

PIISA

Piloting Innovative Insurance
Solutions for Adaptation

Project Newsletter 01

JUNE 2024



We're thrilled to share our first video, which provides a comprehensive overview of the PIISA project. Discover our objectives, learn how our partners are collaborating to achieve them, and see how our results will contribute to climate adaptation.



Watch the PIISA Video

Greetings from the project coordinator

PIISA project team has experts from Finland, Italy, the Netherlands, France and Spain from various disciplines from universities, research institutes and companies. Did you know that PIISA aims to develop insurance innovations to cover at least 50% of losses attributable to climate change effects in Europe? If you did, you perhaps then realize that we also work to develop climate services which can tell the impact of climate change on extreme events such as heat waves, drought and severe

weather. We focus on assessing the losses induced by these events to e.g., forests or agriculture, or urban areas in the current and future climates and combine that knowledge to develop insurance innovations.

The first PIISA webinar about insurance gaps and potential was organised in April 2023. Read more about the webinar <https://piisa-project.eu/blog6>. An attribution research workshop is planned for the coming Fall 2024 jointly with other projects. In addition to the principal goals in PIISA, we decided to cut our project carbon footprint as low as possible and thus also focus on creating innovative ways in hybrid networking, engagement and surveying. We have been visible in ways e.g., in ECCA2023, ClimateWebstivals, Vasa Science Carneval, Flagship ACCC's Impact Week, Naturance Festival, in Local Tapiola media campaign, in statements for Ministry of Agriculture and Forestry about how to prepare for drought risks in Finland.



Hilppa Gregow

PIISA Project Coordinator

Finnish Meteorological Institute




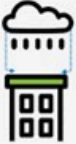

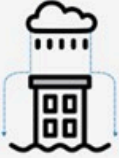









News from PIISA pilots

All five pilots have been running at full speed. Groups of local stakeholders have been formed and new insurance solutions and services are being explored. The concept of piloting raised wider interest in the [Naturance Finance Innovation Festival](#). The first topical deliverable is ready. Based on the work of the first development cycle, more reports will be prepared during 2024.

[Read Deliverable D3.7](#)

Green Roof Insurances Pilot

PIISA's pilot on **green roofs** in the Netherlands is focused on assessing **how green roof adoption** can be **upscaled** through various incentives, including insurance. Over the course of this summer, Institute for Environmental Studies IVM from the Netherlands and Climate Adaptation Services CAS are focusing on two tasks of this study.

	Option A	Option B	None of the two
Local biodiversity improvement	Some biodiversity 	Some biodiversity 	No Green Roof 
Contribution to flood risk reduction	Yes 	No 	No 
Enjoyment of Green Roof	Accessible and visible 	Inaccessible but visible 	No green roof 
Indoor cooling during heatwaves	- 1°C 	- 2°C 	No indoor heat reduction 
Roof lifespan	+ 30 yrs (60 total) 	+ 30 yrs (60 total) 	30 yrs total (standard lifespan) 
Annual cost	300€ 	300€ 	0 €
Which would you choose?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Example of choice experiment deployed in IVM's survey. This method places respondents in the situation of choosing an hypothetical new home that has a green roof. Statistical analysis allows to estimate the "Willingness-to-Pay" of households for the various benefits of green roofs.

IVM is launching a **nationwide survey** to analyze **enablers** and **barriers** to green roof adoption. This survey includes **economic valuation methods** aimed at evaluating the benefits and costs of green roofs, including, for instance, their recreational and biodiversity values. These results will be included in environmental cost-benefit analyses of green roofs. Moreover, this survey includes an **economic experiment** aimed at analyzing the effectiveness of various incentives for green roof adoption, including information provision and financial incentives. CAS is finalizing a report on barriers and enablers of nature-based solution insurance products for Dutch insurers.

From March to June 2024, a total of eight interviews were conducted with Dutch insurers. From these interviews, it became clear that obstacles of nature-based solution insurance products are the lack of a clear business case, limited awareness and uncertainty regarding the role of insurers. Enablers that could incentivise the uptake of nature-based insurance products are differentiating premiums, building information infrastructures, applying the build-back better approach, and offering a broader coverage for nature-based solutions. Beneficial interventions that we could work on to stimulate insurers to adopt nature-based solutions are sharing best practices, creating climate adaptation labels, obtaining more data on the effectiveness of nature-based solutions, raising awareness, establishing a long-term vision, and initiating cross-sectoral collaborations. CAS is now considering how to include these ideas in the climate services to be built.

Read more about the Green Roofs pilot: <https://piisa-project.eu/blog3>

Insurance services for agriculture

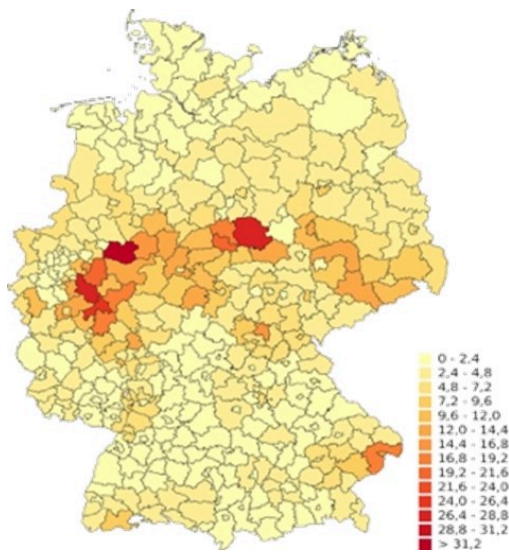
The first topical deliverable is ready ([read interview with Sami Myyrä from LocalTapiola](#)).



