



From analysis to action: Climate change litigation

A guide for public health professionals



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Foreword

Climate change is a public health emergency. It is the single biggest threat to global health, peace, and security, a crisis multiplier, and a significant driver of health inequalities. It also raises profound issues of human rights and dignity. The poor and vulnerable, who have contributed least to climate change, suffer the worst consequences of actions largely committed by rich and powerful nations. These actions directly contribute to unprecedented biodiversity loss, mass extinction of species, and disruption of ecosystems which are fundamental to our very lives and the health of our planet. At this critical juncture, when the intractable problems have fused into one common concern for the whole world, failure to act is unconscionably irresponsible.

Public health professionals and scientists have been at the forefront of generating evidence on the nature, surveillance, and monitoring of climate change and its impact on people and planet. Science and technological discoveries also offer practical solutions to support activities that tackle climate change, prevent further irreparable destruction of the planet, and save lives. Yet despite the clear facts, and the remarkable scientific and technological discoveries, there continues to be lack of volition and action.

In many areas of public health policy, legal action and litigation have delivered significant and long-lasting impacts. Examples include tobacco control, increasing access to treatments for HIV, and addressing air pollution. Litigation is a well-established part of public health's advocacy toolbox. It is a strong domain of legal policy and practice in many countries, and increasingly in international courts and tribunals.

Recent years have seen a significant increase in climate change litigation to oblige governments and private sector polluters to address the climate crisis. Claimants advocate for declaratory judgements and court orders requiring governments or private sector polluters to take specific action or stop an ongoing course of action. Climate change litigation also creates opportunities for public scrutiny and debate by raising awareness of inaction or harm caused by governments or private sector polluters, and sparking wider community mobilisation for action.

The public health professional mandate requires not only the development of robust science and evidence, but also robust meaningful action. This guide makes a timely and important contribution to building the competence and capacity of public health professionals around climate change litigation, supporting strategic partnerships, and encouraging leadership to protect and promote the health of people and planet.

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Acronyms and note on court terminology

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| ASPHER | Association of Schools of Public Health in the European Region |
| ASPPH | Association of Schools and Programs of Public Health |
| CEPH | Council for Education in Public Health |
| CIEH | Chartered Institute of Environmental Health |
| CRC | United Nations Committee on the Rights of the Child |
| EU | European Union |
| EUPHA | European Public Health Association |
| EUPHA-ENV | EUPHA Environment and Health Section |
| EUPHA-LAW | EUPHA Law and Public Health Section |
| FPH | Faculty of Public Health (UK) |
| GCHL | Groningen Centre for Health Law |
| GNAPH | Global Network for Academic Public Health |
| ICCPR | International Covenant on Civil and Political Rights |
| IPCC | Intergovernmental Panel on Climate Change |
| NGO | Nongovernmental organisation |
| PHP | Public health professionals |
| PM | Particulate matter |
| SLAPP | Strategic lawsuit against public participation |
| UCS | Union of Concerned Scientists |
| UN | United Nations |
| UNFCCC | United Nations Framework Convention on Climate Change |
| WFPHA | World Federation of Public Health Associations |
| WHO | World Health Organization |
| WTO | World Trade Organization |

People and organisations initiating legal action are referred to according to the court, tribunal or other forum and jurisdiction in which they bring their case. They may be referred to as litigants, plaintiffs, complainants, applicants, appelants etc. These terms are therefore used variously throughout this guide, as appropriate.

Background, aims, and objectives

In October 2021, a webinar on [Public Health, Climate Change and Strategic Litigation](#) was co-hosted by the [Groningen Centre for Health Law](#) (GCHL) in the Faculty of Law at the University of Groningen, Netherlands; the [Law and Public Health Section](#) and the [Environment and Health Section](#) of the [European Public Health Association](#) (EUPHA); and the [Faculty of Public Health, UK](#). The webinar alerted public health academics and practitioners to the opportunity for legal action to hold governments and private sector polluters to account for health-harming pollution and climate change.

In March 2022, the Faculty of Public Health, the University of Liverpool, EUPHA-LAW and GCHL hosted a webinar on '[Climate Change Litigation at the European Court of Human Rights](#).' The webinar also noted the importance of partnerships between public health academics and practitioners, and human rights and legal experts.

A common theme emerging from these discussions was the role of public health experts and scientists in providing compelling evidence in court. Yet public health experts need skills and guidance to frame and present convincing written and oral testimony. The concept of climate change litigation guidance specifically for public health experts arose from these discussions. In November 2022, the concept was presented at a workshop at the 15th European Public Health Conference in Berlin, Germany, and further discussed at a workshop at the 17th World Congress on Public Health in Rome, Italy, in May 2023.

In June 2023, the Environmental Health Working Group of the World Federation of Public Health Associations (WFPHA) surveyed its national partner organisations to assess their interest in such guidance, and what it should address. The survey was also disseminated through social media and to other public health experts globally in English, French, and Spanish. More than 70 responses were

received. Also in June 2023, EUPHA-LAW, the University of Liverpool, GCHL, and other partners hosted a conference on strategic litigation and public health at Liverpool University, UK.

This guide therefore reflects input from multiple sources to assist public health professionals in supporting legal action that urges governments and the private sector to act now to address the climate crisis. Specifically, the guide:

1. Explains the phenomenon of climate change litigation for public health practitioners and provides an overview of key developments
2. Identifies how the skills required to deliver compelling written and oral scientific evidence of human harms in climate change litigation can be grounded in public health competencies, and
3. Offers insights and lessons learned from prior climate change litigation, based all or in part on evidence of human harms.

This guide is written for the public health community, including the core public health workforce, for whom public health activities constitute the primary part of their functions. The guide is also intended for the wider health workforce that contributes to public health, and other professionals whose activities may significantly affect population health. The guide will also be of interest to environmental advocates undertaking climate change litigation which involves evidence of harms to human health. In this case, public health practitioners may be asked to provide scientific evidence.

Public health and legal systems vary according to national and regional contexts. Experience of previous litigation is often transferrable, and international collaboration is invaluable. The prior decisions of regional and global courts will be persuasive, though often not binding. This guide is written to be applicable in different legal systems and jurisdictions.

Public health professionals will need to work closely with affected communities, legal experts, and scientists in deciding how, when, and where to litigate to maximum effect. This guide draws on similar handbooks for other audiences, however it is the first publication with a global perspective written explicitly for public health professionals.

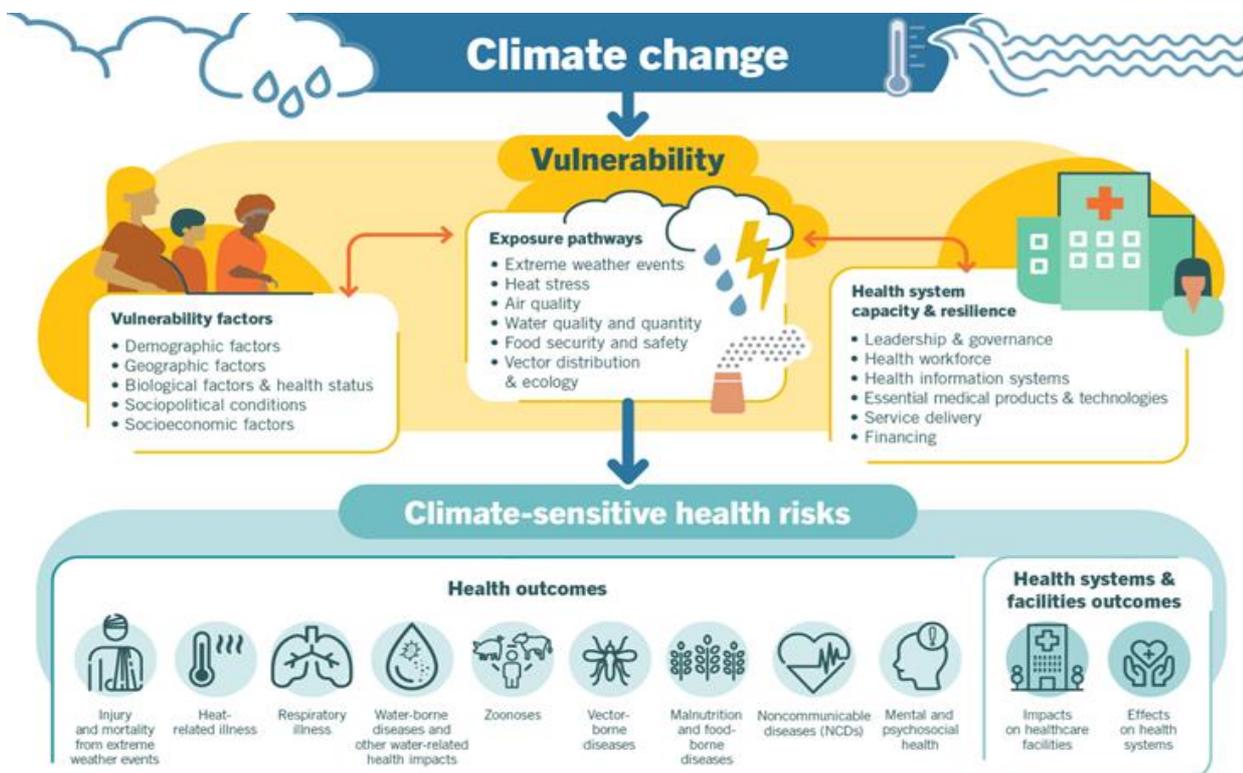
For further information and to provide feedback on this guide, please contact: PHELnetwork@gmail.com

1 Health impacts of climate change

The health impacts of climate change have been well-documented by the Intergovernmental Panel on Climate Change (IPCC), the World Health Organization (WHO), Lancet Countdown, and other authoritative sources as listed in Annex 1. According to the WHO, the impacts of climate change on health are widespread and diverse. The latest IPCC reports are improving our understanding of the trajectory of climate change and related effects, with sections exclusively devoted to health.

