



Research Fund

A large, detailed image of the Earth as seen from space, showing the Western Hemisphere with North and South America. The Earth is centered in the frame, with a dark, star-filled space background. The text 'Science is our future.' is overlaid on the Earth in a large, white, serif font.

Science
is our future.

2024 Activity Report

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About the AXA Research Fund

Since 2008, the AXA Research Fund has been supporting independent scientific research, contributing to a safer, fairer, and more inclusive future.

AXA has committed €262 million to funding 752 research projects in 39 countries, disseminating scientific expertise and fostering expert dialogue to help tackle critical challenges in health, climate and environment, and socio-economic risks. The Fund seeks to contribute to maintaining trust in the scientific community and to gather funding for essential research initiatives.

“Independent scientific research is our strongest ally. It enables us to stay ahead of the curve, fueling innovation and providing robust data and scenarios to inform decision-making and action.”



Ulrike Decoene
AXA Group Chief Communications,
Brand and Sustainability Officer

Embracing progress, with science

In today's world, the concept of progress can often feel daunting, given the constant evolution of global risks, the acceleration of new technologies, and the prevalence of controversial narratives. At AXA, we firmly believe that everyone deserves the right to approach the future with hope and to embrace new opportunities with confidence.

As risk and asset managers, we are dedicated to anticipating emerging risks and providing pioneering, agile solutions to mitigate and adapt to these challenges. Our mission is to make life safer, fairer, and more inclusive for as many people as possible.

Independent scientific research is our strongest ally in this endeavor. It enables us to stay ahead of the curve, fueling innovation and providing robust data and scenarios to inform decision-making and action. Since 2008, we have committed over €260 million through the AXA Research Fund to finance leading risk science globally and to help the latest research insights and discoveries make a tangible impact on society.

The year 2024 has been marked by remarkable achievements, with groundbreaking new partnerships, research outcomes and outreach initiatives.

As the scientific community faces increasing uncertainty, we are more steadfast than ever in our commitment to support them, driving progress and safeguarding what truly matters. •



3 QUESTIONS TO

Julia d'Astorg
Head of the AXA Research Fund

What has marked 2024 in the scientific arena?

In 2024, the scientific community has experienced significant turmoil on multiple fronts. There has been a notable rise in anti-science narratives concerning critical issues such as climate change and health. Additionally, the acceleration of misinformation, exacerbated by the misuse of AI, continues to undermine public trust and critical thinking, which in turn affects social and geopolitical stability. Furthermore, we have witnessed a decrease in funding for science overall, particularly in essential research areas related to climate change and inclusion.

These challenges threaten our ability to tackle the severe issues of our time with the support of robust, independent science.

As a committed corporate philanthropy actor, this situation has prompted us to reflect on how we can further contribute to addressing these challenges, with the support of AXA and our partners. We must actively defend science and become vocal advocates for its importance, help maintain trust and secure funding. Therefore we have intensified our commitment, by adding a third pillar to our initial mission of funding and valorizing independent risk research: being an advocate for science.

How will the new advocacy mission of the Fund take shape?

Advocating for science comes as a natural extension of our mandate, driven by the current context faced by the scientific community. We aim to leverage our network, funding and communication capabilities as a philanthropic entity to support the scientific community and promote respect for and proper use of scientific knowledge.

This involves forming alliances—as collaboration is essential in this mission—to raise funds and enhance visibility for our commitment to science. From participating at the Paris Saclay Summit “Choose Science” to engaging in the Paris Peace Forum debate on the societal role of science, to the launch of AXA’s Pledge for Science campaign, we strive to be vocal and rally support for our cause: a future where independent science can flourish, enabling us to collectively tackle the challenges of our time through respectful dialogue and evidence-based actions. Because science is not an opinion, it is our future.

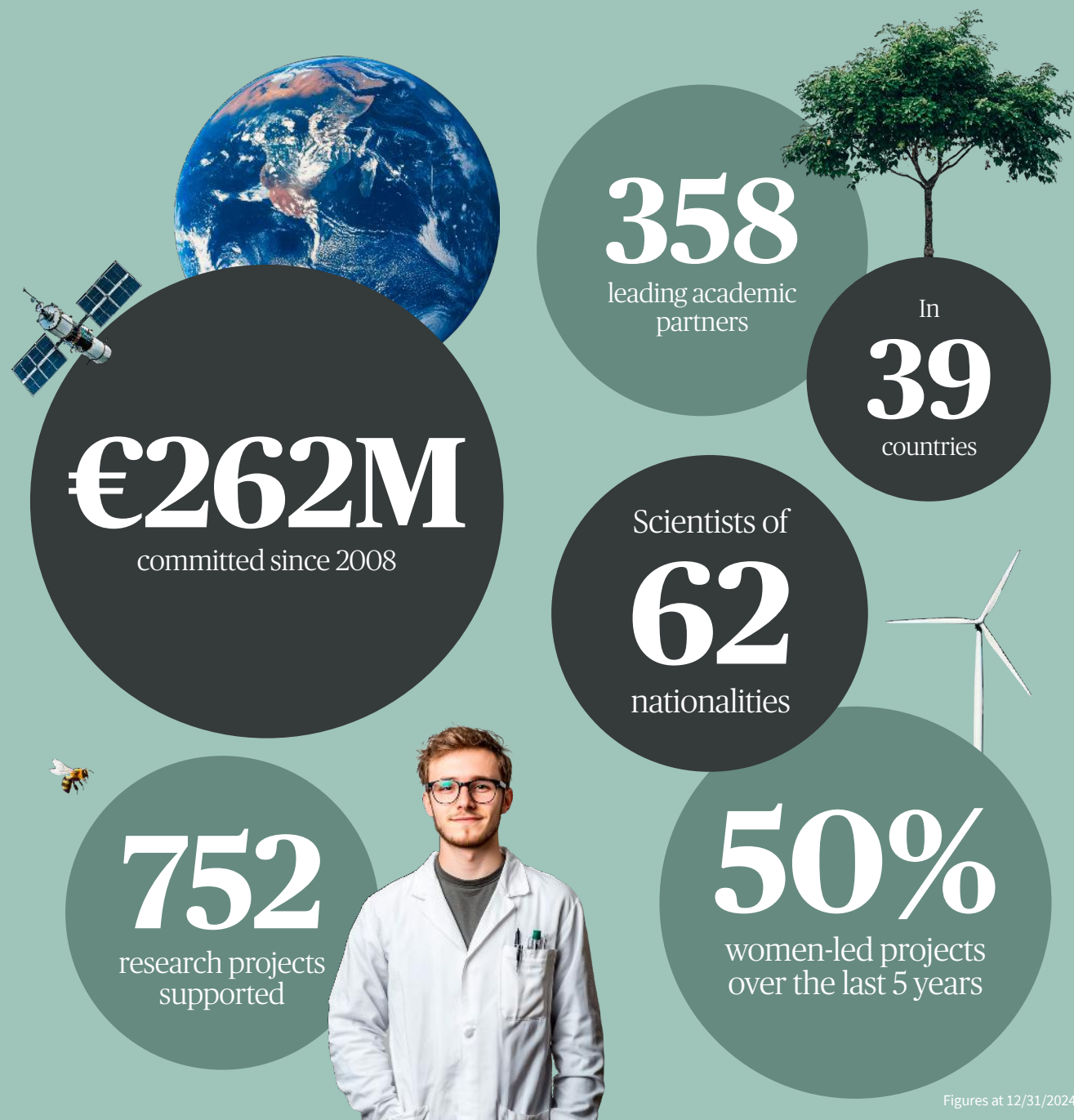
What are the other highlights of the Fund in 2024?

A significant highlight was the launch of a timely postdoctoral fellowship focused on trust and information in the digital age. Seven outstanding young scientists from multidisciplinary backgrounds will tackle various societal threats posed by AI misuse. Additionally, we funded a Chair to combat the impact of climate change on agriculture and ensure food sustainability, as well as another focused on salmonella. Our dissemination efforts concentrated on critical issues that require greater attention, such as the energy transition, the health impacts of climate change, and the rising prevalence of chronic diseases. •

“Science is not an opinion, it is our future.
In 2024, we extended our mission to become a vocal advocate for science, leveraging our network, funding and communications resources to stand up for science.”

