

Insuring with Nature - Premium Rewards for Implemented Risk Reduction

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RISK-KAN Webinar
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Photo by [Usman Malik](#) on [Unsplash](#)

Premium discounts for car accident risk reduction

No-claims bonus	up to 60%	Worldwide
ADAS (AEB, lane assist)	5–10%	EU, UK, US
Telematics safe driving	10–30%	EU, UK, Italy, US
Low mileage	5–20%	EU, US, AU
Anti-theft systems	5–15%	EU, US
Garage parking	5–10%	EU, UK



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Premium discounts are common in auto insurance but not in household hazard insurance

Characteristic	Auto insurance	Household hazard insurance
Risk signal	Continuous, behavioural (daily driving)	Infrequent, hazard-driven (rare events)
Data availability	High	Low (effectiveness of measures uncertain)
Loss attribution	Clear (driver behaviour → crash)	Diffuse (flood/fire affects many at once)
Verification cost	Low	High (inspection, certification)

Examples of premium differentiation for hazard risk reduction measures

Flood

- Flood Re  barriers, raised electrics, flood doors
- Allianz  elevated heating systems, flood-proof basements



<https://newatlas.com/elevating-house-larkfleet-group/46333/>

Wildfire

- Italy, France, Spain, Portugal  fire-resistant materials, cleared perimeters (house hardening)



<https://www.nifc.gov/fire-information/fire-prevention-education-mitigation/wildfire-mitigation/home>

Premium discounts for nature-based solutions

“Actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits” (UNEA, 2022)

Not individual household
but community actions



National Flood Insurance Program (NFIP) Community Rating System



- Underwritten by federal government
- Provides premium discounts to residents of communities participating in the CRS
- Depends on 'points' received for flood mitigation measures



Activity	2006 Max	2013 Max	2013 Avg	2017 Max
310 Elevation Certificates	162	116	46	116
320 Map information service	140	90	63	90
330 Outreach projects	350	350	63	350
340 Hazard Disclosure	81	80	14	81
350 Flood protection information	102	125	33	125
360 Flood protection assistance	71	110	49	110
370 Flood insurance promotion		110	0	110
410 Floodplain mapping	1346	802	65	850
Total Activity 420	900	1970	474	2020
Open Space Preservation	725	1450		1450
Deed Restrictions	75	50		50
Natural Functions Open Space	100	350		350
Special flood-related hazards open space	50	50		150
Coastal erosion open space				750
Open space incentives		250		250
Low-density zoning		600		600
Natural shoreline protection		120		120
430 Higher regulatory standards	2740	2042	214	2462
430LD Land development criteria	700			
440 Flood data maintenance	239	222	54	222
450 Stormwater management	670	755	119	755
510 Floodplain management planning	359	622	123	622
520 Acquisition and Relocation	3200	2250	136	2250
530 Flood protection	2800	1600	136	1600
540 Drainage system maintenance	330	570	214	470
610 Flood warning and response	255	395	144	395
620 Levee safety	900	235	0	235
630 Dams	175	160	0	160

Tahoe-Donner Wildfire Resilience Insurance

- \$2.5 million wildfire resilience product covers 1,345 acres of Tahoe Donner's forested and recreation land
- Tahoe Donner Association has carried out 'forest treatment' measures, including thinning and prescribed burns
- Parametric product structured by Willis, The Nature Conservancy, UC Berkeley
- 39% lower premium ('greenium') and 89% lower deductible
- Marks the first time an insurance company has factored large-scale fuel reduction work into wildfire risk assessments and policy pricing



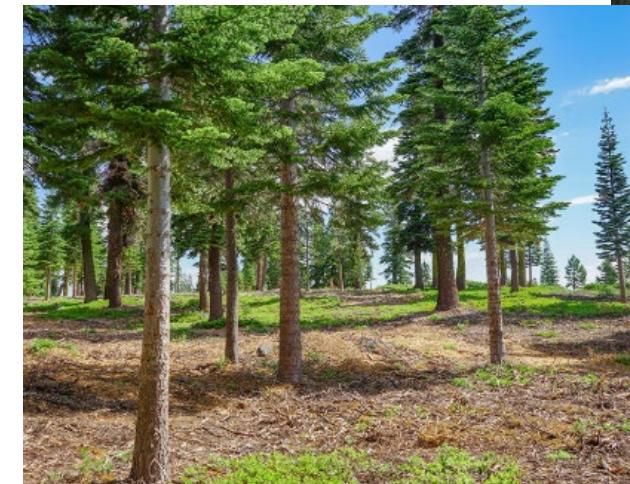
Tahoe Donner Lake

What IS an NBS for wildfire?

