaster-pays-off-new-study-shows](https://www.uschamber.com/security/being-prepared-for-the-next-disaster-pays-off-new-study-shows)
- Vicarelli, M., Sudmeier-Rieux, K., Alsadadi, A., Shrestha, A., Schütze, S., et.al. (2024). On the cost-effectiveness of Nature-based Solutions for reducing disaster risk. *Science of The Total Environment*. <https://doi.org/10.1016/j.scitotenv.2024.174524>
- Wald Schweiz-Verband der Waldeigentümer. (2025). Schutzwald. [waldschweiz.ch. https://www.waldschweiz.ch/de/wissen/waldeleistungen/schutzwald](https://www.waldschweiz.ch/de/wissen/waldeleistungen/schutzwald)
- Schneeberger, P. (2016, August 13). Verjüngungen sind angesagt. *Neue Zürcher Zeitung*. <https://www.nzz.ch/schweiz/schutzwald-verjuegungen-sind-angesagt-id.110761>
- Lenton, T. M., Milkoreit, M., Willcock, S., Abrams, J. F., et al. (2025). The Global Tipping Points Report 2025. University of Exeter. <https://global-tipping-points.org/>
- Thallinger, G. (2025). Climate, risk, insurance: The future of capitalism. [linkedin.com. https://www.linkedin.com/pulse/climate-risk-insurance-future-capitalism-g%C3%BCnther-thallinger-smw5f/](https://www.linkedin.com/pulse/climate-risk-insurance-future-capitalism-g%C3%BCnther-thallinger-smw5f/)
- Institute and Faculty of Actuaries & University of Exeter. (2025). Planetary Solvency - finding our balance with nature I Global risk management for human prosperity. <https://actuaries.org.uk/media/wqeftma1/planetary-solvency-finding-our-balance-with-nature.pdf>
- European Parliament and Council. (2002). COUNCIL REGULATION (EC) No 2012/2002 establishing the European Union Solidarity Fund. <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02002R2012-20200401&qid=1601971117690>
- European Commission. (2024, September 2). How to build climate resilience and narrow the climate protection gap: conclusions from the Climate Resilience Dialogue. https://climate.ec.europa.eu/news-your-voice/news/how-build-climate-resilience-and-narrow-climate-protection-gap-conclusions-climate-resilience-2024-09-02_en
- EIB. (2025). Insurance and Risk Management Tools for Agriculture in the EU. *Fi-Compass*. <https://www.fi-compass.eu/library/market-analysis/insurance-and-risk-management-tools-agriculture-eu>
- Further elaborated in: WWF. (2025). WWF Expectations for COP30: CLIMATE ACTION IN CHALLENGING TIMES: HOLDING THE LINE ON 1.5°C. <https://wwfint.awsassets.panda.org/img/original/cop30-expectations-sept-v3-final-1.pdf>
- Green & Resilient Economics. (n.d.). Compendium of Practice. <https://greenandresilienteconomics.org/compendium-of-practice/>
- WWF. (2025, June 4). Global experts call on G20 to address impacts of nature-loss on the global economy. <https://www.wwf.panda.org/wwf-news/14145966/Global-experts-call-on-G20-to-address-impacts-of-nature-loss-on-the-global-economy>
- Agrega, M., & et al. (2025). Spain requires large companies to report their carbon footprints and develop GHG emissions reduction plans. <https://sustainablefutures.linklaters.com/post/10216fz/spain-requires-large-companies-to-report-their-carbon-footprints-and-develop-ghg>
- Pachon, A. (2025). 6 case studies for a successful agricultural transition. *AXA Climate*. <https://climate.axa/publications/agri-transition-insurance-case-studies/>
- California Wildfire Resilience Task Force. (2023). Prescribed Fire Liability Claims Fund Pilot. <https://wildfiredtaskforce.org/prescribed-fire-liability-claims-fund-pilot/>