KEY FIGURES

17 years of commitment to science



2024 SCIENTIFIC IMPACT

372

scientific outputs related to AXA funding in 2024

77%

of these scientific outcomes were published in open access

341

Articles & preprints

10

Datasets and conference proceedings papers

16

Reviews

5

Book chapters

2024 MEDIA IMPACT

Through blogs, social media and references in articles, the AXA Research community speaks out and shares expertise to reach a wider audience.

350+

references to the AXA Research Fund in media articles, totalling...

1,1K

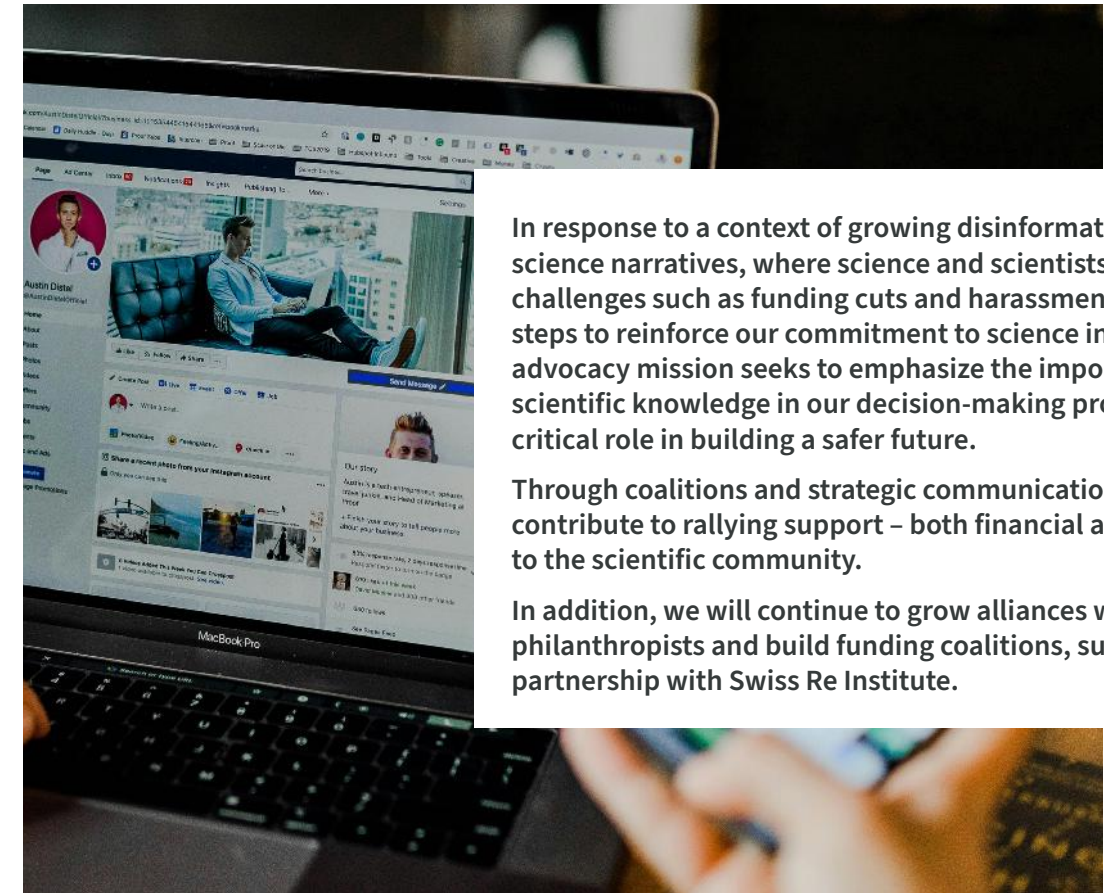
engagement

an estimated potential reach of

1B



Advocating to support and defend science



In response to a context of growing disinformation and anti-science narratives, where science and scientists face numerous challenges such as funding cuts and harassment, we have taken steps to reinforce our commitment to science in 2024. This advocacy mission seeks to emphasize the importance of sound scientific knowledge in our decision-making processes and its critical role in building a safer future.

Through coalitions and strategic communications, we aim to contribute to rallying support – both financial and institutional – to the scientific community.

In addition, we will continue to grow alliances with philanthropists and build funding coalitions, such as our existing partnership with Swiss Re Institute.

／ Supporting the “Choose Science” 1st Edition - Paris-Saclay Summit

In February 2024, AXA sponsored the inaugural Choose Science Summit 2024 at Paris-Saclay. Organized by Le Point and held at France’s leading research campus, this event aimed to emphasize the importance of scientific research and innovation by bringing together researchers, policymakers, industry leaders, and students.

This occasion allowed AXA to reaffirm its commitment to science, with Julia d’Astorg, Head of the Fund, highlighting the crucial role private funders like AXA play in supporting the needs of exploratory science.

This 1st edition of Paris Saclay Summit registered 9,000 attendants and 19,000 remote followers, and generated 150 media outcomes, and a wide social media conversation – 3.9M video views, and 12.5M impressions.



/ Highlighting the crucial role of science at the Paris Peace Forum

In November 2024, Julia d’Astorg joined Agnès Buzyn, former French Minister of Solidarity and Health, who just created Evidences, a think tank related to science and society, to underscore the significance of science and research in achieving sustainable development goals. They emphasized the necessity for sustained investment in both fundamental and applied research to tackle global challenges and uphold democratic values.

In this context, the AXA Research Fund plays an instrumental role in connecting science to society by fostering collaboration between academia, industry, and communities, through the innovative projects it supports. This helps bridge the gap between scientific discoveries and their societal applications.

The discussion highlighted the importance of synergy among public, private, and philanthropic funding for research, reaffirming that science and research are global common goods essential for humanity's advancement. It urged collective action to support these efforts, in line with AXA's commitment to spearheading initiatives that create a sustainable, science-driven future that meets societal needs.



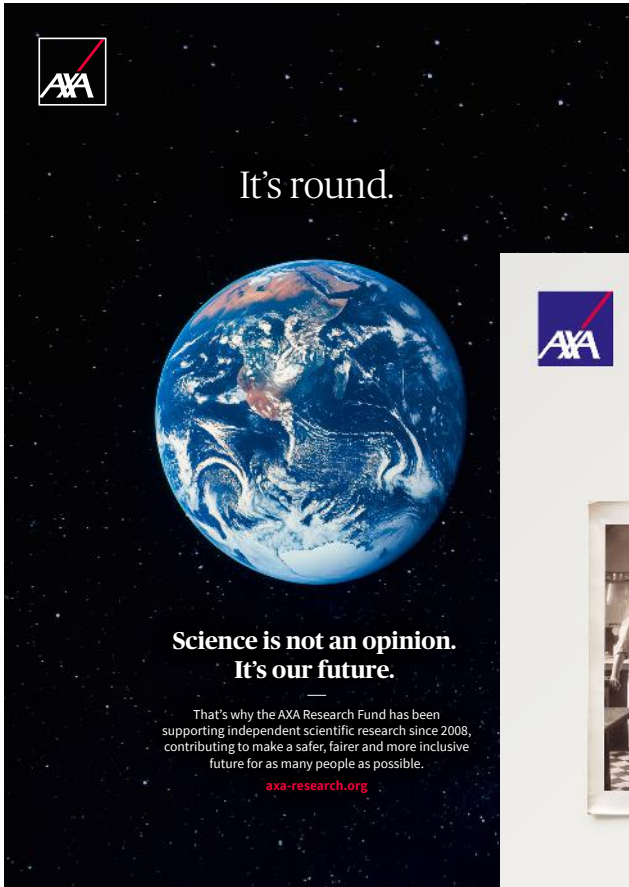
How to defend science in an era of widespread distrust?

This was the subject of a round table at the 2nd edition of the Choose Science Summit, featuring Ulrike Decoene, AXA Group Chief Communications, Brand and Sustainability Officer, in the company of Étienne Klein, physicist, research director at CEA and director of the Laboratory for Materials Science Research, alongside Grégoire de Lasteyrie, president of the Paris-Saclay urban community, and François Houllier, chairman and CEO of Ifremer. Ulrike underlined the importance of science for anticipating and understanding risk, improving data analysis, modeling and impact prediction – to better protect society and the environment.

