



Reinsurer SCOR backs climate prediction market initiative

UNDER EMBARGO until 27th November 2024 14:00 (GMT)

The corporate foundation of the French reinsurance giant SCOR is backing an initiative led by Lancaster University Management School to use prediction markets to combine diverse forecasts of future climate into unified predictions and potentially provide a radical new mechanism for funding climate research.

The *Climate Risk and Uncertainty Collective Intelligence Laboratory* (CRUCIAL) is a collaboration between researchers at Lancaster University Management School (LUMS) and the University of Exeter's Land, Environment, Economics and Policy Institute (LEEP). CRUCIAL uses prediction markets, with expert participants from academia and the private sector, to produce collective forecasts of climate-related risks.

CRUCIAL runs "prediction markets" in which climate experts effectively bet on possible future climate outcomes. CRUCIAL's platform is designed to turn their bets into probabilities of the different possible outcomes. These probabilities represent the collective wisdom of the participating experts, which can change as new information becomes available to those taking part. This approach to producing forecasts of future climate means that users of the forecasts don't have to pick a single forecaster to rely on, and it lets forecasters demonstrate how confident they are in their own predictions.

Participants in CRUCIAL's markets do not have to pay to take part but are compensated based on the contributions they make to the accuracy of the collective forecasts. While participants might base their predictions on different types of models — including AI as well as more traditional climate models — a prediction market can aggregate all these views into a single collective forecast. Such markets could provide a new performance-based way to fund climate forecasting research and provide forecasts of global temperatures, greenhouse gas concentrations, sea-level rise, hurricane activity and other climate-related risks.

CRUCIAL uses the AGORA prediction market platform, developed by Winton Capital Management, for climate forecasting. Winton donated AGORA to Lancaster University, where CRUCIAL is currently running a demonstration market to predict the number of hurricanes during the 2024 Atlantic hurricane season.

The SCOR Corporate Foundation for Science was created by the French reinsurer SCOR to support research in risk analysis of interest to the reinsurance industry. The Foundation will provide funding to CRUCIAL to support its infrastructure and personnel and funds to incentivize participants in the prediction markets.

Dr. Kim Kaivanto, who is leading the initiative at Lancaster University Management School, said that "Our ambition is to create a new type of scientific institution that combines the concept of incentive prizes — like the X-Prize — with the proven ability of markets to elicit and aggregate information."

According to Dr. Mark Roulston, who led the development of AGORA at Winton, “When the primary deliverable of research is a forecast, prediction markets offer a more effective way to combine and summarize the research and a more efficient way to distribute funding.”

Highlighting the interest for a reinsurer like SCOR to participate in the CRUCIAL project, Philippe Trainar, director of the SCOR Foundation for Science, insists on the fact that "The consequences of climate change are currently and will remain in the future the subject of lively controversy between experts and that beyond the scientific analyses which are progressing rapidly, the prediction markets have demonstrated their unrivaled capacity to anticipate future trends in such controversial areas, where it is necessary to quickly combine scientific results, statistical observations and learning from experience."

For more information contact:

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Details:



CRUCIAL (Climate Risk Uncertainty and Collective Intelligence Laboratory) is an initiative between Lancaster University Management School and the Land, Environment, Economics and Policy Institute at the University of Exeter to use prediction markets, with expert participants, to produce collective forecasts of climate-related risks.

<https://www.crucialab.net/>



The SCOR Corporate Foundation for Science forms part of the SCOR reinsurance group's long-term commitment to research and the dissemination of risk-related knowledge. This commitment is an integral part of SCOR's DNA, as illustrated by the Group's tagline, "The Art & Science of Risk". Risk is the "raw material" of reinsurance, and SCOR stays at the cutting edge of risk expertise and research through its vast network of academic institutions, as well as through the support it provides to numerous disciplines including mathematics, actuarial science, physics, chemistry, geophysics, climatology, economics, finance, and more.

<https://foundation.scor.com/>

LEEP (Land, Environment, Economics and Policy Institute) is interdisciplinary research group, with core economic skills combined with expertise in natural, physical and social science, located within the University of Exeter Business School. LEEP integrates expertise from natural and physical science research within environmental economic analyses, which is the hallmark of its policy advisory work and the research that it produces across a variety of fields.

<https://www.exeter.ac.uk/research/leep/>



Lancaster University Management School (LUMS) is the leading business school in North-West England, and consistently receives high rankings in research and teaching (REF, TEF, Financial Times, QS, The Times, Guardian). In the 2021 Research Excellence Framework evaluation, LUMS ranked #1 in the UK for research power. LUMS is among only 1% of business schools that enjoy triple accreditation (AACSB, EQUIS, AMBA).

<https://www.lancaster.ac.uk/lums/>

Peer-reviewed articles:

Roulston, M., Kaplan, T., Day, B., Kaivanto, K. (2022) Prediction-Market Innovations Can Improve Climate-Risk Forecasts. *Nature Climate Change* Vol. 12, Iss. 9, pp. 879– 880.

<https://doi.org/10.1038/s41558-022-01467-6>

Roulston, M., Kaivanto, K. (2024) Can expert prediction markets forecast climate-related risks?, *Bulletin of the American Meteorological Society* Vol. 105, Iss. 9. <https://doi.org/10.1175/BAMS-D-24-0135.1>

Roulston, M., Kaivanto, K. (2024) Joint-outcome prediction markets for climate risks, *PLOS ONE* 19(8): e0309164 <https://doi.org/https://doi.org/10.1371/journal.pone.0309164>