Before



After



[Photo source: Will Apotheker Tahoe Valley parametric nbs WTW.pdf](#)

Ecological forest management

- Thinning
- Grazing
- Controlled burns
- Mixed forests

Conservation/biodiversity

- Ecological thinning
- Rewilding
- Cultural burns
- Mixed forests
- Outside of WUI, let it burn
- Limit development

Feature Article

GROUNDBREAKING NEW WILDFIRE INSURANCE POLICY COULD BE A **GAME CHANGER**

Will Apotheker

[Tahoe Valley parametric nbs WTW.pdf](#)



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Enabler 1: Unaffordability

In California, residential wildfire policies have increased by 123% and commercial policies by 161% between September 2020 and September 2024.



Enabler 2: Public sector financial support

Modeled treatment costs of roughly USD 2,500–4,500 per acre, about \$3-6 million for Tahoe-Donner forest management

- The United States Endowment for Forestry and Communities provided funding
- The Nature Conservancy is covering the cost of the insurance premium through a grant



Photo: Catalan Forest Rescue Service (CFRS)

Enabler 3: Regulation



California Regulation 2644.9 requires any insurance company that differentiates its rates based on wildfire risk to incorporate discounts for wildfire reduction activities by households or communities.

Colorado Insurance Commissioner requires insurance risk models to take into account property, community and landscape scale investments in risk reduction, like home hardening, defensible space, and forest management.

What is the situation in the EU?



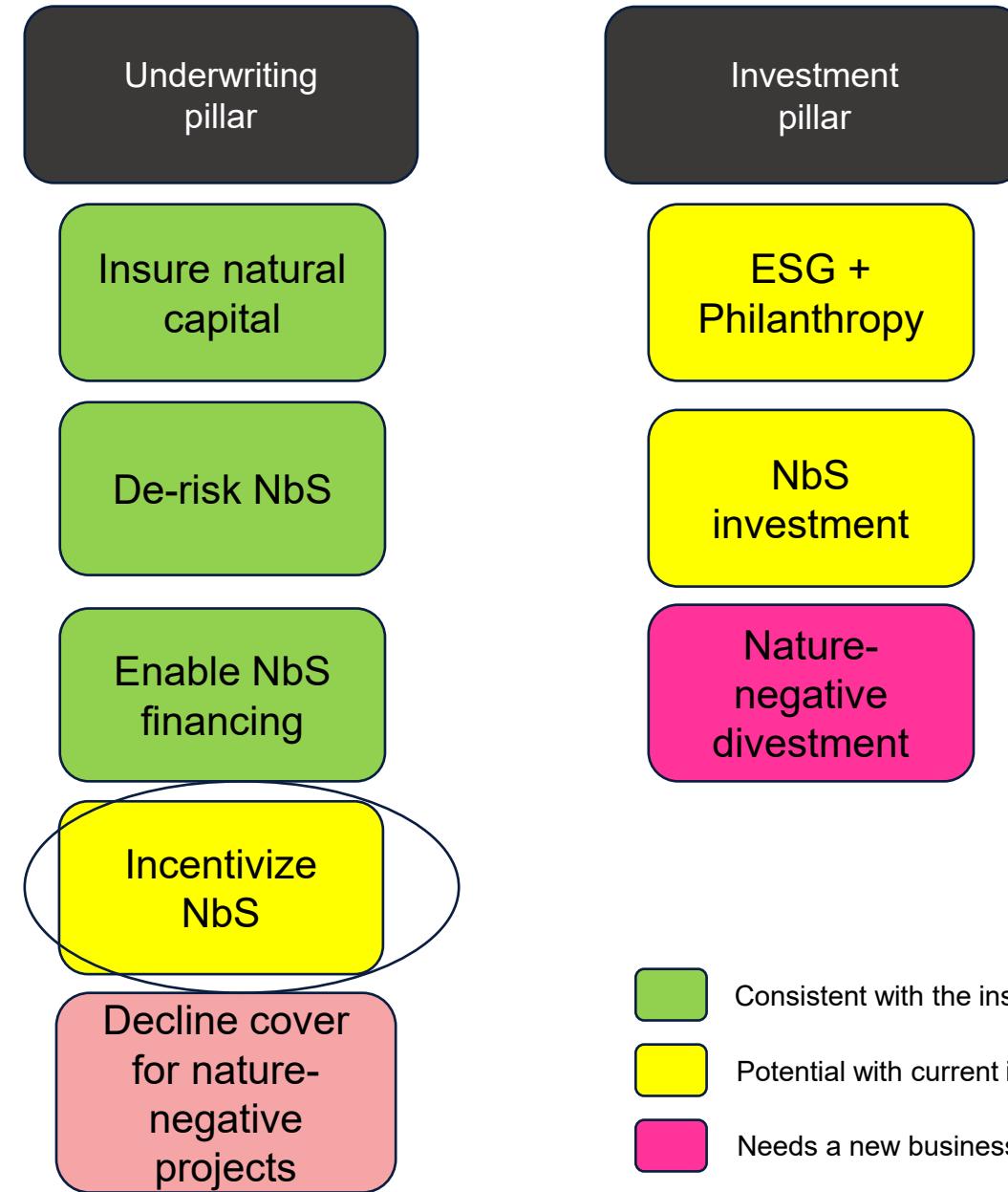
Discounts tied to prevention are *not broadly established*

