PIISA

Piloting Innovative Insurance Solutions for Adaptation

D3.14 Measures to amplify use of insurance solutions to support adaptation

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Table of contents

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Summary

PIISA (Piloting Innovative Insurance Solutions for Adaptation) was a Horizon Europe project aimed at reducing the climate adaptation gap by developing and testing innovative insurance and risk-sharing solutions across Europe. Instead of focusing only on compensating damage after climate events, the project promoted proactive insurance approaches that encourage both public and private actors to improve risk management and implement adaptation measures.

Through co-creation with stakeholders, PIISA designed and piloted new insurance products and services to help farmers, households, businesses, and authorities better manage climate risks. The project included five pilot initiatives across three key areas: cities and well-being, agriculture, and forests.

This deliverable focuses on maximizing the use and impact of PIISA results. It outlines planned actions for scaling and integrating pilot outcomes into real-world practices. Report presents also concise “one-pagers” summarizing each pilot’s outputs and recommendations to support dissemination and enhance exploitation of results. Prepared in May 2026, the document supports the continued use and expansion of PIISA innovations after the project’s conclusion.

Keywords

climate risk management, insurance protection gap, climate change adaptation, pilot project, co-creation, parametric insurance, index-based insurance, agriculture, clay soil, green roof, forests, wind damage, wildfires

Abbreviations and acronyms

Acronym	Description
AXA Climate	AXA Climate
BSC	Barcelona Supercomputing Centre
CAS	Climate Adaptation Services
CSS	clay soil shrink-swell
EU	European Union
FMI	Finnish Meteorological Institute
IVM/VU	Institute for Environmental Studies, Vrije Universiteit Amsterdam
LGI	LGI Sustainable Innovation
PIISA	Piloting Innovative Insurance Solutions for Adaptation
SFO	Sustainable Finance Observatory

1 Introduction

PIISA (Piloting Innovative Insurance Solutions for Adaptation) was a Horizon Europe funded project working to reduce the climate adaptation gap[1] by developing and piloting new insurance and risk-sharing concepts to address increasing climate risks in Europe. The project sought to extend insurance from purely compensatory, post-damage mechanisms to proactive instruments that incentivise private and public sectors to enhance risk management and implement climate adaptation measures.

Recognising that innovative insurance solutions and risk awareness raising have roles to play in helping EU Member States strengthen their climate adaptation efforts, PIISA developed and tested a range of insurance related innovations that have been co-created to enable and stimulate farmers, households, firms and the public authorities to manage climate risks and adapt. The project developed new innovative concepts, products and services through a piloting process that includes co-creation with stakeholders and potential users. The five PIISA pilots focused on three areas: (a) Cities and well-being; (b) Agriculture; and (c) Forests.

In PIISA, piloting was a small-scale, preliminary trial run of a research study, a new concept, products or service. PIISA pilots were resource efficient, fixed length "sprints" with limited scope. Pilots co-created with stakeholders and potential users, tested feasibility, evaluated procedures and uncovered barriers and enablers.

PIISA pilots' insurance related solutions are not market-ready products. However, PIISA outcomes can inform market-oriented product development, support advocacy efforts and facilitate strategic partnerships to leverage enabling factors and address key barriers. Attentively performed piloting produced results and experiences for informed decision making. Results can also be used to plan further research, development and innovation, and they offer important learning opportunities, potentially improving future innovation.

A common, fundamental activity for all pilots was to identify barriers and enablers for wider uptake of the piloted solutions. These findings were input to Task 4.5 which assessed and structured how the results and solutions generated by the PIISA pilots can be replicated, transferred, or adapted to other European contexts beyond the original pilot location and context (e.g. regulation, markets, institutions, climate). This replicability roadmap provides a structured and forward-looking synthesis, details exploitation pathways and involved partnerships. The exploitation pathways are concrete routes, mechanisms, and institutional entry points through which project outputs may be used by external actors, such as public authorities, insurers, or other stakeholders, after the end of the project. (Lameh, 2026)

The ambitious goal of this deliverable is to amplify exploitation of PIISA results. Report describes planned amplification actions and presents concise communication material on PIISA pilots's results.