/ Launching our Pledge for Science Campaign

As tension around science intensified, we decided to initiate a major campaign that would express AXA's confidence in a future where science drives knowledge and innovation. Therefore, in early 2025, we launched the "Pledge for Science" campaign to reaffirm the importance of factual evidence and scientific research outputs in addressing the challenges that face our society and environment.

We created a series of thought-provoking communications to spark discussions about the value of science in our lives and the need to build a safer future. The campaign was launched at the 2nd edition of the Paris-Saclay Summit “Choose Science” in February 2025.



Providing financial support to the science we need

“The role of the AXA Research Fund Scientific Board is to ensure that this support is awarded to innovative scientists conducting ambitious research in supportive institutions.”

Prof. Debra Roberts
*President of the AXA Research
Fund Scientific Board*



Being a scientist shouldn't be a risk

Science is a risky profession as you spend your life asking difficult questions about the unknown. How does the planet work? What makes societies tick? What does the future hold for both the planet and society? Answers are not guaranteed, and in some cases are probably unknowable. But given time to examine the evidence, liaise with colleagues and test innovative solutions we have been able to move towards a safer, healthier and more sustainable world. This progress is not guaranteed; it requires purposeful financial, institutional and political support to create a conducive environment for objective science to be done.

At a time when science and truth are under threat, AXA's trusted and reliable support affords scientists the freedom and independence to keep pushing the boundaries of our knowledge and removing the barriers to our understanding. The role of the AXA Research Fund Scientific Board is to ensure that this support is awarded to innovative scientists conducting ambitious research in supportive institutions. AXA remains a strong ally of the scientific community at a time when the global scientific project is under threat. The Scientific Board is proud to be a part of AXA's mission to de-risk science so that we can better understand the global risks that lie ahead. •

Pioneering innovation through our iconic programs

For the 16th consecutive year, the Fund delivered on its core mission to back independent, innovative scientific research addressing the significant societal challenges of our era. This was accomplished through fundings granted via our two flagship schemes – the AXA Chairs and AXA Postdoctoral Fellowship, and also via joint awards with AXA entities.

Two new AXA Chairs at the intersection of climate and health

The AXA Chairs are a very competitive funding scheme, aimed at enabling the long-term development of ambitious research programs. In 2024, the Scientific Board of the AXA Research Fund has selected two exceptional projects that both address fundamental issues for the future of human health: food safety in a changing climate, and salmonella.

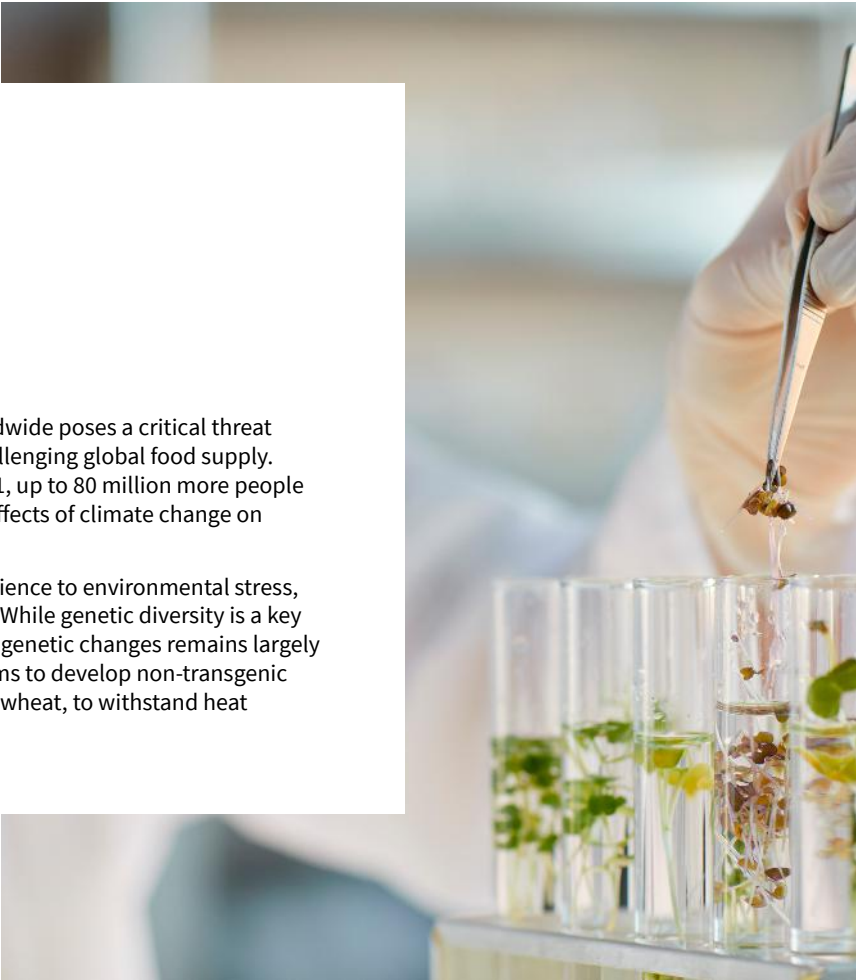
Harnessing the potential of RNA for climate resilient crops



Federico ARIEL,
Universidad Nacional
del Litoral, Argentina

The escalating frequency of heat waves worldwide poses a critical threat to global agricultural productivity, hence challenging global food supply. According to the Global Nutrition Report 2021, up to 80 million more people may be undernourished by 2050 due to the effects of climate change on agricultural productivity.

There is an urgent need to enhance crop resilience to environmental stress, particularly in the context of climate change. While genetic diversity is a key factor in long-term adaptation, the role of epigenetic changes remains largely unexplored. With the AXA Chair, Prof. Ariel aims to develop non-transgenic tools to prime crops, specifically tomato and wheat, to withstand heat extremes and mitigate yield losses.



Preventing invasive salmonella disease in African children



Melita GORDON,
The University of Edinburgh,
United Kingdom

According to the World Health Organisation, Salmonella causes around 155,000 deaths worldwide each year. Children are especially vulnerable to severe outcomes, particularly in Africa.

The new Chair will improve epidemiological data and diagnostic surveillance tools and conduct landmark clinical vaccine trials. It will engage national, regional and international policy stakeholders and provide expert advice to decision-makers and scientists, accelerating the development and use of vaccines against invasive Salmonella. This will reduce cases of illness and death among children, the economic burden on families and governments, and the spread of antimicrobial resistance.



TESTIMONIAL

“The AXA Chair is a transformative funding scheme, expanding beyond research fields and territories”



Prof. Lara Dugas
AXA Chair in Non
Communicable
Diseases at Loyola
University, Chicago,
hosted at University
of Cape Town

The AXA Chair has been a step change for my career and the research field, enhancing capacity at the University of Cape Town and across my African network.

Through collaboration with former AXA Chair Mark New, I secured a 2.6M\$ Wellcome Trust grant for a project on Housing Heat Adaptation Interventions in vulnerable South African and Ghanaian populations, then another 3.6M\$ grant for Climate-Health Attribution studies. This work will involve international research meetings and capacity building for junior faculty. While my original focus remains on non-communicable diseases in high infectious disease areas, the climate attribution work has deepened our understanding of the urgent impacts of climate change on African populations.

The AXA Chair has been a catalyst for this transformative work, enabling significant contributions to climate and health research. •

/ New directions for our historic Chairs

Many previously selected and endowed successional Chairs also welcomed new Chairholders in 2024, giving new orientations to existing programs.



At the University of Bristol, the AXA Chair in Vulcanology previously held by Prof Kathy Kashman welcomed new Chairholder Jenni Barclay.

Under Jenni's direction, the AXA Chair program **“Navigating Volcanic Risk: Understanding Transitions and Vulnerability”** will be focusing on the reduction of risk and the prevention of disaster in volcanic settings. Dr. Barclay aims to enhance the fundamental physical understanding of volcanic processes and to conduct interdisciplinary research into the core drivers of disaster loss, particularly in marginalized populations.