Health stressors related to climate change include heat stress, extreme weather, droughts, reduced air quality (air pollution, pollen, and other allergens), and changes in disease vectors such as increasing the seasonal and geographic reach of certain insect-borne diseases. People’s vulnerability to climate change can be reduced by mitigating climate change successfully through limiting greenhouse gas emissions. Where the effects of climate change can no longer be prevented, adaptation is necessary to minimise exposure to certain risks and harmful effects. Effectively addressing health-related vulnerabilities arising from climate change requires an understanding of the vulnerability of both populations and individuals. It also requires adequately equipping and preparing the health sector for new health risks.

Figure 1. Climate change and health (WHO)



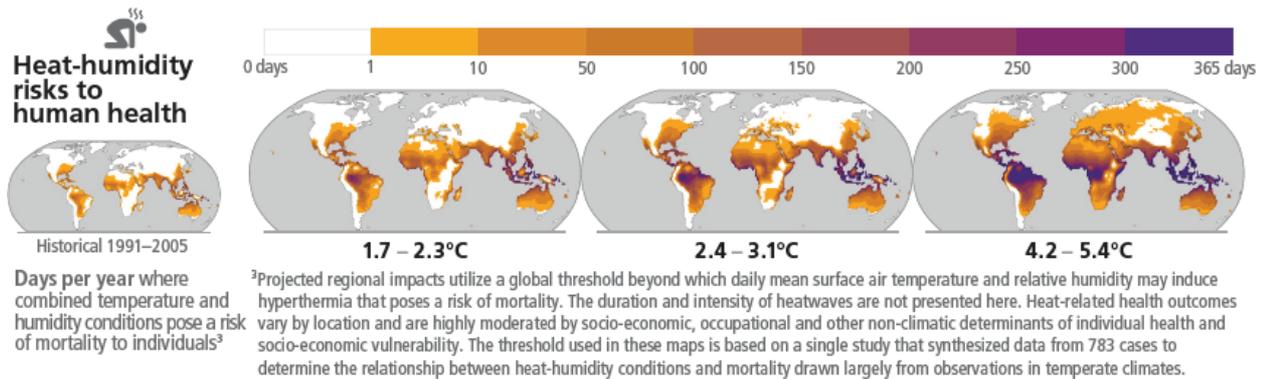
Source: [WHO Fact Sheet Climate Change and Health, 2023](#)

Among the various negative health outcomes of climate change are health risks associated with progressive increase in temperature. International climate science projects a severe increase in the duration and intensity of heatwaves in many parts of the world. Heatwave intensity will differ substantially depending on location; certain parts of the world are warming more rapidly than others.

Evidence from health sciences and public health professionals is crucial to understanding how global warming is affecting mortality and health in different areas and different population groups. Health scientists and professionals are crucial in supporting legal arguments about heat-stress as a health-related human rights risk.

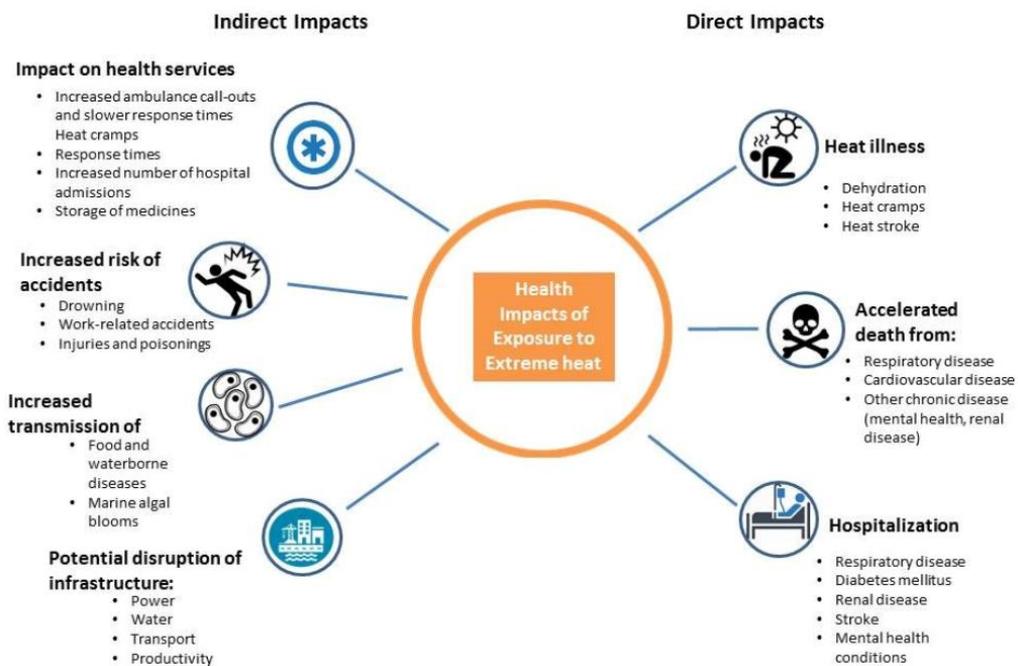
Two cases at the European Court of Human Rights, one by a group of Swiss senior women and another by a patient with multiple sclerosis (see section 3.2), put the effects of heat-stress at the core of their legal arguments on human rights. In order to successfully argue these cases, they will have to rely on scientific evidence of global and national heating trends, known negative effects of heat-stress on health (of specific groups), and negative effects on their personal lives and health. Input from medical specialists will aid these cases.

Figure 2. Heat-humidity risks to human health (IPCC)



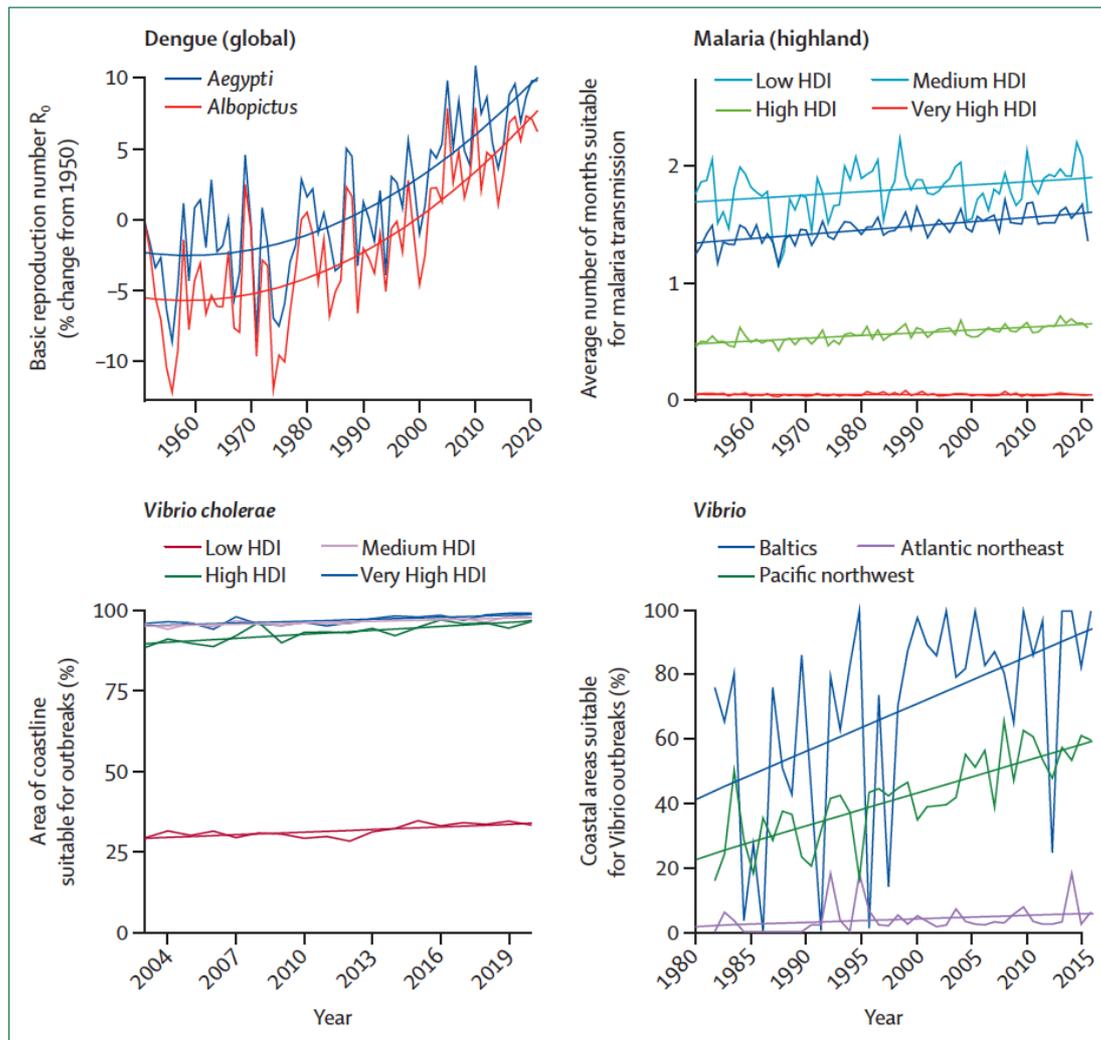
Source: *Summary for Policymakers, IPCC, 2023.*

Figure 3. Health exposure to extreme heat (WHO)



Source: [WHO Fact Sheet Heat and Health, 2018](#)

Figure 4. **Change in climate suitability for infectious diseases (Lancet Countdown)**



Change in climate suitability for infectious diseases. Thin lines show the annual change. Thick lines show the trend since 1951 (for malaria), 1951 (for dengue), 1982 (for Vibrio bacteria), and 2003 (for Vibrio cholerae). HDI=human development index. Source: [Report of the Lancet Countdown on health and climate change: health at the mercy of fossil fuels \(2022\)](#).

Other key sources for data on the health impacts of climate change include:

- The [European Climate and Health Observatory](#). The Observatory provides a range of publications, tools, websites and other resources related to climate change and human health.
- [The Global Climate and Health Alliance \(GCHA\)](#). The GCHA was formed in 2011 to tackle climate change and protect and promote public health. Publications include the [Fact Sheet on Climate and Health](#) (2021).