[1] The difference between the recognised need for adaptation and the implemented adaptation activities.

Firstly, pilot partners outline the actions within the exploitation pathways that enable pilot results to be adopted, integrated into practice, or scaled beyond the PIISA project.

Secondly, a concise, single-page document, so-called “onepager”, summarises for each PIISA pilot: key products and outputs, and recommendations for upscaling and replication. Onepagers are essential for efficient communication and facilitate exploitation of pilot results. They are to be used by all PIISA partners.

This document was compiled by PIISA pilot partners during the last month of the project (May 2026) to show examples and provide support to the partners' legacy activities of PIISA after the project ends.

2 Exploitation of pilot outcomes

2.1 PIISA pilots

The PIISA project implemented five pilots to develop innovative insurance related concepts, products, and services (referred as "solutions"). Solutions were co-created with stakeholders and end-users to address acute, physical climate risks. Each pilot targeted a specific, real-world protection gap and explored how to stimulate climate change adaptation. The resulting solutions include insurance concepts or products, as well as services that enable the development and uptake of climate-sensitive insurance.

One of the core activities of all pilots was to identify barriers and enablers affecting the broader uptake of new solutions. These findings informed Task 4.5, which assessed how pilot results and solutions can be replicated, transferred, or adapted to other European contexts beyond their original settings (e.g. regulatory, market, institutional, and climatic conditions). (Lameh, 2026)

PIISA piloting work and results are described in the project deliverables (see Appendix 1) as well as in other reports and peer-reviewed publications[2]. PIISA has organised and co-organised several webinars on themes of pilots, and their recordings are available. In addition, PIISA Info Cards and Blog texts have been produced. Above all, PIISA pilots have developed Web tools and data sets relevant for risk management. All these tools and materials are available from the **PIISA web site**. Section 3 "PIISA pilots' onepagers" gives concise description of all pilots:

- **Green Roofs insurance pilot**
  (Task 3.2.1 Lead: STICHTING VU, Participants: STICHTING CAS, FMI, LocalTapiola)
- **Clay soil shrink-swell (CSS) pilot**
  (Task 3.2.2 Lead: SFO, Participants: FMI, Amigo)
- **Agriculture insurance and service pilot**
  (Task 3.3 Lead: BSC, Participants: LocalTapiola, POLIMI, FMI, Amigo, CMCC)
- **Forest windthrow insurance pilot**
  (Task 3.4.1 Lead: AXA, Climate Participants: Amigo, FMI, CMCC, Tyrsky)
- **Wildfire insurance pilot**
  (Task 3.4.2 Lead: AXA Climate, Participants: FMI, CMCC, Tyrsky)

2.2 Planned actions to enhance dissemination and exploitation

This section presents planned actions to enhance adoption of pilot solutions by pilot participants. They contain communication, awareness raising, engagement, knowledge transfer, brainstorming, research-policy knowledge brokerage, and policy advocacy. Actions also target different audiences ranging from organisation's internal sessions to online articles aimed at the public. Due to different

[2] Peer-reviewed publications of the project acknowledge ***PIISA*** with the grant number ***101112841***

stages of maturity, the PIISA pilots follow differentiated exploitation pathways. Agriculture insurance and forest windthrow insurance pilots demonstrate relatively strong potential for service or model replication. Advancement of Green roofs insurance and reducing the protection gap of Clay soil shrink-swell events require awareness raising and policy-intelligence-driven activities. Wildfire insurance pilot needs to solve data limitations and gain support for policy-intelligence-driven replication.

