

**Caterina Lindman Question and Answer session (Q=question; A=answer; C=comment)**

- Q:** Could you comment on the local use of the index. Have you had any experience about using the index locally in some certain countries?
- A:** No, not yet. We have had some expressions of interest from property casualty actuaries of using the data and then putting into their modules. And so we hope to pursue those because that is exactly what we want to happen is that actuaries come and take the data and play with it and use it for their own purposes.
- Q:** I have been involved in writing a paper in connection with some of the investment aspects of climate change and there is a big debate as to whether investors should disinvest from fossil fuel companies or should engage with them. I am very much in the area of wanting to engage, certainly with the oil companies. But my question relates to an announcement today of an initiative from certain oil companies to get involved more, prior to the Paris talks, in connection with what they can do in respect of climate change ,but the big exceptions from that are the North American oil companies, in particular Chevron and Exxon. I wonder if any attempts might be made to use this data that you have to try to persuade these particularly North American companies to join their European counterparts in this initiative?
- Q:** That would be a great idea. Often we see that Europeans are more of a leader and then North America follows afterwards, so that might be happening with the oil companies too.
- Q:** What are the plans if I need to share this information outside of actuarial circles with the general public?
- A:** We're going to do a launch of the index and so we have a communications committee that is working on what the strategy of that looks like. We are definitely planning to issue press releases and put information right on the website. There are probably other ideas and other things we can do though, so if you have some of those ideas that you would like to share I would love to hear them.
- C:** In the US at least we've already been promoting the index for policy makers. We've been in front of not only the insurance commissioners (NAIC), but we've also been in front of our federal regulators to acclimate them, excuse the pun, to the fact that this is going to be available soon. So there's already an aggressive campaign to put it in front of policy makers.
- Q:** Have you considered another variable which would be the sea temperature? The article I read on the subject told me that one of the biggest threats on the future climate is how the sea temperature evolves. I wondered if you considered this variable to be included and if so, why didn't you use it? Is there sort-of a strong correlation with others? So what was the reason?
- A:** I know when Solterra was figuring out which variables they would recommend they did have a bunch of criteria, like do we have a long history of measurement, and maybe that one was something that didn't have as long a history or as much of a global coverage. I do recognize though that that's quite an important topic. It's not just sea temperatures, but the carbon dioxide in the atmosphere gets absorbed in the oceans making them more acidic which is also bad for the coral reefs and for any fish that have skeletons on the outside because when it's more acidic they

can't form those skeletons as easily. And then of course if the temperature warms you're going to have the expansion of the amount of water in the oceans which would lead the sea level to rise.

**C:** There is already a recorded strong correlation between sea temperatures in the Pacific and draughts in Australia. The Australian association could easily be more involved in your project.

**Q:** Some of the critics of climate change will talk about temperature increases being measured in cities where they naturally create higher temperatures. So it's not so much that the earth is getting warmer, it's just creating places where temperature can be higher or that increases in property damage are due to the fact that we have more people along the sea. Is there any kind-of framing with this project that kind-of helps address the data so that it's not so easily dismissed?

**A:** We need to work on that for sure, but I think that the fact our data set is on a 2.5 degree grid, we are not just picking the urban heat island affect. It was important for us to make sure it wasn't just because of population that the risk index went up, so we are taking those kinds of criticisms into consideration.