2 Climate change litigation

2.1 What is climate change litigation?

The Grantham Research Institute on Climate Change and the Environment and the Sabin Center for Climate Change Law define climate change litigation as 'cases before judicial and quasi-judicial bodies (this includes bodies such as arbitral tribunals, national human rights institutions, consumer watchdogs, and OECD National Contact Points, to name a few) that involve material issues of climate change science, policy, or law.'¹

This is an important starting point, but from a health perspective, climate change litigation should be understood more widely. For example, litigation involving air pollution and fossil fuels can also have positive climate policy effects, as fossil fuel combustion is currently the largest source of both greenhouse gases and health-harming air pollution. Although the evidence of health impacts arising from climate change may differ from the localised impacts of air pollution such as asthma and other lung diseases, air pollution from fossil fuel combustion is, in practice, a sentinel for climate change. Notably, the greenhouse gas contribution of most countries in the global South (excluding China and India) is far less than that of global North countries, but many Global South countries struggle with severe air pollution that affects the health of local populations.

Therefore, there may be advantages in combining the arguments for addressing both climate change and air pollution, depending on the circumstances. Air pollution cases often involve testimony from public health professionals, and this expert evidence can drive climate-positive outcomes. Similarly, litigation that results in lower levels of greenhouse gas emissions from power plants, for example, will also mitigate climate change.

2.2 Strategic litigation

Climate change litigation can be undertaken by many different actors, with a broad range of objectives in terms of stopping the negative health impacts of climate change. Individuals may wish to hold their governments accountable for the implementation of national climate targets, or gain recognition of specific negative health impacts on certain groups (e.g., children, elderly people, and those with pre-existing health conditions). In addition, non-governmental organisations may wish to sue private sector organisations and governments to stop the construction of a new coal-fired electricity plant or a new licence for gas exploration.

Litigation is often designated 'strategic' if it aims to achieve legal, social, or policy outcomes beyond the interests of the individual litigants or specific case. It may gain a legal precedent that is applicable to other cases, or expose a gap in the law. Compensation is therefore not the primary focus of strategic litigation, though may be included.

Key features of strategic litigation (non-exhaustive):²

- Plaintiffs are selected to communicate a carefully designed message
- Defendants are either those making the largest direct contribution to the problem or those, such as financial institutions, which play a key role in facilitating the problem
- The litigation is framed in the long view, beyond the immediate success or failure of individual cases
- The litigation is part of a broader advocacy strategy.

¹ [Global trends in climate change litigation: 2023 snapshot](#), Grantham Research Institute, 2023.

² [Global trends in climate change litigation: 2023 snapshot](#), Grantham Research Institute, 2023.

Box 1: Successful examples of public health litigation

Tobacco control (global)

Early litigation by those concerned about the health effects of tobacco consumption aimed to strengthen implementation of tobacco control measures and hold the industry liable for its actions. Tobacco control litigation continues to make a major contribution to international and domestic public health law.³

Air pollution (South Africa)

In 2022 the Pretoria High Court, South Africa, held that poor air quality in the Highveld Priority Area was in breach of residents' Constitutional right to an environment that is not harmful to their health and well-being. The Court ordered the government to pass regulations to meet air quality standards. Expert testimony of the health impacts of pollution from local power stations, including sulphur dioxide and PM2.5 particulate matter, were central to the decision. In March 2023, the Supreme Court of Appeal granted leave to appeal the lower court's decision.⁴

Access to medicines for HIV treatment and prevention (South Africa)

In 1998, 41 major pharmaceutical companies challenged reforms to South Africa's Medicines Act, which was designed to facilitate access to generic HIV medications. A coalition of treatment activists and legal experts joined the case as *amicus curiae* (friends of the court) in support of the South African government. In 2001, facing massive social mobilisation and adverse media coverage in South Africa and globally, the pharmaceutical companies withdrew their challenge. Critical to the action was framing access to medicines as a human right, not charity. Subsequently, the intellectual property rules of the World Trade Organization were clarified to confirm the right of States to take measures to protect public health and to promote access to medicines for all.⁵

Reducing greenhouse gas emissions (the Netherlands)

The Dutch Urgenda Foundation case was one of the first cases in which national courts forced a government to reduce their greenhouse gas emissions faster to protect the populations' health and life against negative climate impacts. This sparked many ambitious cases in other countries, most of which mentioned the decision of the Dutch courts (see *Urgenda Foundation v. Netherlands*, section 3.3).

Successful cases motivate the filing of similar claims in other jurisdictions. Climate change litigation can be 'successful' even if a positive court decision is not obtained. The respondent party (the party being sued) may concede and agree to a change in policy or practice. They may also agree to a financial settlement out-of-court to avoid a possibly harsher court decision. Even if the case is lost, the legal action may deliver significant benefits in other ways. These include raising public awareness, social mobilisation, and drawing attention to gaps in relevant legislation. All decisions may also clarify the applicable law and open the door to further litigation.

³ Zhou S, Ricafort E, Bressler D, Devotsu RK. Litigation in tobacco control: past, present and future. *Tobacco Control*. 2022 Mar 1;31(2):291-5.

⁴ [Deadly pollution case back in court](#), Centre for Environmental Rights, March 2023; [Air quality impacts and health effects due to large stationary source emissions](#), Gray Sky Solutions (USA), 2019.

⁵ Heywood, M. [South Africa's Treatment Action Campaign: Combining Law and Social Mobilization to Realize the Right to Health](#) Journal of Human Rights Practice, March 2009

Box 2: A landmark case on childrens' human rights and climate change

In a landmark case, *Sacchi et al. v. Argentina et al*, 16 young people from 12 countries claimed that the named States were violating their rights to life, to health and to culture (see section 3.1). The United Nations Committee on the Rights of the Child (CRC) rejected the petition on formal grounds because the young people had failed to exhaust the remedies available in a *national* court system. Nonetheless, the CRC accepted that childrens' human rights may be harmed due to the negative physical and mental health effects of climate change, and clarified that the State can be held responsible for the impact of its carbon emissions on the rights of children *both within and outside its territory*. The decision opens the door to further applications to UN treaty bodies on these grounds, potentially shaping subsequent legal developments. In 2023 the CRC further clarified States' obligations to address climate change in [General Comment No. 26](#) on children's rights and the environment, with a special focus on climate change. In turn, this General Comment can strengthen legal arguments on health and climate change by other youth groups.⁶

Increasingly, climate change litigation uses a public health lens that is deeply rooted in a human rights perspective (see e.g., *KlimaSeniorinnen v. Switzerland* and other examples in part 3 below). A key human rights principle in international law is the participation of affected communities in decisions about matters that affect them. Wherever possible, climate change litigation should be grounded in civil society mobilisation. Whatever the outcome, litigation can clarify the issues and force respondents to act – even if only to publicly clarify and confirm their position. This can advance the public's understanding of the issues and the forces at play.

2.3 Who can litigate?

In principle, any legal entity can initiate legal action. This includes a government, a company, a legally registered civil society organisation, or an individual. However, depending on the jurisdiction and the applicable law, they may be required to demonstrate a sufficient interest in the issues to obtain *legal standing*, i.e., the right to appear in court on the issue. The requirement to demonstrate a sufficient interest in the case can be a barrier because litigants may have difficulty proving they have suffered climate harm, or that they have suffered harm in a way that is unique to them. They may also face financial or other barriers to court action. Potential victims of climate change may not have been born yet or may live in the global South, far away from national and international courts in the global North.

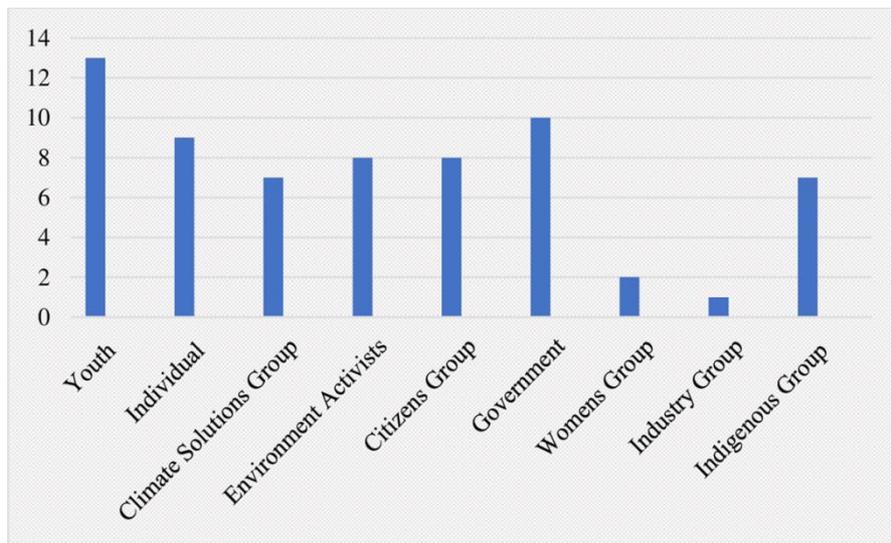
Some legal systems allow civil society organisations to represent an affected community. Sometimes, the individual plaintiffs who are directly or indirectly affected by the health harm may form an association or coalition and apply to join the case. This allows the litigation to continue even if individual plaintiffs die before the case is concluded. For example, *KlimaSeniorinnen v. Switzerland* (see section 3.2) was first heard by the European Court of Human Rights in March 2023. By then, one of the four plaintiffs aged over 80 had died since the application was first lodged.

In addition to initiating legal action, interested parties can apply to provide evidence as 'friends of the court' (*amicus curiae*). Participation as *amicus curiae* is usually at the discretion of the presiding judge.

A 2022 study of 1,641 climate change cases from 1990 to 2020 identified 65 cases directly linked to public health. Of these 65 cases, youth comprised the largest category of litigant, followed by government then individuals independent of interest groups.

