

Summary of Proceedings

On 7 December 2017, ClientEarth hosted a seminar on climate science and the law in collaboration with Oxford University. The two-hour seminar included presentations from leaders in both fields:

- Dr Friederike Otto of Oxford University outlined how climate science seeks to resolve questions of whether and to what extent extreme weather events are caused by anthropogenic climate change;
- Leigh-Ann Mulcahy QC of Fountain Court Chambers explained the recent development of the English courts' approach to tort law doctrines such as causation and explored how such doctrines might apply in the context of climate litigation;
- Dr Claire McIvor of Birmingham University addressed the English courts' approach to assessing and weighing scientific evidence with specific reference to tort claims and epidemiology; and
- Lindene Patton of Earth & Water Group provided an overview of how climate change liability and risk currently feature in the US legal context and how these issues can be expected to develop in the future.

The content of the presentations provoked important questions, particularly about how science could support the development of the law in this area, and some key takeaways emerged from the discussion:

1. At the outset, it is critical that the scope of any event attribution study is defined appropriately so that it answers the relevant (legal) question. For example, what is the weather event that has caused the loss and damage alleged? Is the relevant event in fact a series or "cluster" of weather events? And are there sufficient data and viable climate models available to simulate the magnitude and probability of the event in a counterfactual scenario (i.e. in a world without anthropogenic climate change)? How did intervening factors (such as soil moisture in relation to a flood event) affect the severity of the event's effects?
2. Different court systems will approach scientific evidence in different ways; however, in all legal systems overriding considerations of justice and public policy will often guide the way in which courts assess scientific evidence, at the cost of absolute fidelity to any particular scientific method or set of results.
3. The extent to which courts are willing to vary or circumscribe orthodox legal tests (such as the 'but for' test for causation and the existence of a duty of care) will be highly influential in setting the limits of tort-based climate change litigation.

4. Causation in English tort law involves three components, general causation, individual causation and fault causation. The UK courts have created exemptions to the 'but for' test for negligence in certain limited cases (mesothelioma and clinical contexts), although these developments have been controversial.
5. UK courts have struggled to interpret expert epidemiological (statistical) evidence, equating a $RR > 2$ as satisfying the balance of probabilities test (conflating the probabilistic expression of results with confidence in results). Note that the balance of probabilities test (equated to $> 51\%$ certainty) is a minimal standard of proof.
6. The Bradford-Hill criteria are used to assess the probative value of expert statistical evidence.
7. The latest event attribution science can be used to inform the extent of statutory and common law obligations in respect of mitigating and planning for the reality of current and future climate-change risk. In the US, the assessment of foreseeability of harm is relevant to the application of the test for 'proximate cause'. The question then becomes, what should the reasonable defendant have known? What steps should they have taken to mitigate or to adapt to these risks? Could be relevant to professionals advising in relation to the built environment or managing vulnerable assets.
8. Special class of officers and directors of public companies, who may have specific duties to disclose financial implications of increased risk to the market. Liability may arise under NY Martin Act where disclosures are shown to be fraudulent.