50. City of Norfolk. (n.d.). Goal 1: Design the Coastal Community of the Future. Norfolk.gov. Retrieved 21 October 2025, from <https://www.norfolk.gov/4444/Goal-1-Design-the-Coastal-Community-of-t>
51. City of Amsterdam. (n.d.). Policy: Climate adaptation. Retrieved October 21, 2025, from <https://www.amsterdam.nl/en/policy/sustainability/policy-climate-adaptation/#h-026da261-5252-4527-b1b4-a4c8480536e6>
52. Further elaborated in: WWF. (2025). WWF Expectations for COP30: CLIMATE ACTION IN CHALLENGING TIMES: HOLDING THE LINE ON 1.5°C. <https://wwfint.awsassets.panda.org/img/original/cop30-expectations-sept-v3-final-1.pdf>
53. Delta Commissioner. (2025). NATIONAL DELTA PROGRAMME. [deltaprogramma.nl/](https://english.deltaprogramma.nl/)
54. Nature Conservation Bureau, Ministry of the Environment. (2016). Ecosystem-based Disaster Risk Reduction in Japan - A handbook for practitioners. <https://www.env.go.jp/content/900489554.pdf>
55. Government of California - California Natural Resources Agency. (n.d.). Expanding Nature-Based Solutions: Accelerating nature-based solutions to achieve California's climate change goals. Retrieved 21 October 2025, from <https://resources.ca.gov/initiatives/expanding-nature-based-solutions>
56. United Nations Office for Disaster Risk Reduction. (2021). Words into Action: Nature-based Solutions for Disaster Risk Reduction. <https://www.undrr.org/words-action-nature-based-solutions-disaster-risk-reduction>
57. Ministry of Physical Planning, Construction and State Assets. (2025). EUROPEAN UNION SOLIDARITY FUND. <https://portal-ispu.gov.hr/en/eu-projects/european-union-solidarity-fund>
58. Colorado General Assembly. (2025). Risk Model Use in Property Insurance Policies. <https://leg.colorado.gov/bills/hb25-1182>
59. FEMA. (n.d.). Community Rating System. <https://www.fema.gov/floodplain-management/community-rating-system>
60. NATURANCE. (n.d.). Nature for insurance, insurance for nature. <https://www.naturanceproject.eu/>
61. The Nature Conservancy. (n.d.). Coastal Protection. [oceanwealth.org](https://oceanwealth.org/ecosystem-services/coastal-protection). Retrieved 21 October 2025, from <https://oceanwealth.org/ecosystem-services/coastal-protection>
62. Watson, L., Straatsma, M. W., Wanders, N., Versteegen, J. A., de Jong, S. M., & Karssen, D. (2020). Global ecosystem service values in climate class transitions. *Environmental Research Letters*, 15(2), 024008. <https://doi.org/10.1088/1748-9326/ab5aab>
63. Marsden, L. (2024). Ecosystem tipping points: Understanding risks to the economy and financial system. E-Axes Forum. <https://e-axes.org/research/ecosystem-tipping-points-understanding-risks-to-the-economy-and-financial-system/>
64. World Bank Group. (2021). Protecting nature could avert global economic losses of \$2.7 trillion per year. World Bank Group. <https://www.worldbank.org/en/news/press-release/2021/07/01/protecting-nature-could-avert-global-economic-losses-of-usd2-7-trillion-per-year>
65. Lehnhart-Barnett, H. T. (2022). Peatland restoration on the North York Moors: implications for hydrological functioning and water quality. https://livrepository.liverpool.ac.uk/3166392/1/Hannah%20Lehnhart-Barnett_PhD_THESIS_Corrections_FINAL.pdf
66. McClymont, A. F., Hayashi, M., Bentley, L. R., Muir, D., & Ernst, E. (2010). Groundwater flow and storage within an alpine meadow-talus complex. *Hydrology and Earth System Sciences*, 14(6), 859–872. <https://doi.org/10.5194/hess-14-859-2010>