⁶ [General Comment No. 26 \(2023\) on children's rights and the environment, with a special focus on climate change](#), UN Committee on the Rights of the Child, CRC/C/GC/26 (2023)

Figure 5: Public health-linked climate litigation cases by category of plaintiff



Source: Toolan N, Marcus H, Hanna EG, Wannous C. Legal implications of the climate-health crisis: A case study analysis of the role of public health in climate change litigation. *Plos One*. 2022 Jun 15;17(6):e0268633

Litigation can also be initiated by industry or governments to stop progress to address climate change through Strategic Lawsuits Against Public Participation (SLAPPs). SLAPPs are legal actions which seek to intimidate, silence, and drain the financial and physical resources of activists, environmentalists, journalists, and other people and organisations engaged in climate change and other matters of social relevance. In 2022, the European Commission proposed a directive to protect people who engage in public participation from manifestly unfounded or abusive civil court proceedings with cross-border implications.⁷

Box 3: Strategic Lawsuits Against Public Participation (SLAPPs)

In 2022, EarthRights International identified more than 150 cases in the past ten years where the fossil fuel industry has used SLAPPs and other judicial harassment tactics in attempts to silence or punish its critics in the United States. SLAPPs are not limited to global North. In 2021 the Business and Human Rights Resource Center reported that 75% of 355 frivolous cases by business actors against human rights or environmental defenders were brought in countries in the global South.⁸

2.4 Bases of legal action

Legal action to fight climate change to protect human health is usually grounded in human rights law. However, tort law has also proven useful in several significant cases. In the Netherlands, Dutch courts relied on statutory tort law in successful cases against Shell (see Box 5) and the Dutch government (see section 3.3). Some national or sub-national constitutions also provide explicit reference to the environment, such as the US state of Montana (see *Held v. Montana*, section 3.6). There is generally no need to choose between different bases of legal action in national courts; arguments can be combined according to what is likely to be most successful.

⁷ Source: [European Parliamentary Research Service](#) See also: [European Centre for Press & Media Freedom](#); [How are courts responding to SLAPPs? Analysis of selected court decisions from across the globe](#) Global Freedom of Expression & Article 19, Columbia University, 2023

⁸ [SLAPPed but not silenced: Defending human rights in the face of legal risks](#), Business and Human Rights Resource Centre, 2021; [The Fossil Fuel Industry's Use of SLAPPs and Judicial Harassment in the United States](#), EarthRights International, 2022; [Factsheet: strategic lawsuits against public participation \(SLAPPs\)](#), UK Government, 2023

Another avenue is the possible criminal liability of companies and their directors for human and environmental harms. Criminal prosecutions are usually initiated by the state, or may require state approval to proceed. Thus, civil society organisations and individuals can advocate for the initiation of criminal prosecutions on climate issues. Allegations may be based on general protection of public health in criminal law. In all cases, evidence of threats or harm to human health may be relevant to obtaining a conviction. Scientific evidence of human harms may be relevant in each of these areas.⁹

Box 4: Criminal liability for environmental pollution

In 2023, a coalition of 1,200 local residents called on the Dutch Public Prosecution Service to initiate criminal proceedings under the Dutch Criminal Code against [Tata Steel and its CEO](#) for alleged environmental pollution. The Dutch Criminal Code provides for imprisonment for up to 12 years for any person who intentionally and unlawfully releases a substance into the soil, air or water if it is likely to endanger the health or life of another (article 173a).¹⁰

2.5 Climate change litigation risks and risk mitigation

Litigation is only one of several tools in the public health advocacy toolbox. Litigation is usually time-consuming, costly, and the result is never guaranteed. Consequently, litigation should never be considered the first or only advocacy option. Nonetheless, the risks associated with litigation are well-recognised, and can be mitigated.

| Risk | Mitigation strategy for climate change, public health and legal advocates |
|---|--|
| Litigation can distract stakeholders from other advocacy action, such as lobbying parliamentarians and other key decision makers. | Litigation should always be combined with civil society mobilisation. The publicity associated with legal action can reinforce lobbying of decision makers, even before a judgement is received. |
| A negative decision can set unhelpful precedents or send the wrong message, particularly if cases are poorly argued. | Ensure legal advisors are fully briefed and have the required expertise. Be prepared to frame negative decisions as evidence of the need for law reform. |
| A negative decision can lead to cynicism and disengagement. | Ensure litigants and the public are fully briefed and prepared for a negative as well as a positive decision, and have next steps planned. |
| Individual litigants may die before the case is decided. | If a civil society organisation is also a party to the legal action, the case may nonetheless continue to a verdict. |
| Implementation of court or tribunal decisions is not assured. The respondent State or private actor may ignore all or part of the ruling. | Clarify at the outset if and how decisions can be enforced. In any case, the decision can still be used to name and shame the recalcitrant party in the media. |
| Domestic court action can only flow from international treaties obligations if they are incorporated into national law by the nation’s constitution, or by statute. | Clarify if and how relevant international law is incorporated into domestic law. In any case, domestic remedies may need to be exhausted before applying to international tribunals. |

⁹ [Global trends in climate change litigation: 2022 snapshot](#), Grantham Research Institute, 2022

¹⁰ [Tata Steel director belongs in jail, lawyer says in first lawsuit against big polluters](#), NL Times, 9 June 2023

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| Conflicts may arise between the long-term aims of the litigation and the immediate interests of one or more plaintiffs, e.g. if an offer of compensation is linked to a non-disclosure agreement. | Plaintiffs should be identified in collaboration with affected communities. ‘Litigation plus’ approaches involve working with communities to co-create litigation strategies and agree in advance on how various potential outcomes should be handled. |
| Litigants risk being faced with a SLAPP for the sole purpose of silencing plaintiffs and exhausting their resources. | Refer to arguments in prior lawsuits dismissed on SLAPP basis. Monitor legislative developments to curtail SLAPPs. |

2.6 Standards of proof and the precautionary principle

Most countries have laws imposing a duty of care and an obligation to avoid harm to others. However, standards and interpretations vary. A key challenge for public health experts is to provide evidence of causation while acknowledging the limits of scientific certainty. Different standards of proof exist in science and law. Science establishes a confidence interval that a presumed causal link between events is not a random occurrence. The confidence interval could be 95%, 99%, or higher. For civil legal matters, it is usually sufficient to demonstrate a certainty greater than 50%.

The precautionary principle in environmental matters is now part of international climate law. The UNFCCC states (Art. 3 (3)):

The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost.

Matters related to scientific (un)certainty of environmental harms to human health are generally well-recognised in environmental law litigation. However, other courts and tribunals, such as human rights bodies, may be less familiar with the concept of scientific certainty. Similar issues have arisen in legal action against tobacco companies, yet courts were able to establish a sufficient connection between health harms and tobacco consumption to rule against the tobacco industry (see Box 1).

2.7 Establishing credibility

It is essential to establish the credibility and the independence of the public health experts who will present written or oral evidence. This includes the relevance of the expertise to the case to be decided. For example, expert evidence may be needed of population level harms or of the impacts on individuals, or both. Experts may be asked to testify regarding the impact of future climate change on populations. Experts must be independent, possess the necessary scientific expertise, and have no conflicts of interest. Some experts may not be used to having their expertise questioned or challenged, and will need to be suitably briefed. In each case, the choice of expert is clearly key.

2.8 Assembling evidence and developing a compelling narrative

Public health practitioners have a key role in assembling evidence of direct and indirect health effects. Specific expertise is required to gather evidence and store it securely. Assembling evidence of harms to human health, including from different disciplines, and building a convincing legal case may take many months or years. This necessitates especial care and coordination.

Box 5: Friends of the Earth Netherlands (Milieudefensie) v. Shell

When Milieudefensie announced legal action against Shell in 2018, they had already been preparing the case for two years. In 2021, Milieudefensie won the case and the judge ruled that Shell must reduce its CO2 emissions by 45% compared to 2019.¹¹

Expert evidence also requires a compelling narrative that enables the court to make a sufficient connection between the (in)action challenged and the evidence of past, present or future health harms.

Box 6: Coronial enquiry into the death of Ella Kissi-Debrah

In 2013, nine-year-old Ella Kissi-Debrah died from asthma due in part to air pollution around her home in London, UK. In 2021, [coroner Philip Barlow](#) noted that Ella had been exposed to levels of nitrogen dioxide in excess of WHO Guidelines, and recorded excessive air pollution exposure as a contributory cause of death. Barlow issued a statutory notice to relevant government authorities requiring them to report action taken or proposed and a timetable for action. This was the first time a coroner recorded air pollution as a contributory cause of death.

Respiratory physician and scientist Professor Sir Stephen Holgate (see [video](#)) was central to the coroner's finding. As Ella's case was based on individual not population level harms, finding the right expert was key, combining understanding of the disease mechanisms and interdisciplinary observations, and connecting the cellular and molecular science with the clinical story and the epidemiology. For litigation at the population health level, epidemiology is massively important, including different forms as appropriate – e.g., longitudinal studies and cross-sectional studies – to create a single narrative which can be understood by the court and the lay public. A further important factor to the success of the case included bringing legal and medical teams together with Ella's mother, Rosamund Adoo-Kissi-Debrah.¹²

Box 7: Expert evidence of harm from toxic fumes from a landfill site

Speaking at the Conference on Strategic Litigation and Public Health, University of Liverpool, 15 June 2023, Dr Ian Sinha, Consultant Respiratory Paediatrician discussed the experience of providing medical evidence in the High Court (UK) of the impact of toxic fumes from a landfill site on the lung development and life expectancy of a child living near the site (see [video](#)).

Dr Sinha noted that the available evidence from the literature in this case was not helpful. The observational studies were of varying quality. Proving causation scientifically is not easy. Dr Sinha also noted the importance of close collaboration with the legal team, paediatricians, and medical professionals to identify the real story. By identifying what was unusual and unexplained about the child's story (clinical presentation, frequency of illness, and the length of time oxygen was required at home) the team found that the child's illness could not be fully explained by medical or social background.

