european actuarial academy

ANNOUNCEMENT

EAA Web Session
Quantifying the Prospective Impact of Air Pollution on Mortality

20 November 2025| 09:30-12:45 CET | online

Introduction

As climate change accelerates in the 21st century, the need to consider its effects is growing, particularly with regard to emerging risks and their impact on the insurance sector on a global scale. As a result, financial and insurance institutions must integrate environmental factors into their risk management frameworks.

The consequences of climate change extend beyond financial aspects related to transition risks, also influencing physical risks, including the quality of life of policyholders. Among these physical risks, air pollution is receiving increasing attention due to its significant impact on public health, especially in the context of personal insurance.

The latest estimates from the European Environment Agency (EEA) indicate that in 2022, 96% of the EU's urban population was exposed to $PM_{2.5}$ concentrations above the World Health Organization (WHO)'s recommended level. Additionally, at least 328,000 deaths in the EU27 in 2021 were attributable to exposure to air pollution.

In response to these challenges, regulatory bodies such as the European Insurance and Occupational Pensions Authority (EIOPA) and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) are developing methodological frameworks to quantify the impacts of climate factors on the insurance sector. These frameworks also aim to assess how air pollution affects financial stability, particularly through the lens of increasing claims experience.

In this context, understanding the links between air pollution, mortality rates, and insurance risk modeling is crucial for developing long-term, forward-looking strategies that address the impacts of climate change, including the impacts of air pollution in personal insurance.

Participants

This session will be particularly relevant to actuaries, statisticians, data scientists, and risk management professionals working in the insurance and finance sectors. Individuals with a interest in economics, environmental science, and public health may also find value in this session, as it bridges the gap between climate science and risk assessment.

Participants with an interest in Python programming, geostatistical modeling, and prospective climate scenario analysis will also gain insights into methodologies for quantifying the long-term impact of air pollution risk.

Purpose and Nature

This lecture will aim to understand the current and future effects of air pollution, particularly on mortality, and its impact on insurance activities. The lecture will also provide participants with tools to reimplement their own model to integrate environmental factors into risk analysis and challenge conventional assumptions.

The lecture will provide the ability to reach several objectives such as:

- Understanding the close link between climate change, air pollution, and current and future insurance risks,
- Reviewing the regulatory texts on environmental issues,
- Proposing a state of the art review of open-source data for the study of air pollution.
- Introducing the theory used for fine-scale temporal and spatial modelling,
- The quantitative translation of an air pollutant concentration measurement into an impact on mortality,
- Raising awareness of the importance of using forward-looking scenarios in insurance risk assessment.

The lecture is built around a mixed approach combining contextual and regulatory presentations, theoretical insights, and intuitive use cases. Learning will be progressive and interactive to hopefully ensure a full understanding of the topic.

Language

The language of the web session will be English.

Lecturer

Baptiste Allaire
A double graduate from EURo Institut d'Actuariat (EURIA) and Ecole Supérieure d'Ingénieurs Léonard de Vinci (ESILV), Baptiste previously worked in brokerage at Bessé on social protection topics before joining actuarial consulting at Optimind. He is now an Actuarial Analyst at Accenture within the Finance & Risk & Compliance practice, with a particular interest in data science and the impact of climate change on insurance.

Preliminary Programme

Thursday, 20 November 2025

09:30-10:15 (45min)	Overall framework
10:15-11:00 (45min)	Development of an exposure module using spatial interpolation
11:00-11:15 (15min)	Break
11:15-12:00 (45min)	Assessment and quantification of the actual and prospective materiality of risks
12:00-12:45 (45min)	Use case (Excel): Translating a pollution concentration level into a mortality impact in France.

All the above times are given in CET (Central European Summer Time).

Fees & Registration

Early Bird Registration Fee (until 9 October 2025):

- For private customers in the EU: €225.00 + VAT of the billing country (example Germany: €267.75 incl. 19% VAT)
- For private customers outside the EU: €267.75 (incl. 19% VAT)
- For businesses within the EU (excl. Germany, with valid VAT ID): €225.00 (net, reverse charge applies)
- For businesses in Germany: €267.75 (incl. 19% VAT)

Regular Registration Fee (from 10 October 2025):

- For private customers in the EU: €290.00 + VAT of the billing country (example Germany: €345.10 incl. 19% VAT)
- For private customers outside the EU: €345.10 (incl. 19% VAT)
- For businesses within the EU (excl. Germany, with valid VAT ID): €290.00 (net, reverse charge applies)
- For businesses in Germany: €345.10 (incl. 19% VAT)

Important VAT Information:

- For private customers with a billing address in an EU country: VAT will be charged at the applicable rate in the country of the billing address. The final amount, including VAT, will be calculated upon invoicing.
- For customers with a non-EU (third country) billing address: Only a non-company billing address is accepted for VAT compliance reasons. 19% VAT applies to all non-EU private customers.
- For businesses within the EU (excluding Germany), Iceland, Liechtenstein, Norway, Switzerland, and the UK with a valid VAT ID: The reverse charge mechanism applies (net price; VAT will not be charged). Please ensure your valid VAT ID is entered correctly during registration.
- For all customers with a billing address in Germany: 19% VAT applies.

Please submit your registration using this online form. Closer to the event, you will receive further login details to join the web session.

Your registration is binding. Cancellation is only possible up to 2 weeks before the first day of the event. If you cancel later, the full participation fee is due. You may appoint someone to take your place but must notify us in advance. EAA has the right to cancel the event if the minimum number of participants is not reached.

We will send you an invoice via email. Please allow a few days for handling. Please always give your invoice number when you effect payment. All bank charges are to be borne by the participant.

Registration is open until two working days before the web session. If registration has already been closed for this web session, please call us or send an email to contact@actuarial-academy.com in order to find out whether a late registration is still possible.

Technical Requirements

Please check with your IT department if your firewall and computer settings support web session participation (the programme *Zoom* will be used for this online training). Please also make sure to join the web session with a stable internet connection.

CPD

For this web session, the following CPD credits are available under the CPD scheme of the relevant national actuarial association:

Austria:	3 points
Belgium:	3 points
Bulgaria:	4.5 points
Croatia:	individual accreditation
Czechia:	3 hours
Denmark	3 credits
Estonia:	3 hours
Finland:	3 points
France:	18 points
Germany:	3 hours
Greece:	4 points
Hungary:	3 hours
Iceland:	3 credits
Ireland:	3 hours
Italy:	GdLA individual accreditation
Latvia:	3 hours
Lithuania:	3 hours
Netherlands:	approx. 3 points (individual accreditation)
Norway:	3 points
Poland:	3 hours
Portugal:	3 hours
Serbia:	3 hours

Slovakia:	individual accreditation
Slovenia:	individual accreditation
Spain:	CAC: 3 hours, IAE: 3 hours
Switzerland:	individual accreditation
USA:	SOA (Section B): up to 3.6 hours

No responsibility is taken for the accuracy of this information.