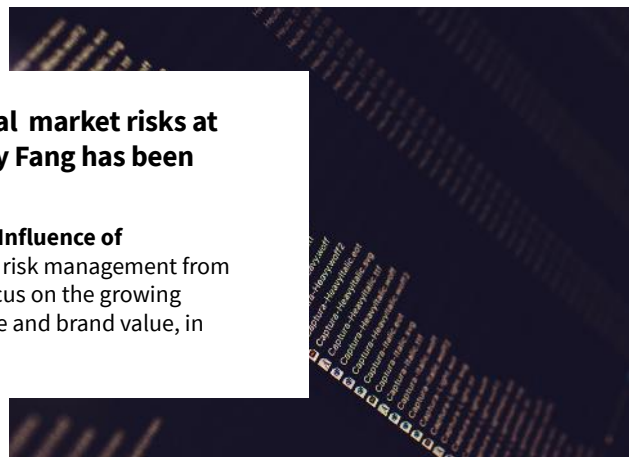
Prof Alban de Kerchove becomes the new head of the AXA Chair in Neurosciences at Université Libre de Bruxelles (ULB) succeeding Prof Pierre Van derHaeghen.

The new AXA Chair **“Neuropsychiatric Diseases and Basal Ganglia: Underlying Mechanisms”** will be investigating the mechanisms involved in certain pathologies such as Parkinson's disease, obsessive-compulsive and attention disorders, and addictions.



The direction of the AXA Chair in Financial market risks at INSEAD Paris previously held by Prof Lily Fang has been taken up by Prof Frederico Belo.

The new focus of the chair: **“Unveiling the Global Influence of Intangible Assets”** delves into asset valuation and risk management from a macroeconomic perspective, with a particular focus on the growing significance of intangible assets, such as knowledge and brand value, in determining company valuation.



Following Prof Victor Murinde, Prof Hong Bo becomes new head for the AXA Chair in Global Finance at SOAS University in London.

As the new director of the new AXA Chair **“China's Infrastructure Investment in Africa post Covid-19”**, Professor Bo is investigating the consequences of ongoing changes in China's overseas infrastructure investment for African countries.



FOCUS ON

AXA Research Chair in African Climate Risk previously held by Prof Mark New at the University of Cape Town now headed by Dr Christopher Trisos

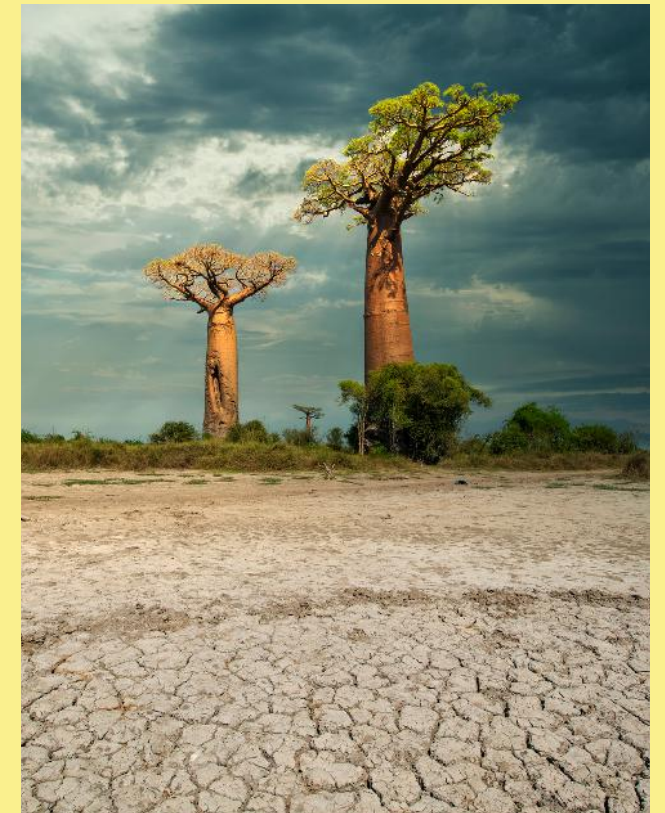


As the new holder of the AXA Research Chair in African Climate Risk, **“Actionable Research on Climate Change Risks in Africa”** Associate Professor Christopher Trisos is working with his team at the Climate Risk Lab and the African Synthesis Centre for Climate Change, Environment and Development (ASCEND) to build tools that predict where and when climate change risks appear and how society can adapt to reduce these risks.

Dr Trisos has intensive collaboration with public and private organizations to manage climate risks and has widely cited research featured in renowned publications.

A Coordinating Lead Author for IPCC and advisor to institutions like World Bank and UNEP, he leads the Climate Risk Lab (climaterisklab.com) at the African Climate and Development Initiative at the University of Cape Town and ASCEND, integrating environmental and social sciences for rapid, just and equitable climate action.

Additionally, to improve climate awareness Dr Trisos has developed an adventure game about how the choices we make today shape our climate changed future, used in classrooms around the world.



/ A new postdoctoral cohort
 on Misinformation in the Digital Age

The AXA Postdoctoral Fellowship helps build
 transdisciplinary communities of young scientists
 in areas of emerging concerns.

In March 2024, we launched a call for postdoctoral projects to
 advance pioneering work assessing the socio-economic impact
 of misinformation and exploring solutions to mitigate it.

Discover the projects selected by our Scientific Board in
 December 2024:



Addressing Misinformation on Natural Hazards in
 Social Media – **Damia Benet Morant**; Université
 Paris Cité, France



AI-Powered Disinformation Defence; Safeguarding
 Truth in the Digital Age – **Chintan Bhatt**; Spanish
 National Research Council (CSIC), Spain



Tracking Adolescents' Susceptibility to
 Misinformation in the Digital Age – **Jiemiao Chen**;
 Univesiteit Leiden, Netherlands



Impact of Misinformation & Mistrust on
 Environmental Issues & Democracy : a Comparative
 Study – **Minos Athanasios Karyotakis**; Hong Kong
 Baptist University, Hong Kong



Confronting the Challenges of AI Generated
 Misinformation – **Paul McIlhiney**; The University of
 Western Australia, Australia



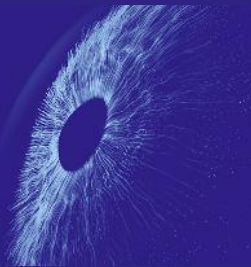
Trust in the Fediverse : Community Protocols
 and Automation to Combat Online Harms –
Ashwin Nagappa; Queensland University of
 Technology, Australia



The Effect of Fake News on Behaviour – **Aglaé
 Navarre**; University College Dublin, Ireland



Testing the Causal Impact of Social Media around
 the Globe – **Steve Rathje**; New York University,
 United States



/ Supporting research jointly
 with AXA business units

By joining forces with the AXA entities in a desire to improve independent research
 on priority risks, the AXA Research Fund allows the launch of innovative tripartite
 projects. In 2024, the fourth edition of the joint Award with AXA Investment Managers
 was launched, focusing on how to "green" the blue economy.

Dr. Nils Goseberg wins the AXA
 IM Research Award for his work
 on coastal zone protection in
 the face of climate change.