EIOPA has recently held a consultation on a blueprint for an awareness tool for natural catastrophe risks and prevention measures

- Insurance Europe's response stresses that significant premium reductions *solely* for prevention measures are **not realistic or common** across EU private markets
- Insurers have broad discretion on how they set premiums, but there's **no EU-level mandate** to give discounts (e.g., flood barriers, fire-resistant materials).

[Insurance Europe](#)

Activities by insurers to enable NbS



Greeniums are simple and powerful

- A game changer, yet only if enabled by significant public support and regulation – EIOPA?
- Only one of many activities by insurers that can support NbS



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Nature for insurance,
insurance for nature

Thank you and questions?



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**Nature for insurance,
insurance for nature**

**Roadmap to nature-based
insurance and investment
solutions**

Jaroslav Mysiak,
Euro-Mediterranean Centre on Climate
Change CMCC @ Ca' Foscari

RISK KAN
December 17, 2025

nature teaches us to manage risks in regenerative, forward-looking ways



We choose nature because without it, we are nothing.

Nature is the foundation of our well-being, our economies, and our collective resilience.

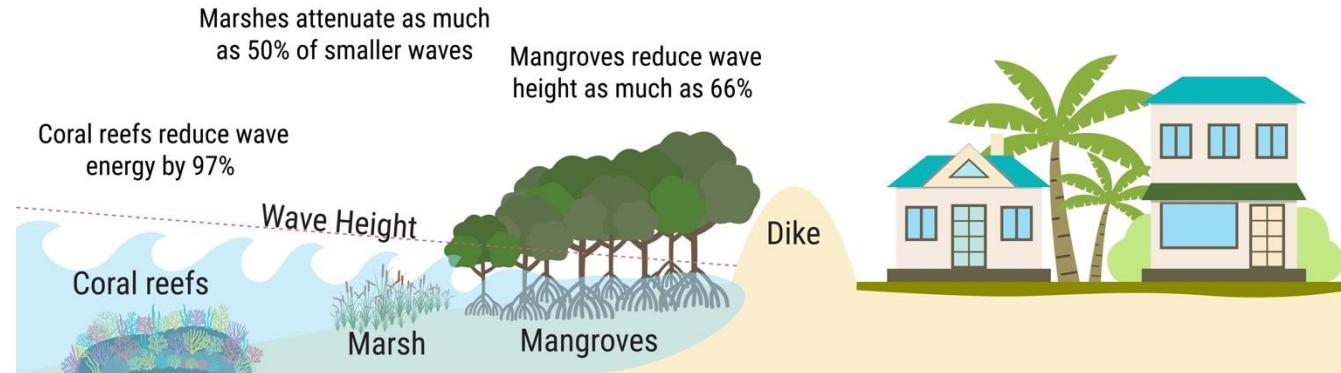
In the face of accelerating climate and environmental risks, nature offers an opportunity to create value, advance equity, and reconnect humanity with the systems that sustain life.