Evidence of expert credentials and credibility was very important, and relevant publications assisted in establishing this expertise. The legal team recognised that medical experts were not accustomed to providing the evidence required, nor trained to look at problems in the same way as the legal experts. Dr Sinha noted the difficulties in proving causality in medicine – there are often too many confounding factors. He advocated thinking in new narratives, including around the human rights of children and the broader social determinants of health, e.g., fuel poverty leads to cold homes which impact child health and development and increase the risk of premature death.¹³

¹¹ [Manual \[handbeleiding\]: How we defeated Shell](#), Milieudefensie, 2021

¹² [Coroner's report and responses](#) Courts and Tribunals Judiciary (UK) (2021); [Policy, patients and pollution: Ella's legacy](#), Academy of Medical Sciences (UK) 2021; [Coronial enquiry into the death of Ella Kissi-Debrah: role of scientific evidence](#) Sir Stephen Holgate, Professor of Immunopharmacology at the University of Southampton (UK)

¹³ [Involving paediatricians in public health litigation](#), Dr Ian Sinha, Consultant Respiratory Paediatrician, Alder Hey Children's Hospital, Honorary Professor of Child Health, University of Liverpool (UK). Conference on Strategic Litigation and Public Health, University of Liverpool (UK), 15-16 June 2023.

3 Sources of inspiration: An overview of key international and national climate change litigation cases

Thousands of legal cases addressing climate change and related environmental harms have been initiated in North America, Europe, and other regions. The Grantham Research Institute on Climate Change and the Environment (UK) publishes analyses of global trends in climate change litigation. Encouragingly, the [Grantham Research Institute 2023 report](#) notes that more than 50% of climate cases have direct judicial outcomes that can be understood as favourable to climate action.¹⁴ These cases are well-documented in [online databases](#) (separately for USA and non-USA cases) hosted by the Sabin Center for Climate Change Law at Columbia University, USA.¹⁵

Not all cases include an explicit focus on health or involve evidence of health-related harms – many are grounded in environmental or administrative law. The following examples include explicit health claims and illustrate the importance of compelling evidence of harms to human health and life.

3.1 United Nations human rights treaties

Sacchi, et al. v. Argentina, et al., UN Convention on the Rights of the Child



In 2019, 16 children from 12 countries [filed a complaint with the UN Committee on the Rights of the Child](#) against Argentina, Brazil, France, Germany, and Turkey.¹⁶ They claimed that these States were violating their rights to life, to health and to culture in the Convention on the Rights of the Child. In 2021, the Committee concluded that the States had indeed failed to take necessary preventive measures to protect and fulfil these rights. The Committee also identified a sufficient causal link between the harm alleged by the children and the acts or omissions of the five States.

Although the complaint was ruled procedurally inadmissible because of a failure to fulfil the legal requirement to exhaust remedies in the national court system, it opened the door to further complaints on right to health and right to life grounds before the Committee on the Rights of the Child and other human rights bodies. To support their claims that the rights to health and to life were violated as a result of States' failure to act on climate change, the lawyers for the children submitted substantial scientific evidence of the health impacts (on children) of climate change generally, as well as personal testimonies from the children. The Committee accepted that the children had *prima facie* established that they 'personally experienced a real and significant harm in order to justify their victim status.'

Box 8: Facts and claims related to health as submitted by children in the *Sacchi, et al. v. Argentina, et al.* case:

"Hotter temperatures foster the spread of infectious diseases and exacerbate health hazards. In Lagos, Nigeria, Debby Adegbile has been repeatedly hospitalized for asthma as hotter temperatures worsen the air quality. Mosquito-borne diseases have spread to new regions. In the Marshall Islands Ranton Anjain contracted dengue fever in 2019, now prevalent in the islands, and David Ackley III contracted chikungunya, a new disease there. Wildfires are growing more frequent and intense because of hotter and drier conditions. [...] In California, Alexandria Villaseñor suffered smoke inhalation from the Paradise wildfire and was bedridden for three weeks. Heat waves and drought are threatening children's lives and creating water scarcity [...] Climate change has affected children's mental health around the world. As the American Psychological Association observed, psychologists now grapple with new, 21st Century disorders, including climate anxiety and solastalgia—mourning the destruction

¹⁴ [Global trends in climate litigation: 2023 snapshot](#), Grantham Research Institute, 2023

¹⁵ [Climate change litigation databases](#), Sabin Center for Climate Change Law, 2023

¹⁶ [Sacchi, et al. v. Argentina, et al.](#), Sabin Center case database.

of a cherished place. In Sweden, Greta Thunberg states she was so disturbed by the climate crisis that she fell into depression and stopped eating.”

Together, the children claim that States are violating their rights to life, health and culture “by recklessly causing and perpetuating life-threatening climate change” and by failing “to take necessary preventive and precautionary measures”. They also argue that “the climate crisis is not an abstract future threat. The 1.1°C rise in global average temperature is presently causing devastating heat waves, fostering the spread of infectious diseases, forest fires, extreme weather patterns, floods, and sea level rise. Because children are among the most vulnerable to these life-threatening impacts, physiologically and mentally, they will bear the burden of these harms far more and far longer than adults”.

Daniel Billy and others v. Australia, UN International Covenant on Civil and Political Rights (ICCPR)



In 2019, eight indigenous Australians and their children from the Torres Strait Islands petitioned the UN Human Rights Committee (which monitors compliance with civil and political rights protected in the ICCPR) regarding Australia’s [alleged failure to protect them against climate change](#).¹⁷

The applicants alleged that Australia violated several rights under the ICCPR, with severe impacts on their traditional ways of life; culturally important living resources; infrastructure, housing, land-based food production systems, and marine industries; and health problems such as increased disease and heat-related illness. The applicants cited threats to their right to life (with dignity); their right to be free from interference in private life, family, and the home; and the right to enjoy their own culture.

The aspect of health was first discussed in relation to the right to life with dignity, as set out in Article 6 of the ICCPR. The Human Rights Committee has to date maintained a fairly narrow interpretation of this right when it comes to health. The Committee stated that although the applicants cited feelings of insecurity of livelihood – e.g. due to changes in seasons, weather patterns and tides, or the availability of traditional and culturally important food sources – they had failed to indicate that they *‘faced or presently face adverse impacts to their own health or a real and reasonably foreseeable risk of being exposed to a situation of physical endangerment or extreme precarity that could threaten their right to life, including their right to a life with dignity’*. In short, the applicants were unable to prove harm to health that was sufficiently severe to be considered a violation of the ‘right to life’ in Article 6 of the ICCPR. Not all Committee Members agreed with such a high threshold. According to Mr Duncan Laki Muhumuza, Australia should take ‘immediate adaptive precautionary measures to thwart the climate changes, and preserve the lives of the islanders including their health and livelihood’.

The right to private and family life was also discussed, and the Committee was willing to accept that the effects of climate change impacted the surrounding living areas and ecosystems to such an extent that it affected options for subsistence and well-being. According to the Committee, degradation of the environment due to climate change ‘may adversely affect the well-being of individuals’, including through prolonged or intense ‘physical or mental harm’; in this sense, climate change may lead to ‘foreseeable and serious violations of private and family life and the home.’

As legal remedies, the Committee asked Australia to compensate the Torres Strait Islanders for the harm suffered, engage in meaningful consultations with their communities to assess their needs, and take measures to continue to secure the communities’ safe existence on their respective islands.

¹⁷ [Daniel Billy and others v Australia \(Torres Strait Islanders Petition\)](#), Sabin Center case database.

Ioane Teitiota v. New Zealand, UN International Covenant on Civil and Political Rights (ICCPR)



In 2013, Ioane Teitiota, a Kiribati citizen, sought asylum in New Zealand, asserting that [the effects of climate change and sea level rise forced him to migrate](#), including on health grounds.¹⁸ His application was rejected by the New Zealand courts at all levels. Teitiota then petitioned the UN Human Rights Committee, alleging that New Zealand had violated his right to life under the ICCPR. In 2022, the Committee rejected his petition (with two members dissenting) on the grounds that sufficient protection measures were in place in Kiribati. Nonetheless, the Committee stated that States may not deport individuals who face climate change-induced conditions that violate the right to life.

On the issue of health, Teitiota alleged that he and his family have ‘reasonably bad health issues’ due to a lack of clean drinking water, including blood poisoning. He claimed this also impacted their ability to grow their own crops. Fresh water lenses had become depleted due to salt water contamination, and the family had to depend mostly on rationed water supplies delivered by the public utility company. Assessing the effects of poor access to water and food on Teitiota’s health, the Committee stated that ‘the author has not provided sufficient information indicating that the supply of fresh water is inaccessible, insufficient or unsafe so as to produce a reasonably foreseeable threat of a health risk’ that would either ‘cause his unnatural or premature death’ or ‘impair his right to enjoy a life with dignity’.

The Committee noted that there was a lack of information on certain issues – despite generally accepting that the situation in Kiribati may become very dire within the next 10 to 15 years. This shows the importance of supporting claims with exhaustive, specific and compelling evidence of various hardships, including physical and mental health impacts.

3.2 European region – European Court of Human Rights

KlimaSeniorinnen Schweiz and others v. Switzerland



In 2020, Senior Women for Climate Protection Switzerland (an NGO) and four individual plaintiffs [complained that the State had failed to introduce suitable legislation](#) to ensure appropriate and sufficient measures to attain targets for combatting climate change.¹⁹ Specifically, the women claim that, being elderly, they are particularly vulnerable to climate change impacts, including negative effects of extreme heat.

Hearings commenced in the [Grand Chamber](#) of the Court in March 2023. Evidence of the health impacts of heat stress on this group will be critical to deciding the case, and plaintiffs are using climate science, public health information, and personal medical dossiers to support their claims.

Box 9: The story of Marie-Eve Volkoff

One of the oldest applicants in the KlimaSeniorinnen case is 85-year-old Marie-Eve Volkoff. In March 2023, she explained her motivation for bringing the case in [an interview](#) with Reuters.²⁰ In 2022, Switzerland suffered several spells of heatwaves, compelling her to stay indoors for 11 weeks, with only a few small outings, and generally, with the blinds closed and air-conditioning on. She refers to this period as her ‘climate lock-down’. Mrs. Volkoff’s medical documents are part of the evidence submitted, explaining how heatwaves affect her physique, mobility, and medication intake. Other women also explain how they are advised by their medical doctors to not go outside during hot weather, as it brings risks to life and health related to cardiovascular or respiratory disease.