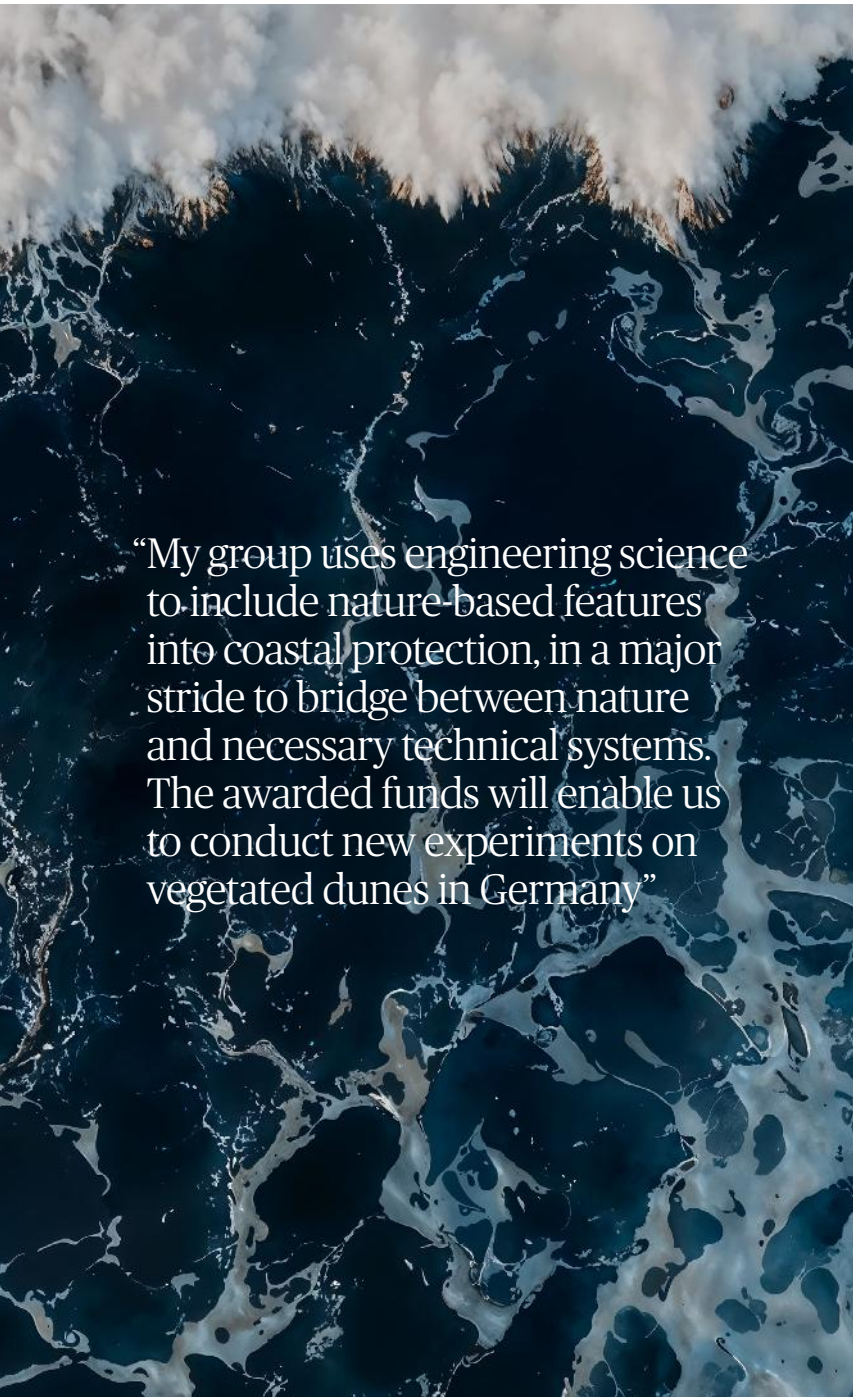
The 2024 edition of
 AXA IM Research Award
 jointly granted with
 the AXA Research Fund
 rewarded the work of
 Dr. Nils Goseberg from

Technische Universität Braunschweig
 (Germany). Dr. Goseberg's work on
 identifying and defining nature-based
 solutions to protect natural coastlines
 from severe weather events and rising
 sea levels induced by global warming.
 These solutions notably include
 exploring how vegetated dunes can
 improve the safety and resilience of
 coastal areas and the local communities
 concerned.



Read
 more

“My group uses engineering science
 to include nature-based features
 into coastal protection, in a major
 stride to bridge between nature
 and necessary technical systems.
 The awarded funds will enable us
 to conduct new experiments on
 vegetated dunes in Germany”



Building Strategic Alliances to Advance Research Frontiers

✓ Risk Resilience Partnership with Swiss Re Institute enters its second edition

In November 2024, AXA and Swiss Re announced the winners of the first edition of their joint partnership. This collaboration aiming to help build resilience to systemic risks with the help of innovative science, was jointly operated by the Swiss Re Institute and the AXA Research Fund. Both equally contributed a total budget of €1M to advance research on systemic risk over the next three years.

Two projects were selected following the first call on cyber risks, and received funding of EUR 150.000 for their respective projects over 1.5 years.



Building Cloud-Outage Resilience Based on the Cyberspace Endogenous Security Framework

Led by Xian Xu, Head of the Department of Risk Management and Insurance, Fudan University, China. The increasing reliance on cloud services has heightened the risk of cloud outages which could have serious consequences. Despite this threat, the resilience assessment in the event of cloud outages has been neglected. The project aims to develop a comprehensive measurement of cloud-outage resilience that will allow for the quantification of resilience impacts on cloud-outage consequences and how to improve it.



Integrated Framework for Smart City Economic Resilience Assessment (IF-SCERA)

Led by Matteo Spada, School of Engineering, Zurich University of Applied Sciences, ZHAW, Switzerland. There is a need to enhance economic resilience against cyber catastrophes, particularly threats to the electrical distribution network due to the pervasive introduction of digitalization. The project aims to develop a framework to address cyber threats to the electrical grid in the context of digitalization.

A second call for project proposals on Resilience Post Natural Catastrophes - Disaster Preparedness and Reconstruction was launched in November 2024



Incidents resulting from weather-related disasters like floods, rainfall, hailstorms, wildfires or droughts, have increased seven-fold since the 1970s. Their physical, social and economic repercussions often leave regional economies or local communities nonfunctional for weeks or months while houses and infrastructure are being rebuilt and public services repaired.

The new call for proposals invited researchers to investigate how to improve reconstruction/post-disaster recovery (e.g. private homes, buildings and infrastructure, social services, general economic activity) and economic resilience building after extreme weather events causing systemic risk to societies and economies.

✓ Supporting Research on PFAS Emissions with the Geneva Health Forum

Every two years since 2006, the Geneva Health Forum (GHF) has been uniting stakeholders to address critical global health issues. For the third time in 2024, AXA has supported the Grand Jet d'Or research on emerging threats.

A research team from University of Lausanne received the Grand Jet d'Or for their project on the emerging threat of PFAS emissions.

The "Grand Jet d'Or" endowed with a €50.000 prize was awarded by the AXA Research Fund, AXA Health and the Geneva Health Forum to the following research team: Exposure Sciences, Department of Occupational and Environmental Health, Center for Primary Care and Public Health (Unisanté), University of Lausanne. Their research directly addresses the challenge of developing health and medical solutions to combat the adverse effects of pollution on human health, with a special focus on protecting the general population from the emerging threat of PFAS emissions, which present significant health risks. Additionally, their study investigates the dysbiosis induced by PFAS and other chemicals in the nasal and skin microbiomes.



The Grand Jet d'Or was presented in the presence of Nils Reich, CEO of AXA Health, Julia d'Astorg, Head of the AXA Research Fund and Antoine Flahault, President of the Geneva Health Forum

Connecting science with Society



To maximise its impact, science needs to be shared beyond the lab. The second core mission of the AXA Research Fund, after the funding of independent research, is the dissemination of scientific facts and the connection of academics with decision-makers to facilitate science-based actions.

This starts with making science accessible—both understandable and available—to a broader audience, and results in various outputs, from non-scientific publications to media partnerships, debates and videos.

2024 was characterized by new formats of public conferences, publications, and experts panels conducted in collaboration with strategic partners. We enriched our MasterScience masterclass series, enhanced our LinkedIn presence, and achieved remarkable online visibility. All these outreach forms enabled us to share the latest insights and create fruitful discussions to support understanding and decision-making on key issues in the fields of climate and environment, health, socioeconomics, and new technologies.

Tackling the most pressing environmental issues

The research community focused on climate and environmental issues has been especially active in 2024, as the acceleration of extreme events has heightened the urgency for better adaptation solutions.

Below is a selection of contributions and events addressing challenges related to climate change, biodiversity, and resource management.

Understanding and managing megafires



2024 has been another year of intense wildfire activity across various regions worldwide, placing immense pressure on ecosystems and infrastructure. In Spring, we released a new episode of our MasterScience series to provide the latest research insights on the issue, in an open access masterclass format.