67. Swiss Re, & Liberty Mutual. (2025). Wildfire risk reduction in a changing climate. <https://www.libertymutualgroup.com/documents/wildfire-risk-reduction-changing-climate-final>
68. WWF. (2025). Fighting forest fires with cork in Portugal. https://wwf.panda.org/wwf_news/?20933%2FFighting-forest-fires-with-cork-in-Portugal
69. Resilient Forests (2022). A step forward in EU forest policy: the Mediterranean perspective. Policy position paper. <https://www.resilientforest.eu/about/>
70. Urban Greening Company. (2024). How urban greening initiatives help UK cities reduce the impact of climate change. TUGC. <https://tugc.co.uk/2024/12/how-urban-greening-initiatives-help-uk-cities-reduce-the-impact-of-climate-change/>
71. Àrea d'Ecologia Urbana. Ajuntament de Barcelona. (2017). TREES FOR LIFE Master Plan for Barcelona's Trees 2017 - 2037. Barcelona.Cat. <https://ajuntament.barcelona.cat/ecologiaurbana/sites/default/files/Pla-director-arbrat-barcelona-ENG.pdf>
72. New York State I Division of Lands and Forests. (2024). 25 Million Trees by 2033. Department of Environmental Conservation. <https://dec.ny.gov/nature/forests-trees/climate-change/25-million-trees>
73. Senatsverwaltung für Stadtentwicklung, Bauen und Wohnen. (2023). 6. Änderungsgesetz der Bauordnung für Berlin beschlossen. Berlin.de. <https://www.berlin.de/rbmskz/aktuelles/pressemitteilungen/2023/pressemitteilung.1369717.php>
74. City of Chicago, Illinois. (2015). 2015 Chicago ordinance 1741015 providing zoning incentives for green roofs. <https://progov21.org/Home/Document/T3P452>
75. Directorate of Legal and Administrative Information (Prime Minister). (2025). Obligation to produce renewable energy or green roofs. <https://entreprendre.service-public.gouv.fr/vosdroits/F38107?lang=en>
76. Naumann, S. et al. (2020). Addressing climate change in cities – Policy instruments to promote urban nature-based solutions. Ecologic Institute, the Sendzimir Foundation: Berlin, Krakow. <https://www.ecologic.eu/sites/default/files/publication/2020/3205-Addressing-climate-change-in-cities-2.pdf>
77. Council of the City of Toronto. (2021). City of Toronto Green Roof Bylaw. <https://www.toronto.ca/city-government/planning-development/official-plan-guidelines/green-roofs/green-roof-bylaw/>
78. Bundesministerium Land- und Forstwirtschaft, Klima- und Umweltschutz, Regionen und Wasserwirtschaft. (n.d.). Was ist Schutzwald? Schutzwald.at. Retrieved 20 October 2025, from <https://www.schutzwald.at/wissen/was-ist-schutzwald.html>
79. WWF International. (2016). Danube-Carpathian Programme I Lower Danube green corridor: floodplain restoration for flood protection. Climate-ADAPT. <https://climate-adapt.eea.europa.eu/en/metadata/case-studies/lower-danube-green-corridor-floodplain-restoration-for-flood-protection>
80. Clark, K. et al. (2025). The multiple benefits delivered by hedgerows: Where is the evidence and does it meet current knowledge needs? *People and Nature* (Hoboken, N.J.), 7(10), 2437–2450. <https://doi.org/10.1002/pan3.70114>
81. Natural Water Retention Measures. (2011). Case Study Elbe Dyke Relocation (Lenzen). https://www.nwrw.eu/sites/default/files/case_studies_ressources/cs-de-01-elbe-final_version.pdf
82. Federal Office for the Environment (2025). A Protection Forest Does More Than You Might Think. In *Natural resources in Switzerland environment*. https://climate-adapt.eea.europa.eu/en/metadata/case-studies/nature-based-measures-against-rockfalls-over-forests-in-the-engadin-region-switzerland/magazine_environment22015-livingwithnaturalhazards.pdf