Main theme for most of the activities will be enhancing selected stakeholder involvement. For the upcoming events there is rich selection of communication materials and tools that can be utilised. Also, project partners have gained ample experiences working with end-users and stakeholders during the PIISA co-creation and engagement events. In support of planned activities, PIISA will leverage digital dissemination channels also after the end of project, especially PIISA web site and Linkedin.

Below are listed planned activites after PIISA by pilot partners:

IVM has planned the following actions:

- IVM will participate in the Sixth European Conference on Risk Perception, Behaviour, Management and Response in June 2026 to communicate some results of PIISA.
- IVM will keep exploiting collected datasets during PIISA in 2026 and publish additional novel scientific articles on green roof and other nature-based solutions.

SFO has planned the following actions:

- Continued promotion and dissemination of the Clay Shrink Swell Building Damage Assessor through its established network oof financial institutions, insurers, regulators, policymakers, researchers and climate risk practitioners in France and across Europe. Through this tool, homeowners can better understand the financial risks associated with clay shrink swell events and SFO will seek opportunities to showcase it as an example of practical, user-oriented climate adaptation innovation.
- Continued advocacy in relation to the Risk Alert Briefing assesses clay shrink swell risk and insurance frameworks across other EU countries and is designed to support informed discussion among policymakers, insurers and public authorities on the implications of climate-driven clay shrink swell property damage for housing resilience, insurance markets and climate adaptation.

AXA Climate has planned the following actions:

Wildfire pilot:

- White paper planned with AGIF in English and Portuguese summarizing the project and key results for publication on AXA Climate's website and dissemination by AGIF
- Presentation with AGIF to local government stakeholders on the project for onboarding and potential next steps

Wind insurance product:

- Presentation of the results and products in an internal AXA monthly meeting gathering practitioners including underwriters from the different AXA entities active in designing sustainability products
- Publication of an article on AXA Climate's website summarizing the project and key results for broader dissemination

For both pilots lead by AXA Climate:

- Presenting the results in the AXA Group Executive Newsletters (pending confirmation)

FMI has planned the following actions:

- FMI participates as an expert organization in the assessment of National Adaptation Plan (NAP) of Finland in 2026, and to preparation of the next NAP in 2027-2028. Based on PIISA outcomes FMI will highlight potential of novel insurance solutions to enhance adaptation in Finland. Especially green roof and forest pilots provide novel solutions as well as the need to address protection gap of property damage due to CCS.
- FMI will organise in September an event to present PIISA results to a wide range of Finnish stakeholders, aiming to raise awareness on insurance as a complementary and supporting solution to climate change adaptation.
- FMI will prepare web material in Finnish for the general public to the climate change portal climateguide.fi and write a feature article to the Monthly Climate Bulletin of FMI.
- LocalTapiola and FMI continue to develop weather and climate services for urban areas with more accurate, region-specific data to support weather-related risk management and climate change adaptation in Finland.
- FMI will continue the development of fire spread model and its implementation to the Climate Adaptation Digital Twin in Destination Earth and national projects.
- FMI will continue work with the seasonal predictability of agrological-climate risk indicators for the growing season in Finland within a national project. The predictability of drought using the consecutive dry days indicator was initially explored in WP3. However, the analysis showed that this indicator does not reliably capture drought conditions in Finland on seasonal scale. Therefore, alternative agrological -climate risk indicators will be applied for the Nordic region.

3 PIISA pilots' onepagers

PIISA has already produced and made accessible a wealth of communication and dissemination materials such as blogs, info cards, recordings of webinar series, reports, policy brief, data sets, tools, scientific papers, and project deliverables (Appendix 1). Materials serve the needs of different target groups, and they can be reached via the project web site. Also, the pilots have both short and long descriptions at the web page.