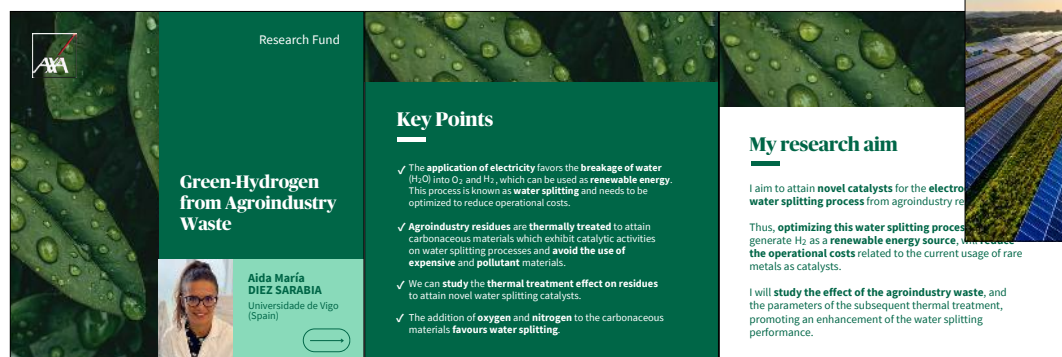
Available on YouTube, The masterclass provides expert insights on the nature and impacts of megafires, and presents approaches to mitigate their impact.



Access the masterclass here

Tackling the energy transition challenge with innovation and multidisciplinary

The presentation of innovative routes to accelerate the energy transition was a big focus in 2024. Seven AXA postdoctoral fellows introduced the stakes and groundbreaking approaches of their projects, bringing together a wide array of disciplines and technologies.



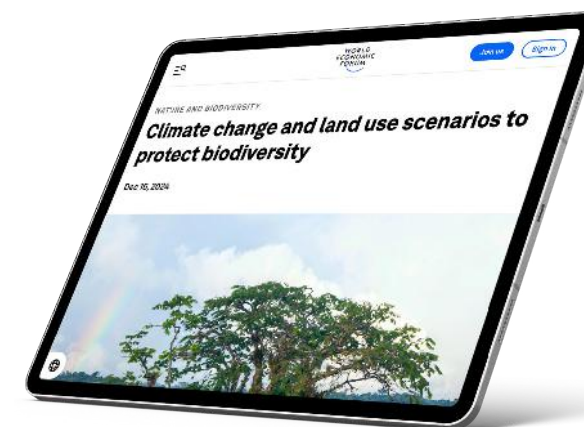
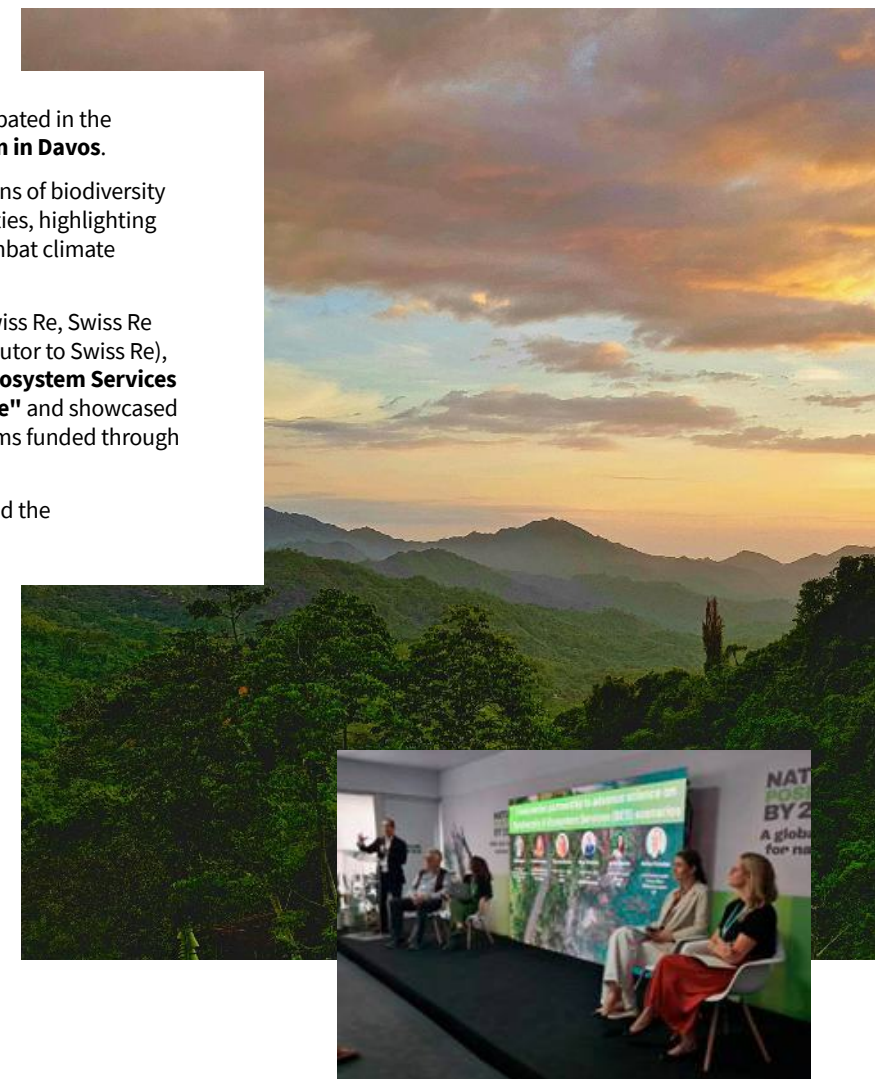
Pushing the biodiversity agenda with our partners, at the World Biodiversity Forum 2024 and COP 16

In June 2024, the AXA Research Fund participated in the 3rd Edition of the World Biodiversity Forum in Davos.

The forum explored the profound implications of biodiversity loss on financial assets and economic activities, highlighting the urgent need for systemic changes to combat climate change and land-use alterations.

A session organized in collaboration with Swiss Re, Swiss Re Foundation, WWF, and EY (as service contributor to Swiss Re), focused on **"Modelling Biodiversity and Ecosystem Services (BES) Loss Scenarios to Advance Resilience"** and showcased the pioneering work of the five research teams funded through our strategic partnership.

Following the forum, the consortium pursued the conversations initiated at COP 16 in Cali.



Finally, an article published on the WEF outlined the five research projects funded by our coalition to develop scenarios aimed at enhancing the resilience of BES through advanced modeling and community engagement.

Sharing the preliminary research results facilitated engagement among researchers, policymakers, and corporate stakeholders, fostering an environment conducive to collaboration and innovation. This approach is essential to build a robust foundation for preserving biodiversity and ensuring ecosystem health for generations to come.



Read the paper

Two new IPBES reports on biodiversity supported by the AXA Research Fund

On December 19, 2024, the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) released two pivotal assessment reports.

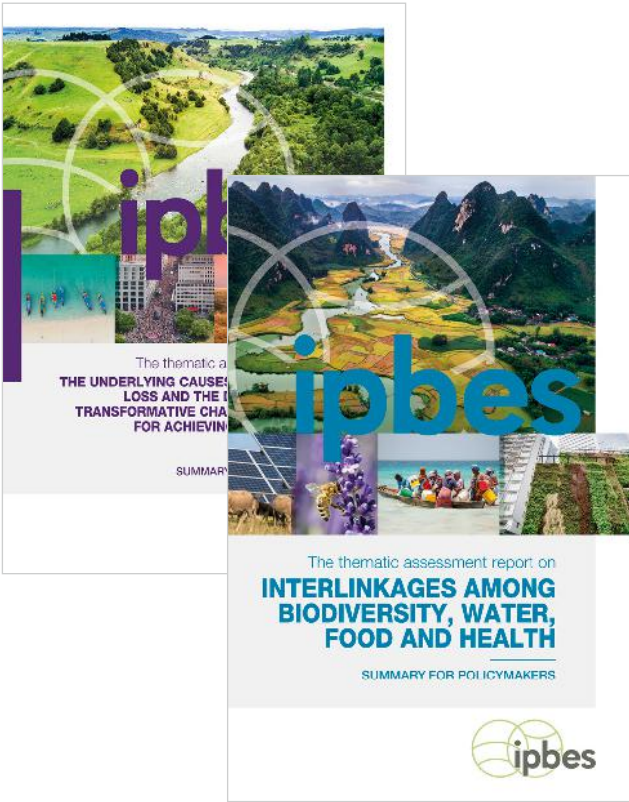
The AXA Research Fund made a significant financial contribution to the IPBES Fellowship Programme working on these two assessment reports.