Prioritizing nature restoration teaches us how to design regenerative, adaptive, and future-oriented solutions that manage risk, and support livelihoods and strengthen communities.

Insurance as a source of finance for nature

Ecosystem services like water regulation, air purification, pollination, and climate regulation **have economic value, even if no price is paid** for their provision.

Insurance offers several ways to harness this value for ecosystem protection and restoration.



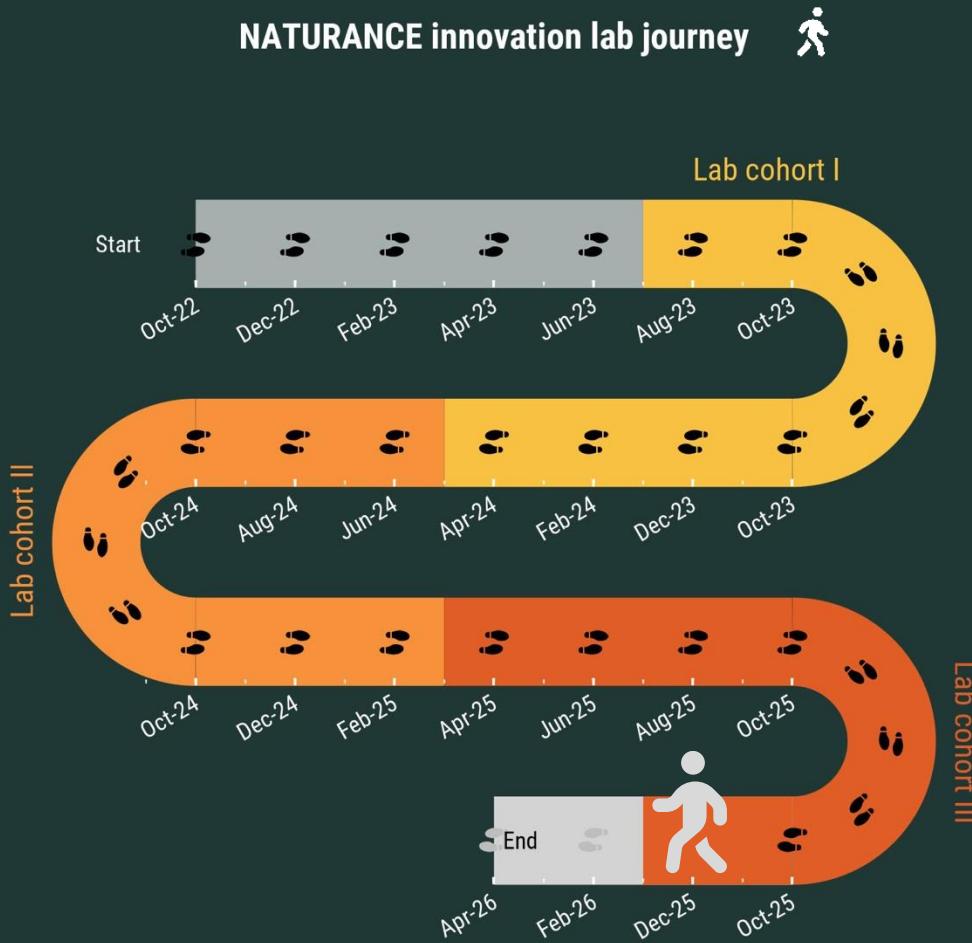
Greenium

Insurance operates on the premise that a stochastic distribution of losses caused by extreme climate events—or more generally, extreme hazardous events—can, when pooled across many policyholders or events, be translated into predictable rates known as premiums.

*If it can be demonstrated that the **positive contributions of nature to people** help reduce losses—compared to what those losses would have been *in the absence of these contributions*—then we can refer to this loss reduction as a **greenium**.*

By protecting and restoring ecosystem services that reduce disaster risk, insurance mechanisms can be used to reward investments in nature-based solutions through lower premiums.