83. Narayan, S., Beck, M.W., Wilson, P. et al. (2017). The Value of Coastal Wetlands for Flood Damage Reduction in the Northeastern USA. *Sci Rep* 7, 9463. <https://doi.org/10.1038/s41598-017-09269-z>
84. EPA United States Environmental Protection Agency. (2012). Coastal Wetlands Initiative: North Atlantic Review. <https://www.epa.gov/sites/default/files/2015-05/documents/north-atlantic-review.pdf>
85. Wetlands International. (2018). The restoration of the former saltworks in the Camargue: a Nature-Based Solution to adapt to sea-level rise. <https://tourduvalat.org/en/news-letter-articles/the-restoration-of-the-former-salt-works-in-the-camargue-a-nature-based-solution-to-adapt-to-sea-level-rise/>
86. The Nature Conservancy. (2024). The Importance of Mangroves. <https://www.nature.org/en-us/about-us/where-we-work/united-states/florida/stories-in-florida/why-mangroves-important/>
87. WWF. (n.d.). SUSREG Tracker. <https://susreg.panda.org/>
88. International Association of Insurance Supervisors & World Bank Group. (2025). G20 Sustainable Finance Working Group input paper: Identify and address insurance protection gaps. <https://www.iais.org/uploads/2025/07/G20-SFWG-input-paper-Identify-and-address-insurance-protection-gaps.pdf>
89. European Central Bank & European Insurance and Occupational Pensions Authority. (2023). Policy options to reduce the climate insurance protection gap. https://www.ecb.europa.eu/pub/pdf/other/ecb.policyoptions_EIOPA-c0a-dae58b7.en.pdf
90. National Association of Insurance Commissioners. (2024). National Climate Resilience Strategy for Insurance. <https://content.naic.org/sites/default/files/national-climate-resilience-strategy.pdf>
91. Crugnola-Humber, J. (2025, September 8). From Risk to Resilience: Closing the Climate Insurance Protection Gap. Council on Economic Policies. <https://www.cepweb.org/from-risk-to-resilience-closing-the-climate-insurance-protection-gap/>
92. WWF Switzerland. (2023). Underwriting Our Planet: How Insurers can help address the crises in climate and biodiversity. https://wwf.panda.org/wwf_news/?9548441/WWF-urg-es-insurance-companies-to-take-responsibility-for-their-underwriting-business
93. WWF Switzerland. (2024). Climate contributions for people & nature. A discussion around meaningful corporate action beyond value chains. https://www.wwf.ch/sites/default/files/doc-2025-06/WWF%20Climate%20%26%20Nature%20Contributions%20Report_FINAL.pdf
94. Tubiana, L. (2025). LinkedIn.com. https://www.linkedin.com/posts/laurencetubiana_yesterday-i-said-to-insurance-leaders-activity-7336743733511516160-WDEO/
95. UNEP FI. (2025). UN forum launches first-of-its-kind global transition plan guide for insurance underwriting portfolios. <https://www.unepfi.org/industries/insurance/un-forum-launches-first-of-its-kind-global-transition-plan-guide-for-insurance-underwriting-portfolios/>
96. UNEP FI. (2024). Insuring a resilient nature-positive future: Global guide for insurers on setting priority actions for nature. <https://www.unepfi.org/industries/insurance/insuring-a-resilient-nature-positive-future-global-guide-for-insurers-on-setting-priority-actions-for-nature/>
97. UNEP FI. (2025). Rooted in Risk: Framing nature-related assessments for insurers. <https://www.unepfi.org/industries/insurance/rooted-in-risk-framing-nature-related-assessments-for-insurers/>
98. Science Based Targets initiative. (2025). Financial institutions net-zero standard version 1.0. <https://files.sciencebasedtargets.org/production/files/Financial-Institutions-Net-Zero-Standard.pdf>