To further support each pilot's dissemination and exploitation activities after the project so-called "onepagers" have been prepared. Onepagers (one-page documents) are very powerful communication tools in the Horizon Europe projects when used strategically. They turn complex results into clear, actionable messages for busy audiences. PIISA pilot onepagers:

- specify hazard and risks addressed,
- explain a key result(s),
- call for action,
- attract stakeholders/users,
- influence risk management and/or adaptation policy,
- support business uptake, and
- provide links to further information and contact information

The following pages present the content of five pilot onepagers without the final layout. They were produced in low resolution and, thus, are not fit for use in communication or presentations. **The onepagers to be used by all PIISA partners will be converted into PDF-format and they will be available from the PIISA web site.**

PIISA (Piloting Innovative Insurance Solutions for Adaptation) **— IVM, CAS, Tyrsky, FMI, POLIMI, LocalTapiola**

GREEN ROOFS NEED A COORDINATED EFFORT FROM AUTHORITIES AND INSURERS

The **green roof pilot** assessed the co-benefits and economic feasibility of green roofs as an adaptation measure, while evaluating how insurer interventions can encourage their adoption. The pilot also explored the key barriers and enabling factors influencing the uptake of green roof solutions.	
Hazard: urban pluvial floods & heat stress	**Status (**present/outlook): acute and intensifying in Europe
Target groups: insurance companies, authorities, urban planners, technical experts, climate change adaptation community, building/homeowners	
Pilot context: Cities in the Netherlands complemented with surveys in Finland and Italy	

Why are green roofs a space-efficient climate change adaptation solution in urban areas?	
• they mitigate flood damage and heat stress • increase biodiversity • provide roof protection • offer aesthetic amenities	

Key results:

- In the Netherlands, respondents of an extensive survey exhibit a clear and positive willingness to pay for green roof individual homeowner benefits and co-benefits for society.
- Green roofs tend to be more economically attractive when public benefits are considered.
- Non-monetary policy instruments, such as targeted information campaigns, have a role in complementing financial incentives and insurance-based solutions (e.g. premium discounts) for raising adoption levels.

Recommendations to enable a wider uptake of green roofs:

- **Cities** can adopt multi-year public subsidy schemes, reduce fragmentation across planning, give guidance on maintenance responsibilities, and reduce lifecycle costs for homeowners
- **Cities** can establish regulatory requirements (e.g. building codes, planning rules and stormwater regulations) to facilitate adoption of green roofs
- **National governments and the EU** should establish standardised monitoring and reporting protocols for green roofs and enable shared data on performance and risk-reduction
- **Insurers** can stimulate green roof adoption, e.g. offer premium/deductible discounts

How to achieve business cases and replicability:

- Develop a coordinated, region-specific approach aligning insurers, municipalities and regulators, and climate change adaptation schemes to local climatic and market conditions
- Generate evidence via building-level performance data, standardised monitoring, and ultimately link incentives to verified risk reduction

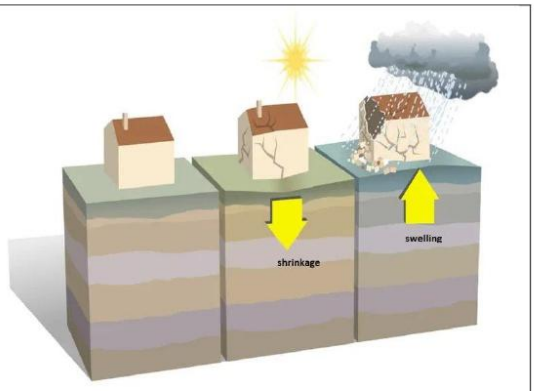
Learn more:

Awareness Web Tool for insurers on Innovative Insurance Solutions: Green Roofs
PIISA Report: Pilots for Cities and well-being
PIISA Report: Barriers and Enablers for Nature-based Solutions: Insights from European insurers
PIISA Blog: Dutch insurers need best practices & partnerships to integrate nature-based solutions into products
PIISA Blog: Incentivizing Green Roof adoption through insurance
PIISA Info Card 3: "Barriers and opportunities for Natural Risk Insurance"
Scientific article: Behavioural public policy for natural disaster preparedness and the role of economic experiments (Robinson & Botzen 2025)
Scientific article: Assessing effects of nature-based and other municipal adaptation measures on insured heavy rain damages (Ooms et al. 2025)