NATURANCE innovation lab journey



Nature for insurance, insurance for nature

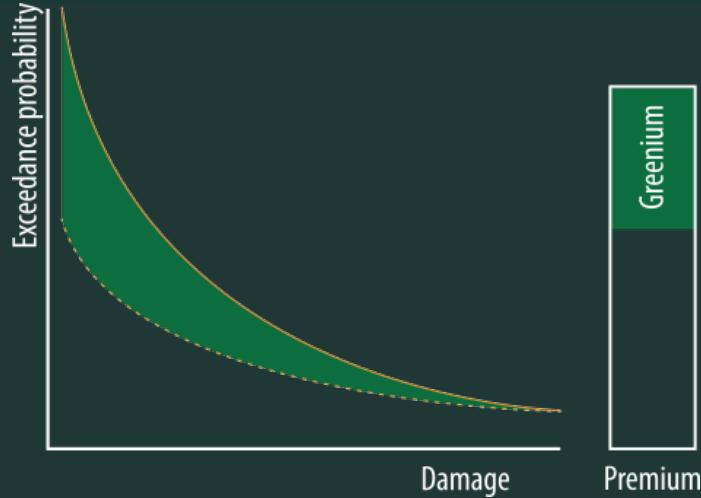
Goal: to evaluate the technical, financial, and operational feasibility and performance of solutions that integrate and combine disaster risk financing and investments with nature-based solutions



Nature restoration is a cost-effective strategy for reducing risks while delivering valuable co-benefits for people, ecosystems, and the economy.



Insurance can play a key role in preserving and restoring ecosystems after they've been damaged.



The avoided risk and damage, measured as the reduction in Annual Expected Damage (AED), is proportional to the insurance premium discount, sometimes referred to as the greenium.

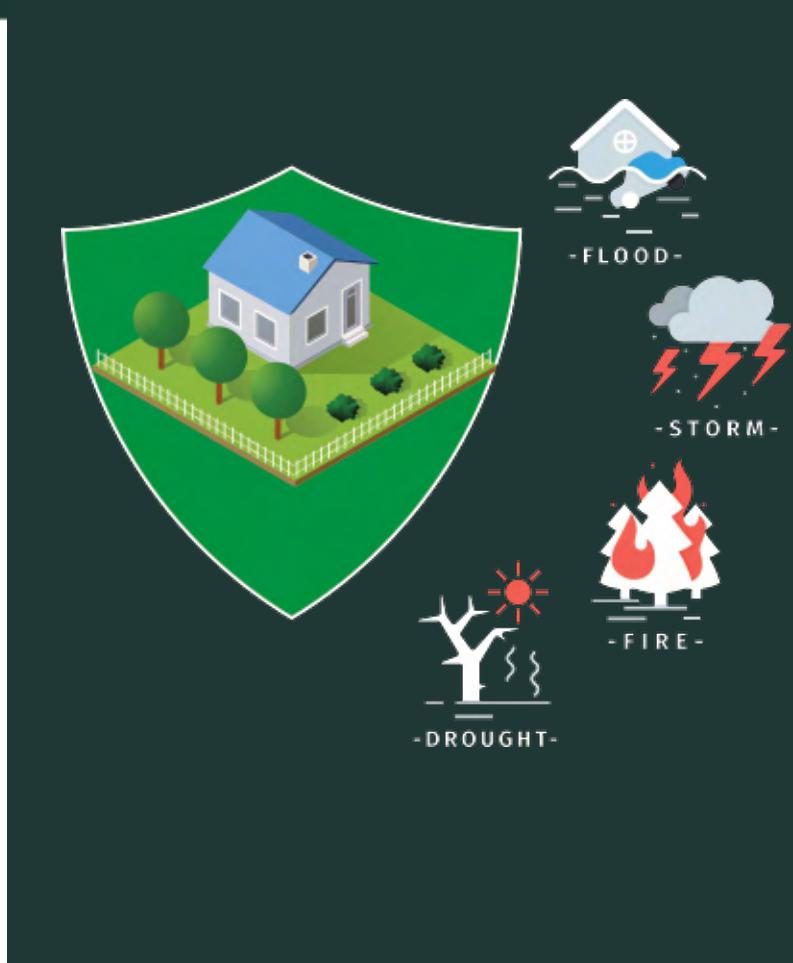
Nature-based insurance solutions

Enhanced property or indemnity insurance

- restoration clause in payouts
- premium or deductible incentives for restored ecosystem services
- conditional renewal or coverage continuation based on restoration commitments

Ecosystem insurance - nature as the insured asset

- reconstruction or reinstatement coverage for ecosystem infrastructure
- investment de-risking for large-scale restoration projects
- performance insurance for nature-based solutions



Insurance as a source of finance for nature

The **biodiversity finance gap** has grown to \$942 billion, with current investments insufficient to meet targets¹.

