

## OPINION

# Strategies for navigating competing climate science in human rights courts

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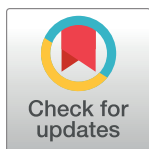
Climate science constitutes an essential evidentiary basis for judges' decision-making in climate change litigation. It has assisted courts in identifying victims, determining guard rails for states' legal obligations to mitigate and adapt to climate change, and prescribing remedies when states have failed to meet their legal obligations [1]. States' duties to prevent climate change impacts are also hotly debated in human rights courts ('HRCs'). These novel legal claims give rise to particular challenges as HRCs must interpret (uncontested) scientific evidence and, more demandingly, 'referee a "battle of the experts"' [2] when presented with competing scientific claims. This task may require adapted fact-finding strategies [2–4], for which the approaches of domestic and other international courts could provide inspiration.

## HRCs fact-finding practices and implications for climate cases

Domestic courts and international tribunals, such as the International Court of Justice ('ICJ'), the International Tribunal for the Law of the Sea ('ITLOS') and the International Criminal Court ('ICC') have long engaged with scientific fact-finding on the basis of established evidentiary rules and other procedural tools [4–6]. HRCs, however, are neither specialised nor inherently deemed competent to undertake scientific fact-finding [7].

In exercising their supervisory function, HRCs primarily determine whether domestic courts adequately considered human rights and struck a fair balance between competing interests. Particular weight is given to domestic courts' fact-finding, due to HRCs' explicitly subsidiary role. HRCs will only depart from domestic findings of fact if deemed 'unavoidable' [7], for instance when domestic fact-finding has not met a sufficient standard of rigour, or when fact-finding has not occurred at all. The European Court of Human Rights (ECtHR) exercises 'particularly thorough scrutiny' [8] of domestically established facts for cases concerning possible infringements of the rights to life, which may also be contested in climate cases.

How HRCs navigate scientific fact-finding could have far-reaching implications [2, 9, 10]. For example, in the recently decided *Duarte Agostinho and Others v Portugal and 32 Other Member States* ('*Duarte Agostinho*') case before the ECtHR, Ireland (one of the defendants) argued on the basis of an expert report that their 'contribution to overall warming over the 2020–2050 period would be either close to zero or negative' [11]. The applicants disputed this claim, referring to peer-reviewed research that they said questioned the methods used in Ireland's expert report for quantifying national non-CO<sub>2</sub> greenhouse gas emissions' contribution to global warming [12]. While this particular case was thrown out on procedural grounds, it is clear that whether or not a country is considered to be contributing to climate change could change legal outcomes.



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## Learning from best practice

The domestic case of *Held et al v The State of Montana et al.*, (*Held*) [13] is exemplary in demonstrating the importance of adversarial cross-examinations of expert witnesses to assist the judiciary in navigating competing expert claims. In 2020, a district court in Montana was tasked with determining whether the State of Montana ('Defendant'), had violated the constitutional rights of 16 Montana youth ('Plaintiffs') by exacerbating the climate crisis through its fossil-fuel based state energy system. The Plaintiffs presented experts who testified that the greenhouse gas ('GHG') emissions produced in Montana were dangerous, whereas the expert report submitted by the Defendant attested to 'miniscule' GHG emissions, which 'have virtually no effect on global climate change' [14].

At trial, the Defendant's expert produced data allegedly representing Montana's total GHG emissions. The Plaintiffs' experts and legal counsel questioned these findings, and argued that the Defendant's expert had misrepresented the importance of Montana's substantial contribution to global GHG emissions; moreover, they clarified that the Defendant's expert specialised in economics, not climate science; lastly, Plaintiffs were able to demonstrate that the Defendant's expert cited a government website that did not, in fact, provide information about the referenced data.

In its judgment, the court concluded that the Plaintiff's experts were 'well-qualified' and produced 'informative and credible' testimony. Meanwhile, the expert testimony of the Defendant was 'not well-supported, contained errors, and was not given weight by the Court' [13]. *Held's* success was predicated on establishing a sound factual basis which proved Montana's role in exacerbating the climate crisis and the consequent harm experienced by the Plaintiffs. This required a considered evaluation of competing expert claims. The district court spent six days listening to live testimony, and was able to learn about the erroneous nature of one of the experts' claims.

By contrast, the [three climate cases](#), *Verein KlimaSeniorinnen Schweiz and Others v Switzerland*, *Careme v France* and *Duarte Agostinho*, recently decided by the ECtHR were each given half-day oral hearings with limited opportunity to clarify, let alone challenge, specific scientific claims. Moreover, in the *Duarte* case, the court would have had to be even more diligent in understanding the complex scientific issues at play, given that neither party appeared to present blatantly erroneous evidence. Cases like these may need additional fact-finding strategies.

In one recent case in California, the judge ordered a climate science tutorial prepared by party-appointed experts [15]. Similar exercises could help at HRCs, although would require a certain level of scientific literacy on part of the judges when defining the subject of the scientific enquiry. Subject to financial constraints, HRCs could also strengthen their research units to compile or assess scientific research, or appoint their own scientific experts.

## What can scientists do?

Scientists could support HRCs' scientific fact-finding through better use of established mechanisms: *Amicus curiae* (known as third-party interventions before the ECtHR) allow for written, and at times oral, submissions of supplementary legal or factual points by states or persons who are not parties to a case. In the recent climate-related hearings before the Inter-American Court of Human Rights and the ECtHR, *amicus curiae* primarily consisted of synthesised scientific information or comparative legal points. In collaboration with legal experts, scientific institutions could submit *amicus curiae* that clearly explain scientific facts specific to the questions under consideration in the case, underlying scientific methodologies, and the reliability of their findings.

## Conclusion

HRCs have acknowledged the ‘necessity (. . .) to engage with a body of complex scientific evidence’ [7] in climate change cases. So, it is not a question of if, but rather how HRCs should engage with climate science. In doing so, HRCs must maintain a careful equilibrium between respecting their institutional role and the limits of their competencies whilst strengthening the legitimacy of science-heavy judgments. Domestic and other international fact-finding practices may serve as inspiration as HRCs develop strategies to navigate a novel legal, and inherently technical, landscape. HRCs could be assisted by receiving supplementary scientific material and explanations through increased inter-disciplinary collaboration efforts between scientific and legal experts. Further research could also prove beneficial in identifying opportunities for adequate scientific fact-finding practices at HRCs. These considerations carry wider implications, given that HRCs increasingly grapple with scientific evidence, for example in cases concerning in-vitro-fertilisation, abortion, and mass surveillance.

## Author Contributions

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