- The **“Nexus Assessment”** offers decision-makers around the world the most ever comprehensive report of the complex interlinkages among biodiversity, water, food, health, and climate change.
- The **“Transformative Change Assessment”** identifies the most significant barriers to transformative change and offers strategies and actions with the greatest potential for achieving a sustainable world.

These reports are the culmination of years of dedicated research and collaboration by hundreds of renowned scientists from all regions of the world. The AXA Research Fund supported early-career researchers to work on the IPBES assessments alongside those leading global experts.



Read more, and access the reports



Celebrating 5 years of the AXA Chair in Mountain Ecology, at Toulouse INP

In commemoration of the 5th anniversary of the AXA Chair, Prof. Dirk Schmeller convened on April 19th a large community of over 60 scientists and experts from UK, France, Germany and Belgium, to address critical challenges and vulnerabilities of mountain ecosystems, such as lake pollution or biodiversity loss.

These ecosystems are crucial – as half of the world's population depends on mountain water – but they are particularly vulnerable to the effects of climate change. With 1.1 million people living in such ecosystems, urgent action is needed to protect and preserve these vital environments.

The AXA Chair celebration provided a unique platform to explore the complexities of ecological interactions and climate change, the impact of climate change on biological populations, social inequalities and health, and the impact of chemical pollution impact on biodiversity.

This milestone marked a significant occasion to celebrate the outputs of the AXA Chair in Mountain Ecology, at Toulouse INP. Franck Courchamp, who heads the AXA Research Fund Chair on Invasion Biology Université Paris-Saclay, also participated in discussions on invasive species.

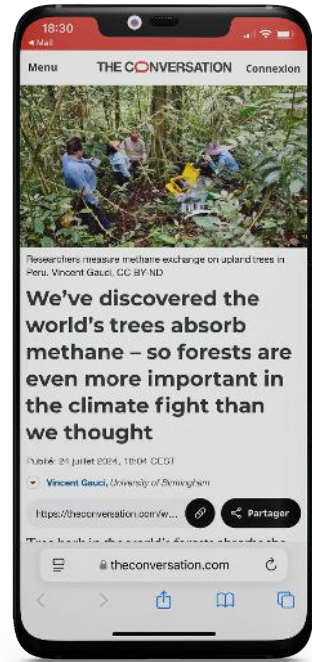


The IPCC and IPBES have been calling for transformative change in the context of the climate fight and wildlife conservation—a fundamental reorganization across technological, economic, and social factors, including paradigms, goals, and values.

Prof. Dirk Schmeller's latest article in The Conversation France, gives a definition and framework for 'transformative change' and discusses its place as a cornerstone of the fight against climate change.



Find out more here



Major discovery in the field of forestry

This highly publicized discovery by former AXA Fellow Vincent Gauci, from the University of Birmingham, suggests that forests are even more important for climate mitigation than previously thought, emphasizing the necessity of protecting and restoring these ecosystems. The article explores the implications of this research for climate strategies and forest management.



Read the article published on The Conversation

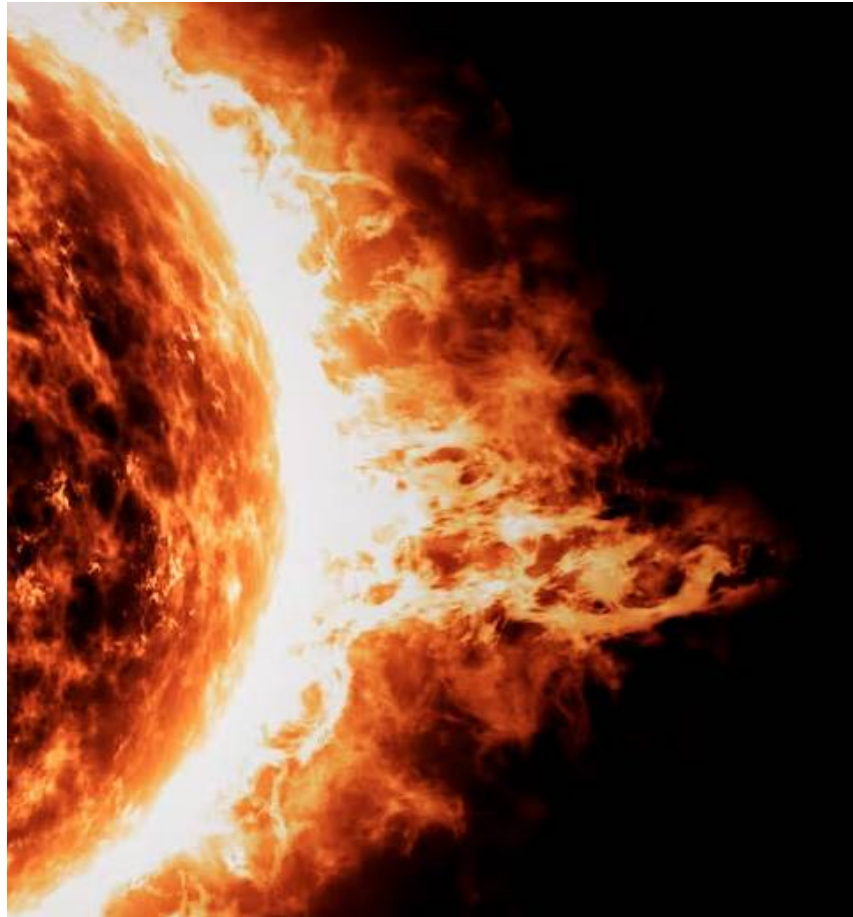
How solar storms play havoc with our lives

The scientific discipline tasked with studying its complex interactions with the Earth is called “space weather”. Its aim is to understand, quantify and, if possible, predict the effect of the Sun on our space and terrestrial infrastructures. So, what are these risks? How can the Sun affect our human activities? And above all, how can we anticipate and protect ourselves against it?

In this article, Prof. Mathieu Barthélémy & Dr. Elisa Robert from the Grenoble University Space Center (France), in a Joint Research Initiative on Space Weather with AXA XL's space division, revealed the far-reaching consequences of solar storms on our everyday lives.



Read the full article



Towards a healthier & sustainable environment

Preserving our health in the face of climate change

In 2024, several AXA Research Fund Fellows shared their perspectives alongside other experts and scientists in the FACT review of Veolia Institute dedicated to the challenges and solutions for safeguarding human health in the face of climate change. The group included AXA Postdoctoral Fellows Dr Choo-Yoon Yi and Dr. Emmanouil Proestakis.

Developing indoor heat-health warning systems for vulnerable populations

The work of Dr. Choo-Yoon Yi emphasizes the need for improved heat-health systems that consider indoor conditions, while current warning systems focus on outdoor temperatures. His research on residential care homes reveals significant variations in indoor heat stress across housing types, highlighting the necessity for tailored interventions. (Read p.100)

Tackling the effects of atmospheric dust hazard on human health

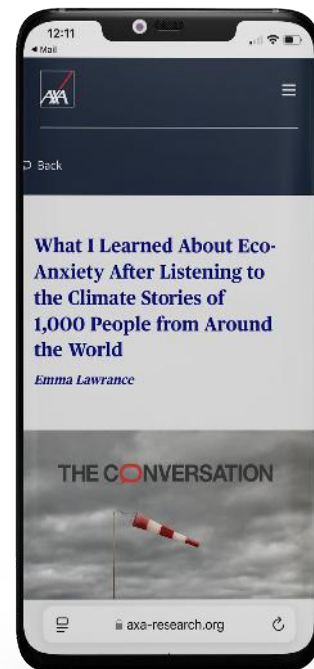
Atmospheric dust layers impact Earth's weather and climate systems, but also human activities and health. The research of Dr Emmanouil Proestakis advocates for the combination of scientific advancements in the observational and modeling capabilities of dust aerosols with individual actions – such as monitoring air quality indexes to limit outdoor exposure during high dust levels for people with pre-existing conditions. (Read p.76)

To pursue the conversation on the links between health and the environment in the context of a changing climate, a conference was organized on January 27, 2025 by Veolia Institute.

