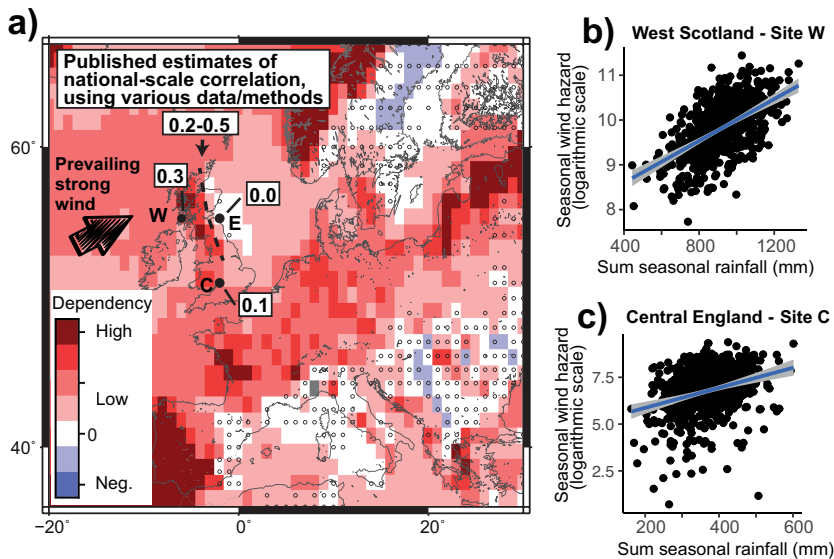


Project Case Study #1 - It's windy when it's wet: why UK insurers may need to reassess their modelling assumptions



Overview: All models are by design a simplification of the real world and insurers need to decide carefully which aspects of the real world to simplify. UK property is exposed to weather risk but in 2021 only a few insurers assume that the tendency for major windstorms to co-occur with inland floods during the winter season needs to be reflected within their model.

A pilot study was conducted to consider whether or not UK insurers may need to reassess their modelling assumptions

Main Study Conclusions

- This pilot study challenges the existing assumption, providing an initial indication that the correlation between windstorms and inland floods is underrepresented in insurers' models.
- Our test case showed that the neglected correlation might plausibly result in a low single digit underestimation of insurers' capital allowance.
- This is not alarming by itself but indicates that an aggregation of underrepresented correlations could raise risk management concerns – if not capital ones – particularly as this could be altering as climate changes.

REFLECTIONS

The project team consisted of members from the Bank of England (regulator), Aon (insurance broker), AIR worldwide (risk modelling) and the Universities of Loughborough and Reading. Upon completion, the team reflected on the project. Here, reflections are an overview of the collected opinion of these individuals, not the organisation they work for.

Project outcome

All partners felt that the project was successful, producing a journal article¹ and co-written piece for the Bank Underground².

What made the project successful?

- *Clear task:* A well-defined scientific starting point^{3,4} requiring further study, recognised industry need^{5,6}, and identified regulatory tool i.e. the General Insurance Stress Tests⁷.
- *Small and agile group* of participants all familiar with the sector.
- *Benefit for all parties*, although identified in an *ad hoc* way.
- *Good awareness of positionality of others* (e.g. concerns, motivations, timescales, sensitivities).
- *Trust already existed* (e.g. that academic wouldn't sensationalize results). Critically, the regulator was closely

engaged and it was determined early on that all would have to agree to any written output.

- *Clearly identified contribution from all*, which also leverages existing skills, practices and data.
- *Some luck* (i.e. in the 'soft' part of the insurance cycle where resource is not so constrained).
- *Internal reviews* of work done.

What might have been done better?

- *A more formal planning process*, such as Figs. 1&2.
- For flexibility, EDI and additional benefit each partner could have paired with a junior colleague.
- *Process for external review* to allow input, to increase sector buy-in and improve the work, yet designed pragmatically to prevent significant delays.

Endnotes

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Fig. 1: A mind-map, 'Map 2' in the Co-RISK format, conceptualizing the stakeholders of the TOGETHER project together with their contributions, motivations, barriers, and concerns. Perhaps most importantly, the map identifies specific outcomes/outputs and 'insertion points' denoting exactly where science might likely be incorporated into policy, practice or decision making.

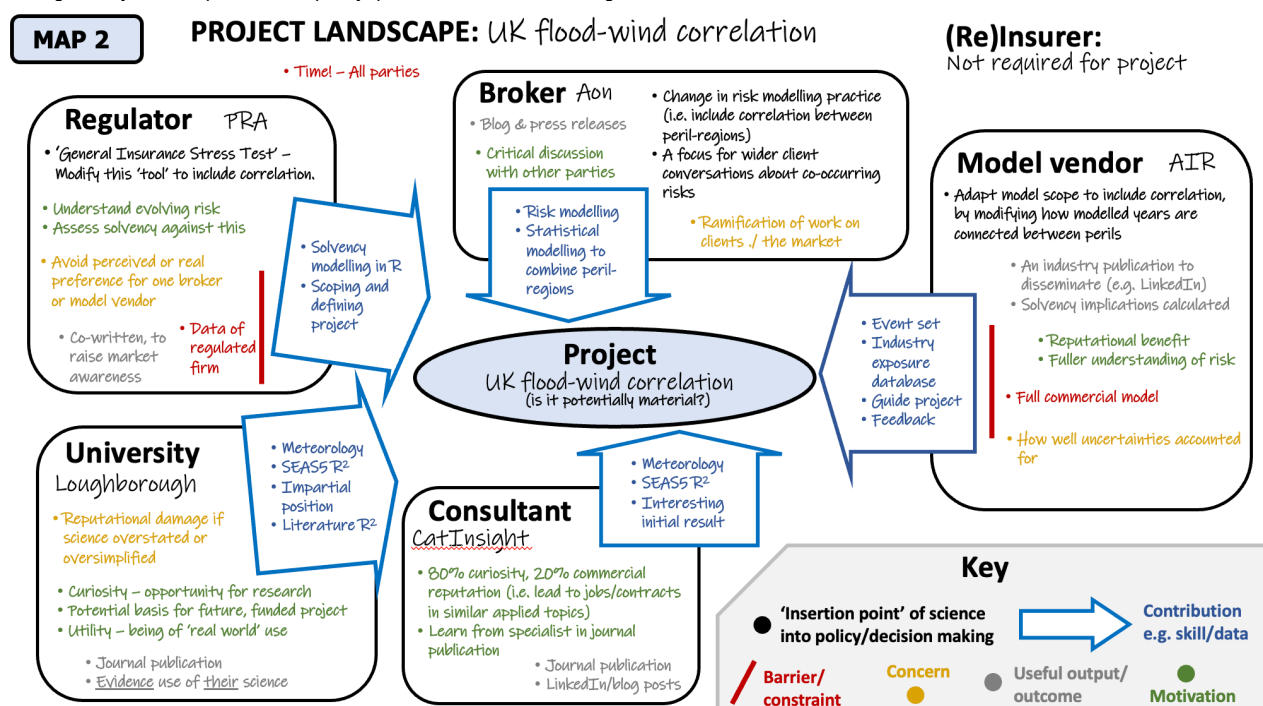


Fig. 2: A planner for tasks and actions within TOGETHER, framed as a multi-hazard risk framework tailored to the immediate task in a bottom-up approach. Important elements include a pragmatic design (grey box), and tasks and outcomes relevant to each stakeholder. The plan accounts for restrictions (e.g. on data or information, which in detailed form can only pass between certain partners).