PIISA (Piloting Innovative Insurance Solutions for Adaptation) — **SFO, FMI, Amigo**

THE INCREASING PROTECTION GAP FOR CLAY SOIL SHRINK–SWELL PROPERTY DAMAGE

The **clay soil shrink-swell (CSS) pilot** developed a web-based tool to communicate to homeowners in France the financial and related risks of inadequate insurance cover. At the same time research was carried out to assess CSS risk and insurance frameworks across other EU countries to inform a Risk Alert Briefing addressed to key stakeholders.	
Hazard: Building damage caused by CSS events	**Status (**outlook): CSS risk level is projected to increase across Europe
CSS processes occur when clay-rich soils contract during dry periods and expand again when moisture returns, causing ground movement that can lead to cracking and structural damage to buildings and infrastructure – see schematic figure below.	
Target groups: homeowners, property stakeholders, local and national authorities, insurance companies, climate change adaptation communities	
Pilot context: France and preliminary assessments in Finland, Germany, Luxembourg, Italy, Spain	

Why is it essential to raise awareness and initiate discussion on the implications of climate-driven CSS property damage?	
• Large areas in Europe are exposed to increasing risk from CSS property damage. • It is estimated that 48% of the national territory is at medium or high risk in France. • Awareness of CSS risks seems to be limited to the construction and civil engineering sectors. • CSS property damage is typically excluded from standard home insurance and not mentioned in climate change adaptation plans. • There is a state compensation scheme in France, but not all homeowners receive compensation.	

Key results:

- A key output of the pilot was the development of a **web-based tool** (**Clay Shrink Swell Building Damage Assessor**) to inform homeowners about the financial and other risks they face from inadequate insurance cover in France.
- The combination of growing CSS risk and insurance protection gaps may lead to increased financial exposure for homeowners and potential systemic challenges for insurance markets and public authorities across Europe.

Recommendations to support narrowing the protection gap:

- Awareness of CSS risk among policymakers, regulators, insurers and homeowners is an essential first step toward informed planning and risk management.
- Implement and amplify targeted publicity linked to the Risk Alert Briefing to raise awareness of the issue at European level.
- Roll out national communication activities targeting homeowners, public authorities and policymakers to increase visibility and understanding of clay shrink–swell risks.

Learn more:

PIISA CSS Report: Pilots for Cities and well-being
PIISA CSS Report: Risk Alert Briefing: Clay shrink–swell property damage and the increasing protection gap in Europe
PIISA Blog: Clay Shrink Swell causes property damage and financial risks for homeowners
Webinar: Clay shrink–swell property damage and the emerging insurance protection gap in Europe, 24 Apr 2026S

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PIISA (Piloting Innovative Insurance Solutions for Adaptation) — **BSC, POLIMI, LocalTapiola, FMI, Amigo, CMCC**

INNOVATIVE INSURANCE AND CLIMATE SERVICES IMPROVE AGRICULTURE SECTOR'S RESILIENCE

Farmers' views collected in the **agriculture pilot** confirmed high exposures to weather and climate risks, along with a significant insurance protection gap. The pilot developed CoDepi - a web tool for co-designing index-based climate insurance. It uses farmer input on climate indicators, local thresholds, and historical bad years to better align insurance payouts with experienced losses. While CoDepi supports index design and validation, final payout calibration and pricing require historical loss data. A Shiny app on Seasonal Drought Forecasts for olive farmers in the Iberian Peninsula was also operationalised.
Hazards: drought, heat and other adverse weather events — **Status (present/outlook):** recurrent crop losses across Europe/ intensifying especially in southern and central Europe
Target groups: farmers, agriculture experts, insurance companies, public authorities, climate change adaptation community
Pilot context: Andalucía in southern Spain focusing on the olive sector; market analyses in Italy and Finland

How can innovative insurance and climate services enhance agricultural resilience to weather hazards and climate change?

