

## Investing in Science For Natural Hazards Insurance

### *The making of ..... some thoughts by John Hillier*

In writing the briefing document '*Investing in Science For Natural Hazards Insurance*' it was something of a surprise to me that we ran across quite a few sensitivities in our use of language that I didn't anticipate, and that we're something of an eye-opener to at least one of the co-authors. So, I am writing this commentary to set out the more notable of these points of linguistics and understanding so that I remember them, and also in the hope that it might be interesting to anyone else setting up university-industry collaborations with the (re)insurance sector.

The briefing document was co-written by a group of people representing university-based scientists, the insurance sector, and one of the organisations that channel government funding (i.e. NERC). And, it is important to note that these individuals were all the types who have pretty good baseline knowledge of at least one of the other groups of stakeholders. For instance, I mainly identify myself as a university-based research scientist although currently working mainly as a Knowledge Exchange Fellow for NERC, and I worked as a catastrophe modeller in an insurer for 2 years. So, we're at the end of the spectrum most likely to be aware of sensitivities in the other groups, and yet we missed some.

We were all working to achieve the same thing, get on well, are pretty tolerant, and the imperfect usages of language were inadvertent and possibly sub-conscious. So, we worked through things, but I can see how such mis-understandings might be detrimental.

The linguistic points most memorable to me are

- *Academic*: As it is typically used, this term is essentially derogatory i.e. '*that's just of academic interest*' or '*that's academic*', meaning irrelevant. The terms 'research scientist', or 'university-based scientist' are less loaded.
- *Scientist*: Some in industry/funders consider themselves to be ex-scientists or analysts with a scientific background, but others define themselves as scientists. Namely, it's a mistake to conflate scientist with a university-based researcher, even if the majority of work done to a depth suitable for publication in peer-reviewed journals is done in universities.
- *Peer-reviewed*: There was universal agreement that this is a benchmark, but following on from the last point, it is not appropriate to conflate 'peer-reviewed' with 'university'
- *University-based scientist*: we ended up using this term for what might also be thought of as academics in the environmental science field for the reasons above, and also because it distinguishes universities from other publicly-funded organisations (e.g. the MetOffice, BGS etc ...) which deliberately restricted the scope of the briefing note.
- *Board-level*: This should not be conflated with 'senior' in terms of decision makers in industry. The board, executive committee, and variants on governance structures are particular to individual companies and there are also a range of important and influential senior decision-makers below these levels.

There are also some other points about understanding or emphasis

- *Producing a document with multiple audiences*: The note is quite deliberately and simultaneously targeted at both university-based scientists and the (re)insurance sector. If collaboration is going to proliferate, we all need to be (literally) on the same page at some point. This required a re-framing half way through. Initially, the note focussed closely on the findings of the Oasis LMF workshop based on the assumption that all groups would be interested in an objective summary of how environmental science was used in the

(re)insurance sector. It was pointed out that (re)insurers already have a pretty fair idea of how their sector works, so this was likely to cause limited excitement amongst this group.

- *Implications about responsibility:* A key point of the briefing note is that effort is needed by all groups (university-scientists, funders, and industry) to both put a case within UKRI for funding allocations that can target (re)insurance, and then to put high-quality bids into funding calls from any successfully created schemes. It was quite difficult to avoid implying a responsibility on one of the groups. For example, '*Yet, how can government (i.e. UKRI) best fund university-based scientists to work with (re)insurers in light of their differing priorities and existing tools and expertise within industry?*' was felt to imply the onus for current levels of collaboration not being greater was on the UKRI. So, this was changed in the final version to better allocate responsibility to all three parties.
- *Individual is not institutional* but both must work for a collaboration in that typically a limited number of individuals must champion a collaboration, and it must align with their motivations as well as those of their organisation. A clear example of this is where academics must publish, and need regular journal articles attributable to them, whilst universities can take a wider broader view (i.e. are happy if individual projects produce only non-publishable work leading to impact as long as there is balance across many projects). The potential for mis-alignment is because each collaboration needs a university lead (i.e. scientist convinced doing this in place of other work such as research is a good option for them).

So, as a result of writing this note I will try to better understand and account for my sub-conscious biases. I will also try to be more aware of that different perspectives likely exist even in areas I think I know reasonably well.