Marie-Eve Volkoff says: “I am fighting for my life and for my quality of life. Why do I fight? Because it’s only going to get worse and, if the government is as languid as it is now, it won’t sort itself out.”

¹⁸ [UN Human Rights Committee Views Adopted on Teitiota Communication](#), Sabin Center case database

¹⁹ [KlimaSeniorinnen v. Switzerland](#), Sabin Center case database

²⁰ Farge E. [‘Climate lockdown’ anger drives Swiss grandmother to sue Bern at European Court](#) Reuters, 28 March 2023.

Duarte Agostinho and Others v. Portugal and 32 Other States

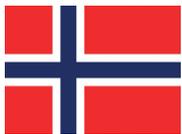


In 2020, six young people accused 33 European countries of [failing to agree to emissions reductions](#) that will keep average global temperature rise to 1.5°C.²¹ They claim that heatwaves and related wildfires, which have increased in recent years in Portugal and are projected to increase in frequency and intensity in the coming decade(s), are affecting their lives, living conditions, physical and mental health.

The case claims violations of the right to life, prohibition of torture and inhuman and degrading treatment, and the right to private and family life. The Grand Chamber of the European Court of Human Rights began hearing the case in September 2023.

The case centers nearly exclusively on the physical and mental health effects experienced by the applicants. In support of their concerns about how unabated climate change is impacting their lives now and in the future, the young people refer to the IPCC's findings on human health and climate change, climate studies projecting the occurrence of heatwaves and forest fires in Portugal, and the negative impacts of heatwaves and fires on lives and health in Portugal so far. Personal experiences documented include the inability to exercise or spend time outdoors during hot weather or wild fires; missing school days; being confronted with the dangerous or even deadly effects of wildfires in close surroundings; reduced sleep; feelings of fear and anxiety; reduced energy levels; and lack of faith in the future. The applicants also refer to the negative effects of air pollution and increased pollen in the atmosphere, affecting the health and well-being of those suffering from respiratory diseases such as asthma.

People v. Arctic Oil



In 2016, a group of young climate activists, along with Young Friends of the Earth Norway (Nature and Youth) and Greenpeace Nordic, [sued the Norwegian government](#) after it granted oil and gas exploration licences in the Arctic.²²

The applicants claimed that the licences violated the Paris Agreement (see Annex 2) and the right to a healthy and safe environment protected by the Norwegian Constitution. The Norwegian domestic courts did not agree, and in 2021 the [claimants applied to the European Court of Human Rights](#). In 2022, the Court postponed its decision pending the outcome of three other climate cases, including the aforementioned Duarte Agostinho and KlimaSeniorinnen cases.

The six young applicants in this case all cite an increasingly common health concern by young people engaging in climate change litigation: negative mental health effects. The applicants explain why and how they are experiencing climate anxiety and emotional distress. They say they 'worry greatly' about the 'current and imminent risks' of climate effects in Norway, and how it will impact their lives and life choices, and those of future generations. They also cite mental health literature on climate anxiety to support their claims, and hold governments responsible due to a lack of climate action. Climate-related mental health problems are expected to become more serious in coming years, especially among young people. The issues relate to unhealthy worry about the present and future, powerlessness, and feelings of severe loss and grieving due to preventable loss of species and ecosystems – also known as 'solastalgia'.

²¹ [Duarte Agostinho and Others v. Portugal and 32 Other States](#), Sabin Center case database

²² [Greenpeace Nordic and Others v. Norway](#), Sabine Center case database

Müllner v. Austria

In 2021, an Austrian man suffering from Uthoff syndrome and a form of temperature-sensitive multiple sclerosis [took legal action](#) against the Austrian government at the European Court of Human Rights.²³ Mr. Müllner is seeking urgent protection against the severely debilitating effects of each incremental degree of global warming and the severely negative effects of longer heatwaves on his health, thereby violating his right to private and family life. Specifically, the complaint explains how at temperatures higher than 25°C he becomes dependent on a wheelchair, while at temperatures over 30°C he loses complete control of his muscular movement. The Court has postponed its decision pending the outcome of three other climate cases.

The Müllner case is one of the few legal cases exclusively about the negative effects of unabated climate change on a specific type of disease. The application cites general scientific evidence on global warming, premature death, and impairment as related to chronic diseases from the Austrian Panel on Climate Change, the IPCC, and the Lancet Report. Other evidence includes average temperature increases in Austria and the applicant's region, projections of increased heatwaves, and medical dossier and personal statement of the applicant. Expert reports are used, although these are not freely accessible.

3.3 European region – national cases

Urgenda Foundation v. State of the Netherlands

In 2015, a Dutch environmental group, the Urgenda Foundation, and 900 Dutch citizens [sued the Dutch government](#) to require it to do more to prevent global climate change.²⁴ Because Dutch laws allow environmental organisations to sue governments on environmental matters on behalf of the wider Dutch population (a so-called *actio popularis*), there was less need in this case to provide evidence of specific negative health effects on specific groups of people. Indeed, the Dutch courts fairly readily accepted general international and national scientific evidence that due to extreme heat, drought, rainfall, or other extreme weather events, it was reasonably expected that the Dutch people will be exposed to various negative effects on health at higher levels of global warming and may even be confronted with loss of life.

The Court also accepted that the impacts may be catastrophic as key 'tipping points' in the climate system occur and certain effects become irreversible. Such dangerous levels of warming must be prevented based on the 'precautionary principle'. This principle accepts that in case of very serious (environmental) risks, especially irreversible risks leading to loss of life or severe damage, a lack of 'scientific certainty' as to the exact risk should *not* be a reason to delay action. In fact, in the face of scientific uncertainty, States may be obliged to act proactively with precaution.

All three courts in the Netherlands hearing this case agreed with the Urgenda Foundation. There was no good reason why the Netherlands should not and could not achieve an emissions reduction of 25% by 2020. In each judgment, the legal arguments differed slightly. The highest Dutch court, the Supreme Court, ultimately ruled on the basis of human rights law that Article 2 (right to life) and Article 8 (right to respect for private and family life) of the European Convention on Human Rights required the Dutch government to do more to protect people's lives and health against the negative environmental effects of global warming.

²³ [Müllner v. Austria](#), Sabin Center case database

²⁴ [Urgenda Foundation v. State of the Netherlands](#), Sabin Center case database

Inquest into the death of Ella Adoo-Kissi-Debrah, UK



In 2013, a nine-year-old girl, Ella Adoo-Kissi-Debrah, died after suffering the last of a long series of asthma attacks. A coronial inquest concluded in 2021 that [air pollution exposure from living in a congested area in London was a cause of her death](#).²⁵

Expert testimony was provided by Professor Sir Stephen Holgate, an immunopharmacologist and consultant respiratory physician. The coroner's report called for tougher air pollution limits, more monitoring and public awareness, and better education for medical professionals. In 2022, the Clean Air (Human Rights) Bill ('Ella's Law') was tabled in the House of Commons. The Bill would make clean air a human right and set a date of 2030 for compliance with key pollution standards.

3.4 Southeast Asian region

Indonesian Youths and Others v. Indonesia



In 2022, 14 applicants representing Indonesian youth [sued the Indonesian government](#) at the Indonesian National Human Rights Commission over violating their constitutional right to life and the right to live in physical and spiritual prosperity in a good and healthy environment.²⁶

They argue that climate change is already causing and will further cause life-threatening hazards, reduce physical and mental well-being, increase health risks, and lead to food and water insecurity – along with disruption to education, healthcare, and livelihoods. The applicants describe the harmful effects that they personally experienced through climate change-related events so far, such as record heatwaves; sea level rise, tidal flooding, high waves, and strong winds or cyclones; increased extreme heat and rainfall; changing disease-vectors (e.g., risk of contracting dengue or malaria); and aggravated mental health problems.

The applicants say the current health system is not able to deal with many of these impacts, and that during disasters their ability to access care and basic needs is even further impaired. They cite reports of the IPCC, WHO, and other bodies, national studies of specific local climate impacts, and personal experiences. This case is currently pending.

Shrestha v. Office of the Prime Minister et al., Nepal



In 2017, Padam Bahadur Shrestha filed an application to compel the government of Nepal to enact a [new climate change law](#).²⁷ Shrestha argued that the existential threat created by climate change impaired his constitutional rights to (i) live with dignity, (ii) live in a healthy and clean environment, (iii) access basic healthcare services, and (iv) food and protection from starvation.

In 2018, the Supreme Court ordered the government of Nepal to enact a new climate change law to (i) mitigate and adapt to the effects of climate change, (ii) reduce the consumption of fossil fuels and promote low carbon technologies, and (iii) develop scientific and legal instruments to compensate those harmed by pollution and environmental degradation, among other provisions. Subsequent to the Supreme Court decision, the government of Nepal passed the Environment Protection Act of 2019 and the Forests Act of 2019.

²⁵ [Coroner's report: death of Ella Kissi-Debrah](#), Courts and Tribunals Judiciary (UK), 2021

²⁶ [Indonesian Youths and others v. Indonesia](#), Sabin Center case database

²⁷ [Shrestha v. Office of the Prime Minister et al.](#), Sabin Center case database

3.5 Africa region

Groundwork Trust and Vukani Environmental Justice Movement in Action v. South African Government, South Africa



In 2022 the High Court [recognised the poor air quality](#) in South Africa's Mpumalanga Highveld region as a breach of residents' Constitutional right to an environment that is not harmful to their health and well-being.²⁸ [Scientific evidence of the health impacts of air pollution](#) was critical to the decision. In March 2023, the Supreme Court [granted leave to appeal](#) the decision.

3.6 The Americas

Held v. State, USA (Montana)



In 2020, 16 young residents of Montana [filed a lawsuit](#) alleging that two Montana statutes are unconstitutional: (i) the state energy policy, which directs statewide energy production and use, and (ii) the Montana Environmental Policy Act, which prevents the state from considering how its energy economy may contribute to climate change.²⁹ In 2023, the Court ruled that the state's failure to consider climate change when approving fossil fuel projects was unconstitutional. An appeal to the US Supreme Court is anticipated.