Nature-based solutions (NbS) are cost-effective and as effective as engineering solutions in hazard mitigation².

Nature-based insurance and investment solutions integrate ecosystem services and nature-based solutions into financial incentives to mitigate climate risks³.



The [Mesoamerican Reef Insurance Programme](#) is an initiative that provides financial protection for **coral reefs** ecosystems.

[Parametric insurance](#) connected to **mangrove restoration** integrates innovative financial mechanisms to facilitate rapid restoration post-storm.



¹ [Biodiversity Finance Factbook](#) October 22, 2024, Bloomberg New Energy Finance (BNEF)

² Vicarelli, M. et al. On the cost-effectiveness of Nature-based Solutions for reducing disaster risk. STOTEN 947, 174524 (2024).

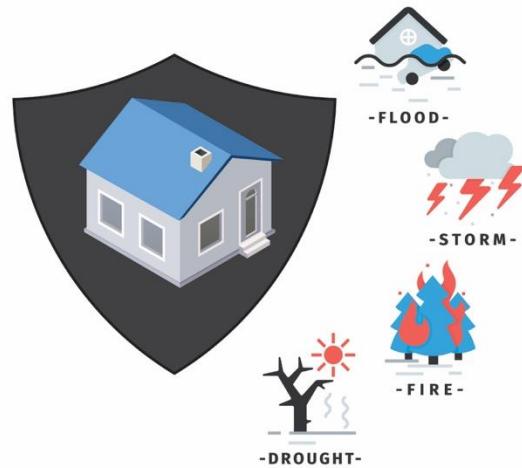
³ Nature for insurance, insurance for nature (<https://www.naturanceproject.eu>)



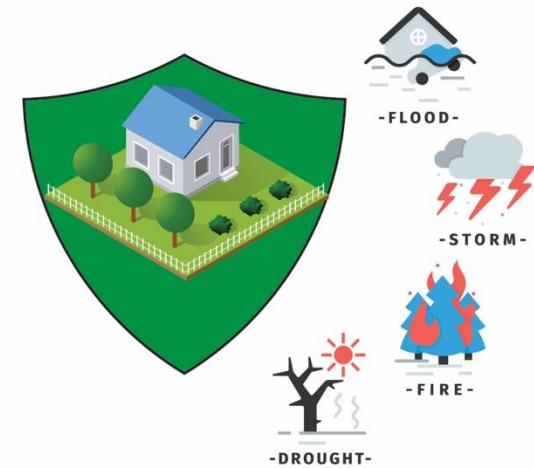
Steps to Transform Insurance into Ecosystem Finance



Unprotected residential property values theoretically reflect climate risks, but hazard classification maps may not accurately capture the true risk level.



Insurance protects property from climate-related damage but offers little incentive to reduce risk beyond contract terms; coverage may be lost if it becomes unsustainable.



Insurance promotes risk reduction through contracts and innovative schemes, fostering confidence in continued coverage as climate-related damage rises.