Julia d'Astorg, Head of the AXA Research Fund, Sandrine Bouttier Stref, CSR Director of the Sanofi Group and Philippe Seberac, Director of Technological and Scientific Expertise at Veolia, respectively focused on health implications and water access challenges.



Read the reports



Eco-Anxiety : learnings from 1000 people climate stories

Six out of nine planetary boundaries for the liveable environmental niche are crossed, as North America and parts of Asia bake, Nigeria and Brazil flood, and Filipinos flee homes buffeted by another intense typhoon. I am thus worried about the people who are not feeling worried about the state of the environment right now.

Dr. Emma Lawrence, former AXA Post-Doctoral Fellow at Imperial College London, explores in this article the psychological responses to the climate crisis and the implications for individuals and communities, based on her extensive research fieldwork.



Read the article

Watch the replay of the conference on these inspiring discussions



/ High visibility & community engagement for the AXA Chair on Water Quality and Global Change



In 2024, the Chair made significant strides in the scientific outreach of its research program.

Enhanced program visibility: Lectures were delivered at partner universities in Bolivia, Cuba, Kenya, Uganda, the Netherlands, France and South Africa. Research findings were presented at major international scientific conferences, including The World Water Forum in Indonesia and the UNESCO IHP Council meeting in Paris.

Citizen Science workshops: Approximately 350 students and local and national stakeholders were trained on the importance of water quality for sustainable development in Kenya, Uganda, Belgium and in Bolivia.

Outreach and education: Four videos were produced to present the AXA Chair, showcase Citizen Science initiatives, and explain water planning under climate uncertainty. They were shared along with updates, research highlights, and event outcomes via LinkedIn.

Mass media visibility: Prof. Van Griensven was featured on national news in Belgium, and university press releases in Bolivia, Kenya, and Cuba helped disseminate the program’s milestones to academic and local audiences.

This adds up to no less than 18 scientific articles published by the AXA Chair in 2024, making a substantial contribution to the scientific community and significantly raising the program’s visibility in academic, policy, and public spheres.

/ Engaging science with policy making on climate economics

“Towards a Sustainable and Insurable Future” was the central topic of the climate-economics conference co-organized with our strategic partner CEPR - Centre for Economic Policy Research on September 11th 2024 at the Collège de France.

High-level stakeholders from academia, policymaking, and industry came together to explore the pressing challenges of tomorrow’s insurability and the pivotal role of public and private climate finance in driving a sustainable economy.

Panel 1: Bridging the Insurance Gap in a Changing Climate

The first panel tackled the escalating frequency of weather-related disasters and Europe’s staggering 75% insurance coverage gap. Panelists called for greater solidarity, enhanced customer engagement, and supply chain preparedness to rebuild communities post-disaster. They also debated the liberal versus non-liberal dynamics of the insurance market, advocating for a balanced approach to address these pressing issues.



Gilles Mœc, AXA Group Chief Economist



Panel 2: Financing the Path to Sustainability

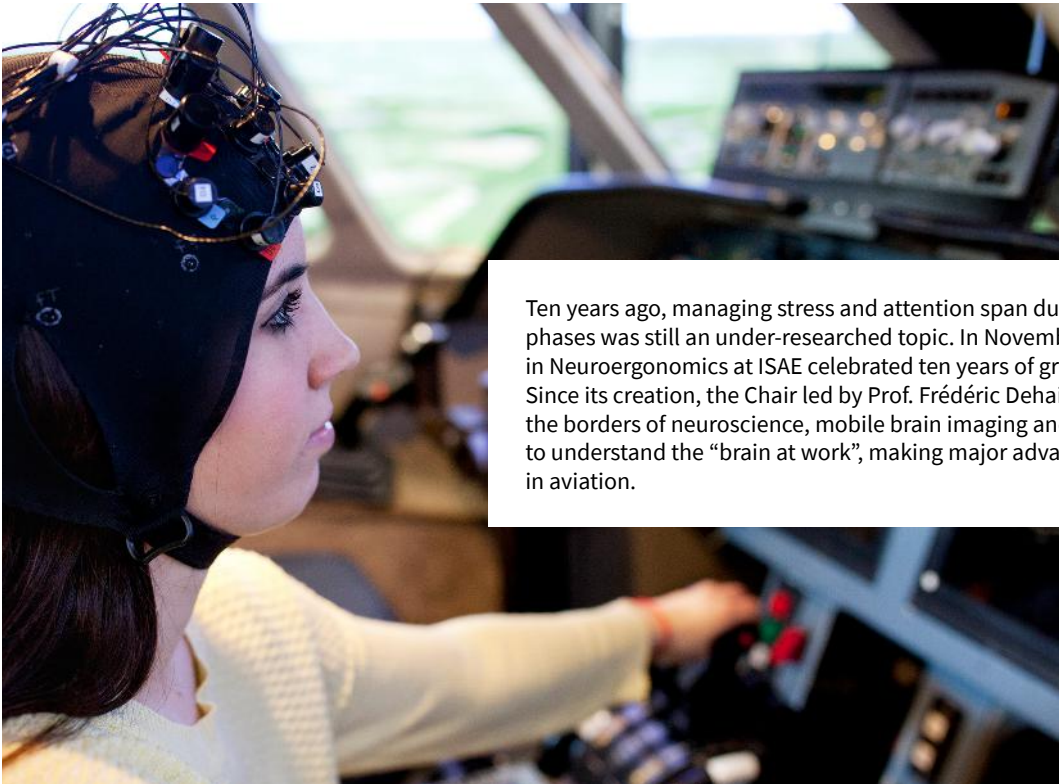
The second panel turned the spotlight on the financial roadmap to a sustainable future, highlighting the EU’s ambitious 2030 targets, which require an estimated €406 billion annually—equivalent to 2.6% of GDP. Experts stressed the critical role of the private sector, the need for transparent carbon pricing policies, and the interconnectedness of climate action and nature conservation. Collaboration between public and private sectors emerged as a key theme in achieving net-zero goals.



Watch the replay

To explore deeper, VoxTalks of expert leaders and academics by Tim Philips are available on the CEPR website, on “Insuring the world of the future”, “Financing the green transition” and “The price of deforestation”.

/ New frontiers for Innovative Science:
 From flight safety to clinical applications, a decade
 of scientific advances in Neuroergonomics



Ten years ago, managing stress and attention span during difficult flight phases was still an under-researched topic. In November 2024, the AXA Chair in Neuroergonomics at ISAE celebrated ten years of groundbreaking research. Since its creation, the Chair led by Prof. Frédéric Dehais has been pushing back the borders of neuroscience, mobile brain imaging and artificial intelligence to understand the “brain at work”, making major advances to enhance safety in aviation.

“By highlighting the concrete impact of this research on everyday life, improving both safety and quality of life, we express our gratitude to the AXA Research Fund for its vital support that has helped advance this research, broaden its impact and foster collaborations with meaningful real-world applications”



Frédéric Dehais
 AXA Chair in Neuroergonomics for flight safety, Institut Supérieur de l'Aéronautique et de l'Espace

- Now a global leader in aviation safety research, the team has been instrumental in establishing this research field, notably through the biannual International Neuroergonomics Conference, which has gathered leading experts from around the world since 2016, and the open-access academic journal Frontiers in Neuroergonomics.
- Thanks to the AXA Chair, a new center dedicated to Neuroergonomics has been created on the ISAE campus, as well as a new Masters in Neuroergonomics & Artificial Intelligence.
- The learnings from the research have allowed for the offering of personalized adaptative training programs. A spin-off was created, Hinfact, now offering these trainings to major airlines companies in 25 training centers around the globe. It has helped the aviation industry improve safety risks analysis and risk management, as well as training efficiency, and created over 40 positions, and offered 25 internships.
- Beyond aviation, work on brain-computer interfaces is also paving the way for revolutionary clinical applications. In collaboration with Prof. Stein Silva (CHU Purpan), the team is developing a “cockpit bed” capable of monitoring the state of comatose patients in real time, opening new perspectives in personalized medicine.

Head of publication: AXA Research Fund
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It's round.



**Science is not an opinion.
It's our future.**

That's why the AXA Research Fund has been supporting independent scientific research since 2008, contributing to make a safer, fairer and more inclusive future for as many people as possible.

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