3.7 Western Pacific region

Greenpeace Southeast Asia and others, Inquiry into the Carbon Majors, Philippines



In 2014, a group of Filipino citizens and NGOs [petitioned the Philippines Commission on Human Rights to conduct an inquiry](#) on the impact of climate change on the human rights of the Filipino people and the role played by the [Carbon Majors](#) (big oil, coal, and gas producers).³⁰

Although the Commission does not have enforcement powers, it made [recommendations](#) to the Philippines Government; global governments; the Carbon Majors; corporations such as financial institutions and investors; the UN and other international bodies; national human rights institutions; courts; non-government organisations and civil society organisations; the legal profession; and global citizens.

The Commission accepted that climate change adversely impacts the right to life with dignity through the degradation of the environment, deprivation of resources and the prevalence of life-threatening diseases and widespread hunger and malnutrition. More specifically, individual human rights impacted by climate change include the rights to food, water, life, sanitation and health. The Commission accepted that climate change influences vulnerable groups of people, including Indigenous peoples, women, children, the elderly and people with disabilities.

In arriving at these conclusions, the Commission recorded in some detail how climate change impacts health generally, citing the World Health Organization and IPCC. It further noted a wealth of evidence and concerns about local impacts: '*climate change has and continues to impinge on Filipino's right to health*'. This occurs through severe temperature increase, extreme weather conditions (heat, heavy rainfall), air pollution, food and water shortages, population displacement, and various water and food-borne, vector-borne and rodent-borne diseases. The Commission specifically highlighted an increase in dengue cases of 98% between January and July 2019, leading to declaration of a national dengue epidemic. Major climate-related disasters, e.g. typhoon Haiyan/Yolanda, also contribute severely to trauma. The Commission clearly accepted both the physical and mental health effects of climate change.

²⁸ [Major court victory for communities fighting air pollution in Mpumalanga Highveld](#), Centre for Environmental Rights, 2022

²⁹ [Held v. State](#), Sabin Center case database

³⁰ [Philippines Commission on Human Rights finds that the world's largest emitters of greenhouse gas emissions engaged in "willful obfuscation" of climate science and breached human rights](#), Commission on Human Rights of the Philippines, *National Inquiry on Climate Change* (2022)

4 The role of public health professionals

In 2021 the Global Climate and Health Alliance and WHO supported an [urgent call for climate action](#) directed to delegates to the CoP26 climate summit in Glasgow, UK.³¹ Over 600 organizations representing over 46 million health workers, together with over 3,400 individuals from 102 different countries, signed the open letter to national leaders and country delegations, calling for real action to address the climate crisis by limiting global warming to 1.5°C, and to make human health and equity central to all climate change mitigation and adaptation actions.

This section of the guide describes actions that public health professionals can take, including (but not limited to) directly supporting climate change litigation.

4.1 Guidance for public health professionals to support health-based climate litigation

4.1.1 Research the health impact of climate change

The impact of climate change on human health has been well-studied by the IPCC, Lancet Countdown, and other research institutions. However, these reports are necessarily general in nature and there are gaps in the evidence base. Further research is needed to understand specific health impacts of climate change at the national and sub-national levels, and assess the cost-benefit of different adaptation options for at-risk communities.

Research is also needed into emerging health effects, such as eco-anxiety and other mental health issues, and their impact on vulnerable and disadvantaged populations such as children and people with disabilities. The field of climate change litigation is also understudied, particularly in the context of public health.

Public health professionals have access to evidence of environmental impacts on health, including through environmental and health impact assessments, death registries, and related clinical care. This evidence can inform local and national action.

Public health professionals can contribute to this evidence base through participating in:

- **Desk reviews** (e.g., to synthesise the existing evidence base on a specific topic)
- **Documenting and reporting** of observed cases for climate-sensitive diseases
- **Health impact and vulnerability assessments** (e.g., to understand the potential impact of a new project or programme on human health, and whether more vulnerable populations are at heightened risk, i.e., due to issues of climate justice)
- **Environmental impact assessments** (e.g., to understand the potential impact of a new project or programme on the natural environment)
- **Epidemiological studies** (e.g., to study morbidity and mortality-related climate change)
- **Qualitative research** (e.g., to understand the mental health impacts of climate change and also the impact on quality of life, self-rated health, and access to green space (e.g., parks) and blue space (e.g., canals)).

4.1.2 Alert public health authorities, civil society organisations and affected communities

Public health professionals are often among the first stakeholders to identify population-level health threats arising from climate change. These may include, for example, a rise in incidence of vector-borne diseases due to temperature changes, or increasing rates of respiratory diseases due to high levels of air pollution exposure. Public health professionals are also likely to be among the first to assess inequalities and support action on behalf of vulnerable groups in populations.

Experience has shown that publishing the data alone does not result in timely action to limit and reverse these threats. Consequently, the global response to climate change remains inadequate. More is

³¹ [An urgent call for climate action from the health community](#), Global Climate and Health Alliance and the World Health Organization, 2021

required – including active engagement with public health authorities, civil society organisations, and affected communities.

4.1.3 Provide expert evidence and advice to inform climate change litigation

Sound scientific evidence is critical to successful litigation. Public health professionals can assemble evidence of impacts on human health to support climate change litigation. Collecting this evidence requires foresight, meticulous record-keeping, and peer support. Early discussions with the legal team and affected communities are key.

Court evidence may be written, oral, or both. Communication skills are needed to ensure the evidence is accessible to people without a background in public or environmental health or epidemiology. This will include the judges and other officials of the court or tribunal, and the general public following the proceedings.

4.1.4 Support advocacy and social mobilisation for climate action

Governments and private sector organisations are more likely to make the hard decisions needed to address climate change if there is widespread community support for these decisions. To be effective in the long-term, systemic change requires social mobilisation.

Public health practitioners are generally well-respected and trusted members of their communities. They can raise awareness about the urgent need for climate action and support social mobilisation in many ways. For example:

- Raising the issues with colleagues from all health backgrounds – exploring how they are integrating climate change into research and practice
- Publishing articles or blogs – co-authored to offer an interdisciplinary perspective
- Getting the message out through social media channels
- Briefing the press and other media about climate change behind current issues
- Organising and signing petitions in the name of their organisations, or encouraging the organisational head to do so
- Sharing petitions with other organisations likely to endorse them
- Providing in-depth interviews with journalists on the public health impacts of climate change
- Joining a Science Media Centre database of public health experts (e.g., the UK's [Science Media Centre](#)) to offer expert opinion to science journalists.

4.1.5 Strengthen collaboration between public health, legal, and other experts

Public health professionals can explore interdisciplinary collaboration between public health and legal experts to take legal action to address climate change. Increased collaboration is also needed between public health professionals and meteorologists, climatologists, weather experts, clinical health professionals, and other relevant parties with valuable knowledge and expertise. The field of attribution science is advancing rapidly and it is essential for public health professionals to have access to the evidence that draws direct links between singular weather events/extremes, climate change, and associated health consequences. This means, for example, not just attributing the number of deaths to an event such as a heatwave, but going further by quantifying the influence of anthropogenic climate change in increasingly the likelihood of a heatwave to occur. Importantly, further advances in the science of detection and attribution are now making it possible to, in some cases, quantify the influence of anthropogenic climate change in an observed increase in adverse health outcomes.

Interdisciplinary collaboration is thus needed with scientific experts who can link different meteorological events and scenarios and help quantify the influence of climate change on the observed health impacts.

4.2 Guidance for public health professionals to build capacity on health and climate change

4.2.1 Promote and participate in education, training, and development

The health impacts of climate change are complex and evolving. Up-to-date information can be accessed and contacts made by joining national or regional organisations addressing climate change and its health impacts. Public health professionals can attend knowledge exchange platforms such as conferences, webinars, courses, and related events, and should endeavour to become knowledgeable about the impacts of climate change on health and the solutions on offer. Local environmental groups welcome public health experts who can explain the health impacts of climate change.

There are also several national, regional, and global professional communities of practice which address these issues, including:

- [Environmental Health Working Group](#) World Federation of Public Health Associations
- [Environment and Health Section](#) European Public Health Association
- [Chartered Institute of Environmental Health](#) (UK)
- [Global Consortium on Climate and Health Education](#), Columbia University (USA).

Climate action can start locally, e.g., by engaging colleagues through workplace information sessions. Further integrating climate change into public health, medical and health care professional curricula is essential to train the coming generation of health practitioners. Promoting interdisciplinary dialogue about climate change with academic communities and practitioners in law, science and other relevant disciplines is also essential to enable transdisciplinary collaboration and action.

Some regional public health institutions and national bodies are integrating climate change into public health curriculums. In 2020, the World Medical Association adopted a resolution on protecting the future generation's right to live in a healthy environment. The resolution noted that climate change and air pollution are closely connected as both have huge impacts on human health and result from anthropogenic emissions due to the combustion of fossil fuels. Recommendations included updating medical school curriculums and including compulsory sections on environmental health. [Protecting the Future Generation's Right to Live in a Healthy Environment](#), World Medical Association General Assembly (2020)

The Association of Schools and Public Health in the European Region ([ASPHER](#)) supports the development of climate-health education and capacity-building for the public health workforce to be key advocates and actors in climate mitigation and adaptation to improve climate change and public health interventions. ASPHER convenes a Climate-Health Education Working Group to facilitate relevant networking and support for the Climate-Health Agenda. The ASPHER climate change and health task force web page holds resources including the [ASPHER Climate and Health Competencies for Public Health Professionals in Europe](#), 2021. ASPHER also leads a European Health Policy Platform [Network on climate change and health education](#). ASPHER is a partner in the [European Climate and Health Observatory](#) and has initiated [activities on climate change and health](#). The European Climate Adaptation Platform [Resource Page](#) is linked to ASPHER's website.