- co-developed, demand-driven, and tailored insurance products can complement traditional insurances and fill the existing insurance protection gaps
- potential to improve farmers' income stability
- loss prevention with forecast-based insurance

- fast payouts, simplified claims processes, clear triggers, and higher transparency with index-based insurance

Key results:

- Improved understanding of farmers' needs and insurance gaps in the agriculture sector. Surveys indicate that farmers are interested in new insurance solutions throughout Europe, provided they are transparent, reliable, and locally relevant.
- CoDepi - a co-design tool for creating and validating index-based insurance solutions for varied contexts.
- Using a convergence-of-evidence approach, a case study demonstration of the tool for reducing spatial basis risk by matching simulated historical payouts with farmer-reported bad years and cross-verification with independent climate data.
- Guidance for replication to diverse contexts, and operationalization of complementary climate services.

Recommendations supporting farmers to manage climate-related risks with insurances:

- Raise awareness and understanding of index-based insurance among farmers and farmer organizations.
- Expand simple, transparent, and fair insurance solutions that feature low basis risk.
- Improve the understanding of agricultural insurance regulatory and policy frameworks across countries.
- Develop integrated climate services and insurance tailored to local hazards, seasonal calendars, and farmer-defined loss thresholds.
- Establish targeted incentives, premium support, quality standards, clear regulations, and public guarantees at the EU and national levels.

Learn more:

CoDepi – web tool for Co-Designing Parametric Insurance

PIISA Report: Pilots for Agriculture
PIISA Report: Insurance services for Mediterranean regions
PIISA Report: Potential for agricultural insurance in Boreal regions
PIISA Blog: Majority of Finnish farmers recognise the impact of climate change, but lack tools to manage weather-based risks
PIISA Blog: The role of index insurance in Agriculture in the face of Climate Change
PIISA webinar: Farmers First: Insurance that works for farmers, 25 Mar 2025
PIISA webinar: Market Feasibility of Index-Based Climate Insurance for Mediterranean Agriculture: Results from the PIISA Food & Agriculture Pilot, 16 Apr 2026

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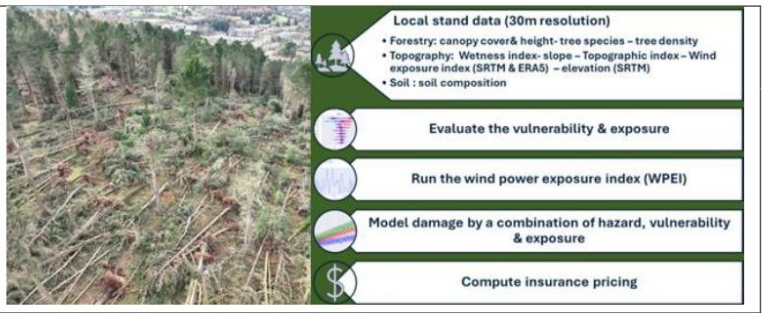
PIISA (Piloting Innovative Insurance Solutions for Adaptation) **— AXA Climate, FMI, Amigo, Tyrsky, CMCC**

SCALABLE APPROACH FOR REDUCING THE GAPS IN FOREST WIND DAMAGE INSURANCE

The **forest wind damage pilot** created, experimented with, and refined a novel, climate-sensitive insurance solution for windthrow risks that is informed by high-resolution climate and forest modeling. The solution incorporated hazard modeling, stand-level vulnerability assessment, and actuarial pricing.
Hazard: forest wind damage **Status (**present/outlook): recurring severe losses/likely to increase
In Europe, forest damage and losses have been increasing due to abiotic, biotic, and synergetic factors. Losses have likely been exacerbated by climate-driven changes and monocultural forest management.
Target groups: forest owners and managers, insurance companies, authorities, forestry stakeholders, climate change adaptation communities
Pilot context: Germany, France, Ireland, Scotland, and Denmark, with feedback from the Boreal region