Authors:

- **Regula Hess** | WWF Switzerland
- **Jérôme Crugnola-Humbert** | Crugnola Humbert Consulting
- **Teresa Gäckle** | WWF Austria
- **Dr. Katja Kirchstein** | WWF Germany
- **David Kuhn** | WWF US
- **Ed Steeds** | WWF UK
- **Mia Wilke** | WWF Switzerland

External Advisory Group:

Disclaimer: The individuals and organizations listed as members of the Advisory Group contributed their time and expertise to inform the development of this Policy Brief. Their contributions were made in an advisory capacity only and do not constitute authorship. The content, findings, and recommendations presented in this Policy Brief are the sole responsibility of WWF and do not necessarily reflect the views, positions, or policies of the Advisory Group members or their respective organizations.

- **Felicity Alvey** | Cambridge Institute for Sustainability Leadership
- **Butch Bacani** | UNEP
- **Prof. Enrico Biffis** | Imperial Business School
- **Prof. Marc N. Conte** | Fordham University
- **Annia Costermani Visconti** | NatureFinance
- **Chip Cunliffe** | Ocean Risk and Resilience Action Alliance
- **Rowan Douglas** | Howden Group Holdings
- **Esther Egeter** | a.s.r.
- **Deborah Halberstadt** | California Department of Insurance
- **Danielle Imperato** | Generali
- **Adrian von Jagow** | WU Vienna University of Economics and Business
- **Dave Jones** | UC Berkeley
- **Jonathan Kassian** | Flood Re
- **Dr. Hazem Krichene** | Group Economic Research – Allianz Investment Management SE
- **Arend Kulenkampff** | NatureFinance
- **Tomé Pedroso** | Fidelidade
- **David Rochester** | Flood Re
- **Kate Stein** | Environmental Defense Fund
- **Prof. Swenja Surminski** | Marsh McLennan / LSE / MCII
- **Raphaëlle Vallet** | OAK Global
- **Bert Vandewalle** | AG Insurance
- **Bouke de Vries** | Independent

We also thank the following colleagues for their insights and feedback:

WWF Belgium: Koen Stuyck; **WWF European Policy Office:** Sebastien Godinot, Dominyka Nachajute; **WWF Germany:** Jochen Krimphoff; **WWF Greece:** Constantinos Liarikos; **WWF International:** Elisa Vacherand, Aaron Vermeulen; **WWF Nepal:** Sandeep Chamling Rai; **WWF Netherlands:** Chayanika Perera, Christine Wortmann; **WWF Switzerland:** Maud Abdelli, Carolin Carella, Amandine Favier, Patrick Hofstetter, Stephanie Huber, Stephan Kellerberger, Nicola Lei-Ravello, Dominik Rothmund, Thomas Wirth; **WWF UK:** Nitika Agarwal, Alexandre Chausson, Karen Ellis, Josephine Quint; **WWF US:** Elizabeth Aceituno, Oliver Ames, Laura Brush, Andrew Deutz

Editing by:

Mark Nicholls | MRG Comms Ltd

Production and design:

The Corner Shop Creative

WWF Switzerland:

The mission of WWF is to stop the global destruction of the environment and shape a future in which people and nature can live together in harmony. In order to fulfil this mission, WWF is dedicated to preserving global biodiversity. WWF also fights to reduce the use of natural resources to a sustainable level. In order to meet its objectives, WWF works at four levels: in the field, with companies, in the political arena and with the population. WWF regularly performs company ratings and thus assesses the sustainability performance of companies in important sectors.



Our Mission

Together, we protect the environment and create a future worth living for generations to come.

© WWF Switzerland 2025

© 1986 Panda Symbol WWF © «WWF» is a trademark registered by WWF

WWF Switzerland, Hohlstrasse 110, PO Box, 8010 Zurich.

Tel: +41 (0) 44 297 21 21, wwf.ch/contact

For contact details and further information, please visit our international website at wwf.panda.org