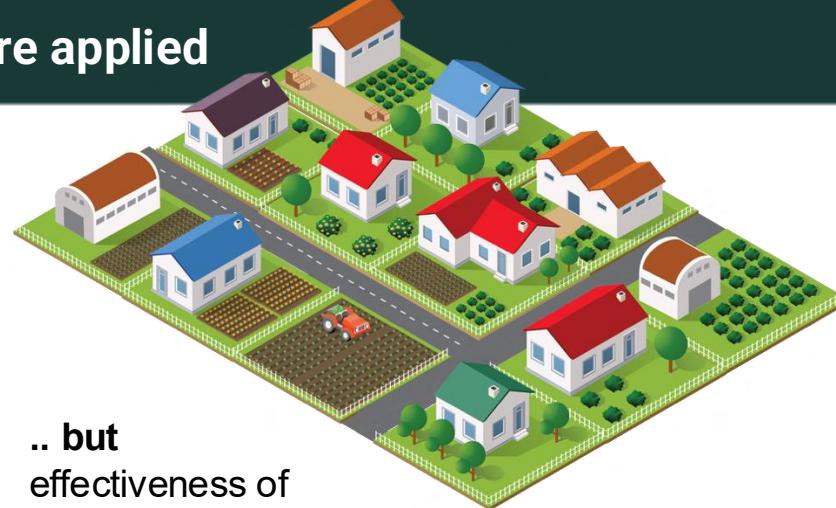


NbS can reduce risks but it depends how they are applied



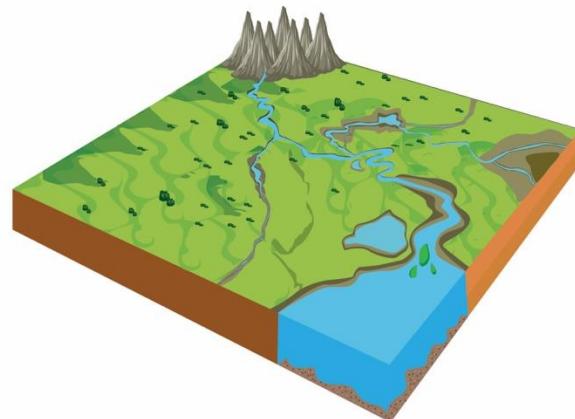
Property owners can implement NbS to protect their properties and help reduce climate-related damage, e.g.

- green roofs
- rain gardens
- permeable pavements
- tree planting
- living fences or hedges
- native landscaping
- bioswales

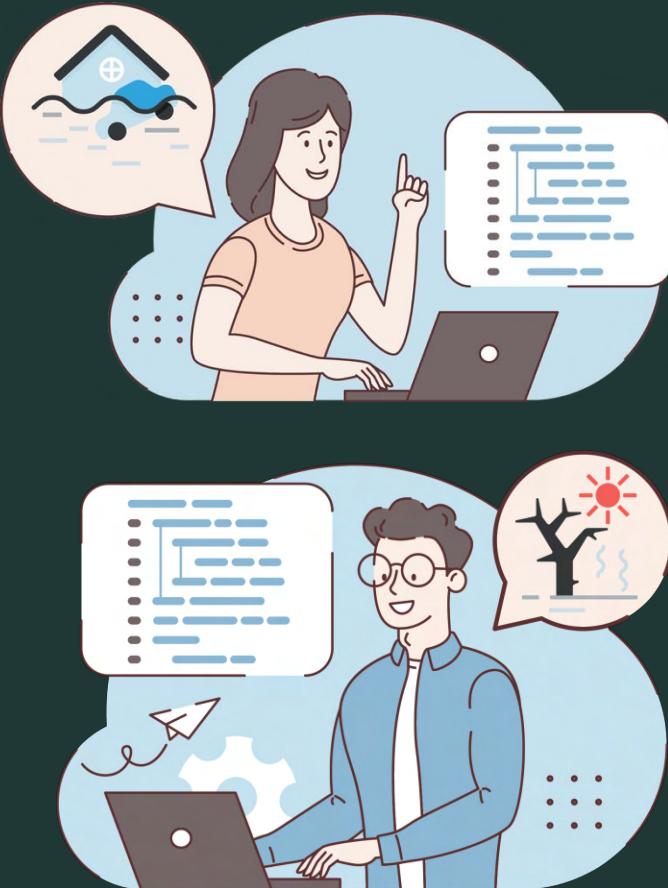


.. but effectiveness of NbS depends on the scale of application

... or where the intervention is implemented (in this case, upstream of the urban area).



Place-based risk governance and agency



As risk knowledge becomes more widely accessible and governance becomes more place-based, success will depend on the capacity to turn risk intelligence into coordinated action and sustainable risk-sharing solutions

- *Expanded access to risk data, analytics, and climate intelligence,* 
- *Cities and regions increasingly assume ownership of risk management,*
- *Climate, adaptation, and resilience services act as key intermediaries, embedding insurance and finance within locally governed resilience pathways*



Financial protection as a public resilience goal

Closing the financial protection gap — the difference between total and insured losses — has become a public policy goal.