Why is it timely to develop a novel parametric insurance for forest wind damage?	
• ca. 50% of all forest losses in Europe are due to wind damage • forest insurance remains marginal in Europe • there is limited selection of tailored wind damage insurance products	

Key results:

- **Forest vulnerability map,** including characteristics like canopy height, cover, tree density, elevation, wind exposure, slope, etc. These categories were refined using machine-learning clustering techniques, and the model design allows updates based on the availability of client-specific data.
- **Wind Power Exposure Index** (WPEI) was built on Copernicus ERA5 land data and it provides a transparent and replicable climate input.
- The **windthrow insurance prototype** developed by AXA Climate in PIISA is technically robust, economically sound, and structurally replicable.
- Although parametric insurance may not be optimal for all forest types or risk layers, the combined modelling framework – integrating hazard characteristics, stand-level vulnerability, and actuarial simulations – provides a credible foundation for climate-sensitive forestry insurance for protection against windstorms.

Recommendations to enable a wider uptake of this novel windthrow insurance concept:

- Regional calibration for replication significantly improves model accuracy. It is recommended to validate model outputs against observed data from historical storms. It is also needed before the contractualization of any product.
- Combining stakeholder engagement, regional testing, insurer dialogue, and market feedback supports exploitation through business validation and strengthens replication by assessing transferability to other forest and insurance contexts.

Learn more:

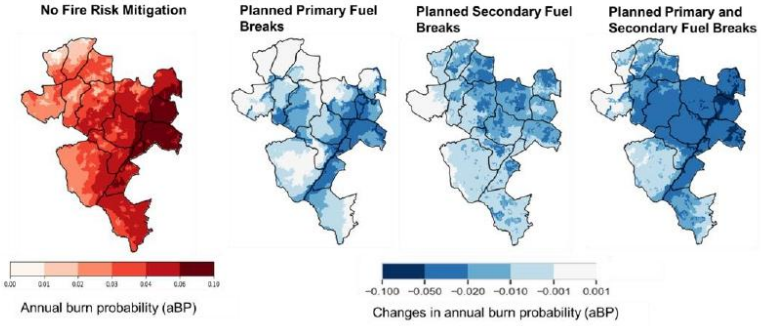
PIISA Pilot Reports: Pilots for Forests and Concept of Climate Change Risk Sensitized Forest Insurances
PIISA Report: Role and potential of insurance in accelerating climate adaptation in Europe
Info Card 3: "Barriers and opportunities for Natural Risk Insurance"
Blog: "Quantification of forests adaptation measures for insurance application"
Webinar: Adaptive Forest Management and Policy to Tackle Climate Risks (jointly with HEU SWIFTT)
Webinar: Climate resilient natural resources management: simulation-based approaches, forest insurances and climate services (jointly with HEU PRECILIENCE)

PIISA (Piloting Innovative Insurance Solutions for Adaptation) **— AXA Climate, FMI, CMCC, Tyrsky, AGIF**

A NOVEL WILDFIRE INSURANCE CAN REWARD FIRE RISK MITIGATION ACTIONS

The **wildfire pilot** assessed the efficiency of wildfire risk mitigation plans to quantify risk reduction. Regional climate change adaptation was integrated into parametric wildfire insurance design, allowing risk reduction efforts to be explicitly modelled and priced for the benefit of households, forest owners, and communities.
Hazard: wildfires — **Status (**present/outlook): acute in southern Europe/risk increasing across Europe
Target groups: local and national authorities, insurance companies, forest owners and managers, homeowners, disaster risk reduction and climate change adaptation communities
Pilot context: Caramulo and Ribeira de Mega regions in Central Portugal (total pilot area ca. 12,000 ha)