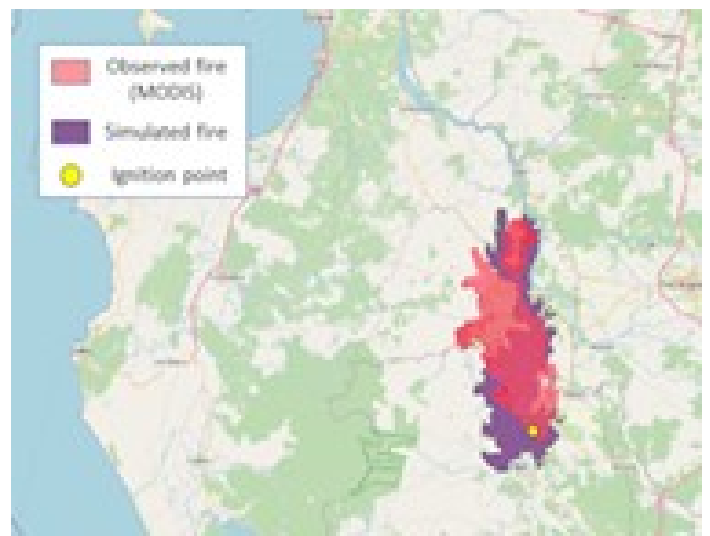
Read Report:
D3.7 - Potential for agricultural insurance in the boreal region

Wildfire insurance enhancing adaptive actions Pilot

Forest Insurances against selected biotic and abiotic risks Pilot



The second forestry pilot is aiming at developing new forest insurance concepts to support wildfire prevention and management, by modeling adaptation measures into the insurance product. The first loop is focusing on the central region of Portugal, where the National Adaptation Plan has been studied with the help of public entity in charge of fire prevention (AGIF). Replicability in other EU regions will be tested in future loops.



Forestry Pilot Update Overview The objective of this pilot is to design a new climate cover for forest asset, based on existing insurance schemes, on both biotic and abiotic risks. First loop is composed of a pilot in Germany. Over the last year, both parametric and Indemnity models for wind and wildfire insurance have been compared on the same parcels to understand sensitivity to clients' characteristics. Further loops will consist of testing applicability of the new schemes (including insect outbreak) and replicability in Boreal region (Finland). Proportion of total forest area affected by tree loss, 2018-2021 (%) Sources: German Aerospace Center (DLR), Brèteau-Amores et al. (2020)

Addressing soil stability risks for home owner insurance holders Pilot



The pilot addresses homeowners and the risks associated with clay soil shrinkage and swelling. Our goal is to create a dashboard that educates and empowers homeowners across Europe to manage their financial risks from gaps in insurance coverage effectively.

2DII and Amigo are currently drafting the preliminary dashboard specification which provides the framework for the climate adaptation dashboard.

[Learn more about the Pilots](#)

Report about role and potential of insurance in accelerating climate adaptation in Europe published



The recently published PIISA [D1.1 “Role and potential of insurance in accelerating climate adaptation in Europe”](#) synthesises the state of the art on the supply and demand of climate insurance and alternative risk transfer mechanisms in Europe. It is based on a review of academic and grey literature, carried out by systematic, AI-powered, and independent searches. The literature review was complemented with up-to-date information on climate insurance penetration rates across European countries.

Firstly, the report reviews and assesses the climate insurance systems in European countries. The outcomes highlight that the national regimes which currently are better suited to address the climate insurance protection gap are those with significant involvement of public institutions, such as those in Denmark and France.

Secondly, the report examines the factors contributing to such climate insurance protection gap, from both the demand and supply perspective. Income and prices significantly influence insurance demand, and affordability issues are expected to become more relevant if premiums are consistently risk-based. Climate change and natural hazards present limitations in terms of insurability due to uncertainties regarding their occurrence and magnitude. In addition, very few actuarial insurance models incorporate climate change, and most base their premium estimations on past data.

Finally, the report presents an overview of new technologies and potential innovations that could help address the identified barriers and increase insurance coverage and promote adaptation-enhancing insurance. These innovations can enable more precise and effective pricing of risk, reduce operational and transaction costs, and improve transparency and ease of use.

PIISA develops Climate Indices



PIISA is developing climate indices. For example, the Standardised Windstorm Index was produced to be integrated into an index-based insurance model. We also started the development of a compound index for the combined effect of drought and heatwaves to assess the soil stability risk. Moreover, we are actively engaged in discussions regarding convective and drought indices for agricultural parametric insurance.

Read more about climate indices and index insurance : <https://piisa-project.eu/blog2>

Project Deliverables over the 1st year

You may find and download all our public deliverables directly on the PIISA website:

- Guidance on setting up Pilots, living documents and coordinated approach for surveying
- Project communication, dissemination and stakeholder engagement plan CDSEP
- Survey for mapping Loop feedback for collecting iteration needs
- Project Management Guide (PMG)
- Project Administration Guide (PAG)
- Project Risks and Ethics Guide (PREG)
- Project Data Management Plan (DMP)



[Read More Here](#)

Our latest production!



How do we know the contributions of climate change to extreme weather events?

Climate scientists are often asked if climate change has affected an occurred extreme event, for example a severe flood. And if so, how big was the effect? Find out how climate change directly influences specific extreme events!

[Read Article](#)

Project Partners





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