Addressing this gap is no longer just a matter for the insurance industry; it is a shared responsibility: Governments are increasingly recognising that risk protection needs to be **accessible, affordable, and equitable**. This makes financial resilience a key objective of climate adaptation and social policy.

Ecosystem restoration is a legitimate, insurable, and financeable strategy for climate.



Nature becoming bankable and insurable



Nature becomes bankable when its absence is more expensive than its maintenance, and insurable when failure can be priced.

- *legal subjectification* defines nature as a rights-bearing entity within legal systems;
- *risk internalisation* translates ecological degradation into financially material risks at macroeconomic and balance-sheet levels;
- *operationalisation* provides the metrics, verification, and contractual tools required to turn rights and risks into investable and insurable arrangements.



Design principles under CEN Workshop Agreement CWA

- Economic soundness
- Financial viability
- Environmental integrity
- Social value and ethics
- Governance

- (1) Solutions must demonstrate measurable and material risk reduction against clearly defined hazards, based on transparent and robust assessments.
- (2) Solutions must be financially sustainable over their life cycle, with a credible business case aligned with insurance and investment practices.
- (3) Solutions must deliver net positive outcomes for nature, avoid significant harm, and ensure climate-resilient, well-maintained ecosystems.
- (4) Solutions must ensure fairness, inclusivity, and accountability through meaningful engagement, equitable benefit-sharing, and transparent communication.
- (5) Solutions must be supported by clear governance structures, transparent data management, and credible monitoring, reporting, and verification processes.

FINANCE INNOVATION FESTIVAL

INSURANCE AND INVESTMENT OPPORTUNITIES FOR NATURE-BASED TRANSFORMATIONS

3-5 FEBRUARY 2026
BRUSSELS

FINANCE INNOVATION FESTIVAL AGENDA

ALL TIMES ARE CET

3 FEBRUARY 2026

12:00  Welcome
13:30  Lunch

13:30 *Insurance and Investment*
15:30 *Opportunities for Nature-Based
Transformations*

15:30  Break
16:00  Break

16:00 *Financing Nature-Positive
Solutions*
17:30  Aperitif and
Social Dinner

INSURANCE AND
INVESTMENT
OPPORTUNITIES
FOR NATURE-BASED
TRANSFORMATIONS

4 FEBRUARY 2026

09:30 *From Risk to Resilience:*
11:00 *Insurance Solutions*

11:00  Break
11:30  Break

11:30 *Capital for Nature:*
13:00 *Investment Solutions*

13:00  Lunch
14:30  Lunch

14:30 *Communities Connect:*
16:00 *Advancing NbS through
Insurance and Investment*

16:00  Break
16:30  Break

16:30 *Methods: Quantifying
NbS-benefits for
decision-making*
18:00  Aperitif and
Social Dinner

5 FEBRUARY 2026

09:00 *Collective Insights, lasting impact:*
10:30 *Financing and insurance for NbS*

10:30  Break
11:00  Break

11:00 *Seeds of change:*
12:30 *Citizens and Cities*

12:30 *Closing session*
13:00  Aperitif and
Social Dinner

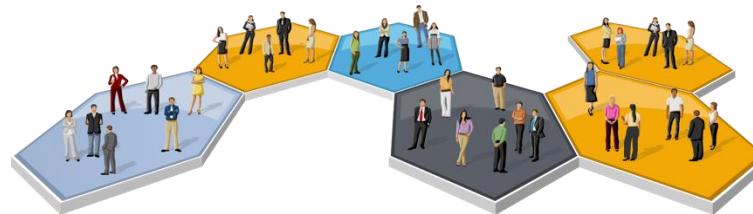


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THANKS

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Nature-based insurance and investment solutions integrate ecosystem services and nature-based solutions into financial incentives to mitigate climate risks. These innovations transform existing financial instruments, such as insurance, bonds, and equity, to leverage the value of ecosystem services.



Knowledge communities and networks are groups united by common interests to share experiences and build expertise. They include professionals, researchers, practitioners, educators, and stakeholders collaborating on knowledge creation, dissemination, application, and advocacy.

Innovation labs are creative hubs for developing and testing solutions. They provide a space for experts, entrepreneurs, and policymakers from knowledge networks to collaborate on innovative solutions.