Why is it urgent to develop a novel wildfire insurance concept that integrates and prices the climate change adaptation and fire risk reduction plans?	
• wildfires are a recurrent threat to health and property • wildfire insurance uptake remains limited • the most fire-prone areas are at risk of becoming uninsurable	• fire spread models can estimate efficiency of fire mitigation measures e.g. fuel breaks • this novel insurance concept enhances the development and realization of fire risk mitigation measures



Key results:

- A parametric wildfire insurance design allowing risk reduction efforts to be explicitly modelled and priced was co-created with the assistance of the *Agency for Integrated Rural Fire Management* (Portugal).
- Results demonstrated that combined primary and secondary fuel break networks were more effective than single-type treatments, and full fuel removal outperforms partial removal highlighting the importance of the maintenance of fuel breaks.
- Pilot demonstrated that wildfire insurance with built-in risk reduction incentives is both technically feasible and economically valuable, showcasing that the impact of fire risk reduction measures can be quantified.

Recommendations to enable a wider uptake of this novel wildfire insurance concept:

- Enhance collaboration between insurers, planners, and forest managers on adaptation and risk reduction
- Establish regulatory frameworks recognizing risk reduction actions supported by insurance requirements and incentives
- Implement the fire spread model into the Climate Adaptation Digital Twin of Destination Earth to estimate performance of fire reduction measures in future climates
- Improve the availability, quality and compatibility of data on fires, impacts, and fuels

Learn more:

PIISA Report: Pilots for Forests
PIISA Report: Preliminary Design of the New Insurance Instrument
PIISA Blog: Quantification of forests adaptation measures for insurance application
Webinar: Adaptive Forest Management and Policy to Tackle Climate Risks (jointly with HEU SWIFTT)
Webinar: Modelling as a tool to understand wildfire risk and risk reduction potential (jointly with the Destination Earth's Climate Change Adaptation Digital Twin)
Webinar: Climate resilient natural resources management: simulation-based approaches, forest insurances and climate services (jointly with HEU PRECILIENCE)

4 Discussion

The planned actions reported in this deliverable focus on dissemination and exploitation of PIISA pilots' results. We describe measures aiming to ensure exploitation of the results after the end of the project by using them in further research and development activities; developing, creating or marketing a product; creating and providing a service; or using them in research-policy knowledge brokering.

During the final reporting period of PIISA we will integrate all planned exploitation activities of PIISA partners. Also, we hope to coordinate exploitation activities the with PIISA's sister and other collaboration projects to increase impact.

This report. will provide support to the partners' legacy activities of PIISA after the project's conclusion.

References

Lameh, G. (2026). D4.7 Replicability Roadmap. Zenodo. https://doi.org/10.5281/zenodo.20432731

Appendix 1: PIISA pilot deliverables

PIISA Pilot deliverables with links

Number	Deliverable name	Link
D3.1	Guidance on setting up Pilots, living documents and coordinated approach for surveying	PDF
D3.2	Summary of lessons learned	see PIISA web site
D3.3	Plan for evaluating barriers and enablers for green roof insurances in the Netherlands	PDF
D3.4	Results of survey on applicability in Boreal region	PDF
D3.5	Preliminary dashboard specifications	PDF
D3.6	Lessons learned from testing usage in Lyon, France	PDF
D3.7	Potential for agricultural insurance in Boreal region	PDF
D3.8	Insurance services for Mediterranean region	PDF
D3.9	Concept of climate change risk sensitized forest insurances	PDF
D3.10	Preliminary design of the new insurance instrument	PDF
D3.11	Pilots for Cities and well-being	PDF
D3.12	Pilots for Agriculture	PDF
D3.13	Pilots for Forests	PDF
D3.14	Measures to amplify use of insurance solutions to support adaptation	this report