In North America, the Association of Schools and Programs of Public Health ([ASPPH](#)) supports the integration of core climate and health competencies into the training of public health professionals at masters and doctoral levels through the creation of the [Climate Change and Health, A Public Health Education Toolkit](#). The Toolkit, launched in 2022, was created in partnership with the [Global Consortium on Climate and Health Education](#). It provides a framework for integrating climate and health into existing Council for Education in Public Health (CEPH) competencies and provides several entry points for schools to begin to include climate and health training at their institutions.

Box 10: Resources, opportunities, conferences, and collaboration

The Union of Concerned Scientists (UCS) connects scientific experts, legal scholars, and practitioners working at the intersection of science and climate change litigation through the [UCS Science Hub for Climate Litigation](#).

The European Public Health Association has a law and public health section ([EUPHA-LAW](#)). In June 2023, EUPHA-LAW co-hosted a conference on Strategic Litigation and Public Health with the Law and NCDs Research Unit at the University of Liverpool (UK), the Faculty of Public Health (UK), the Groningen Centre for Health Law, and other partners. Climate change was one of the two conference themes.

In 2023, the [Chartered Institute of Environmental Health](#) (CIEH) partnered with the Faculty of Public Health (UK) to offer CIEH members the opportunity to join and access the FPH Special Interest Groups and other professional networking opportunities.

4.2.2 Public health competencies

The role of public health professionals in responding to the climate crisis is increasingly acknowledged in descriptions of professional competencies which determine basic training and continuing professional education. At present, this acknowledgement is largely limited to understanding the health impacts of climate change. There is a separate competency also developing which references the role of the law in public health. The next step will be an acknowledgement of the role of the law in responding to climate change, and the role of public health professionals in that response.

Box 11: Climate and health competencies for public health professionals

Global

The Global Consortium on Climate and Health Education has published and regularly updates the [Climate & Health Core Concepts for Health Professionals](#). Many of the concepts addressed are relevant to climate change litigation, including:

- 1.4.1 Climate and environmental justice
- 1.6.1 Potential protection strategies (could include economic and legal)
- 1.7.1 Transgenerational ethics and ethical obligations to natural world
- 2.1.1 Effective communications
- 2.2.1 Transdisciplinarity
- 2.2.1 Leveraging health professional perspectives in advocacy and policy
- 3.1.0 Policy frameworks and governance structures.

Regional – Europe

In 2021, ASPHER published [Climate and Health Competencies for Public Health Professionals in Europe](#). See also [WHO-ASPHER competency framework for the public health workforce in the European Region](#), 2020, which references climate change in the context of One Health and health security.

National – UK

In 2022, the Faculty of Public Health (UK) included climate change in its [Public Health Specialty Training Curriculum](#). Key Learning Outcome 5.7 calls on public health professionals to *demonstrate leadership in environmental sustainability with a focus on the links to health or emergency planning and climate change*.

4.2.3 Maintaining mental health and well-being in the climate crisis

Public health and other scientists and professionals engaged in climate change litigation contend with many potential stressors. Public health professionals may already face the personal impacts of climate change on their lives and livelihoods. They may be criticised for speaking out about climate change by governments, as well as nongovernmental organisations representing or supported by fossil fuel companies and related private sector interests. SLAPP litigation and other forms of harassment and intimidation may be initiated against actors involved in climate change advocacy and litigation. Health professionals might be unprepared to cope with this intimidation, and disproportionately affected by these techniques.

Climate change related stress can also arise in personal relationships. Furthermore, an awareness of the scope of climate change can be overwhelming in itself. Traditional behavioural norms may dictate that professionals remain composed and unemotional, and expressions of distress may invite stigma. These stressors have been [noted among earth science professionals](#).

Five strategies have been proposed to address these stressors: self-education; psychological self-care practices; professional preparedness and services; social support; and institutional cultural change. Public health professionals considering or engaging in climate change litigation and other action can help to alleviate the negative impact on their own well-being by considering which stress factors might arise and seeking sources of support. Health professionals' institutions also have a role in supporting and protecting those engaged with climate change litigation.³²

³² Gilford D. et al. [The emotional toll of climate change on science professionals](#), Eos, American Geophysical Union, 2019.

5 Looking ahead

Climate change litigation is a fast moving field. Below are some emerging themes and anticipated developments in the coming year or two, and further beyond. Overall, the role of public health evidence and opportunities for the engagement of public health professionals in climate action and advocacy are expected to grow accordingly.

5.1 Advisory opinions

International Court of Justice (ICJ)



In 2023, the [UN General Assembly](#) requested the International Court of Justice to issue an advisory opinion on States' responsibilities for curbing global emissions and the legal consequences of inaction. The request was initiated by Vanuatu, an island state in the Western Pacific.³³

Other advisory opinions relating to climate change have been sought from the [International Tribunal for the Law of the Sea](#) (2022) and the [Interamerican Court of Human Rights](#) (2023).

5.2 Ecocide

According to the [Independent Expert Panel for the Legal Definition of Ecocide](#), 'ecocide' refers to 'unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts'.³⁴ There are proposals to establish the crime of ecocide under both national and international law, for which individuals could also be liable. In March 2023, the European Parliament [proposed including ecocide](#) in the EU's revised environmental crime directive.³⁵

5.3 Fossil Fuel Non-Proliferation Treaty

In 2022, more than [1000 health professionals and 200 health organisations](#) called on governments to urgently develop and implement a Fossil Fuel Non-Proliferation Treaty to end global dependence on fossil fuels. Similar to the Framework Convention on Tobacco Control, the proposed Fossil Fuel Non-Proliferation Treaty would be an evidence-based international agreement to control a category of substances known to be harmful to human health.³⁶

5.4 Obligations towards future generations

In 2023, after extensive consultation, human rights and environmental scholars and advocates from all regions adopted the [Maastricht Principles on the Human Rights of Future Generations](#).³⁷ See also [Protecting the Future Generation's Right to Live in a Healthy Environment](#), World Medical Association.³⁸

³³ [Request for an advisory opinion on the obligations of States with respect to climate change](#), Sabin Center case database

³⁴ [Legal definition of ecocide](#), Stop Ecocide International, 2021

³⁵ [European Parliament votes unanimously for ecocide](#), OpinioJuris, 10 April 2023

³⁶ [International health organizations call for fossil fuel non-proliferation treaty to protect the lives of current and future generations](#), Global Climate & Health Alliance, 2022

³⁷ [Maastricht Principles on the Human Rights of Future Generations](#), OHCHR, 2023

³⁸ [WMA resolution on protection the future generation's right to live in a healthy environment](#), World Medical Association, 2020

Conclusion

Public health professionals have already proven to be key players in climate change litigation. This guide notes multiple promising initiatives and case studies which demonstrate the success of climate change litigation as a means to steer governments and other organisations towards more climate conscious laws, practices, procedures, and policies.

Nonetheless, stronger connections with the legal sector, community advocacy groups, and government representatives are crucial. For successful climate change litigation, it is essential to work intersectorally.

This report is part of ongoing efforts to build competence, capacity and capability of the public health workforce in public health ethics, law and human rights for good practice, research and policy making.

For further information and to provide feedback on this guide, please contact: PHELnetwork@gmail.com

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Annex 1: Resources

1.1 Websites, databases, and reports

- [Climate Change Laws of the World](#)
London School of Economics and Political Science & Grantham Research Institute on Climate Change and the Environment
- [Climate Change Litigation Database](#)
Sabin Center for Climate Change Law
- [Environmental lawyer database](#)
ClientEarth and Environment & Justice
- [European Climate and Health Observatory](#)
A joint initiative of the European Commission, the European Environment Agency, and other organisations
- [Global Trends in Climate Change Litigation: 2023 Review](#)
[Global Trends in Climate Change Litigation: 2022 snapshot](#)
Grantham Research Institute on Climate Change and the Environment
- [Global Climate Litigation Report: 2023 Status Review](#)
United Nations Environment Programme (UNEP)
- [Intergovernmental Panel on Climate Change](#)
 - [AR6 Synthesis Report: Climate Change 2023](#)
 - [AR6 Report: Impacts, Adaptation and Vulnerability: Climate Change 2022](#)
- [International Society of Doctors for the Environment \(ISDE\)](#)
- [Lancet Countdown](#)
 - The 2022 report: health at the mercy of fossil fuels
 - The 2021 report: code red for a healthy future
 - The 2019 report: ensuring that the health of a child born today is not defined by a changing climate
- [Model Statute for Proceedings Challenging Government Failure to Act on Climate Change](#)
International Bar Association & Human Rights Task Force

1.2 Guides

- [Climate & Health Core Concepts for Health Professionals](#)
Global Consortium on Climate and Health Education & Columbia Mailman School of Public Health (2023)
- [Manual: 'How we defeated Shell'](#)
Friends of the Earth Netherlands (2021)
- [Holding your Government Accountable for Climate Change: A People's Guide](#)
Greenpeace (2018)
- [Protecting your environment: The power is in your hands - Quick guide to the Aarhus Convention](#)
UNECE (2014)
- [Health and environmental impact assessment](#)
Faculty of Public Health (UK)
- [The human right to health and climate change: A legal perspective](#) (2015)
Groningen Center for Health Law

1.3 Podcasts

- [Randall Abate: Standing in Climate Change Litigation](#) *The Climate Show*. January 2023.
- [Trends in Climate Change Litigation: Building for the Future](#) *OUTLOOK: The Commercial, Construction and International Arbitration podcast*. January 2023.
- [The role of litigation in fighting the climate crisis](#) *The Lancet Voice*. November 2022.

- [Harro van Asselet: Climate Change Litigation, Scholactivism and the Evolution of Climate Law and Governace](#) *Climate Discourse*. September 2022.
- [Jacques Hartmann: Rights-based climate change litigation in Europe](#) *The Climate Show*. July 2022.
- [Annalisa Savaresti: Trends in human rights and climate change litigation](#) *The Climate Show*. June 2022.
- [Climate Change 101: Litigation Against Governments Climate Conduct and Policies](#) *Herbert Smith Freehills Podcasts*. February 2022.
- [Milieudéfense v. Shell: A Tipping Point in Climate Change Litigation against Corporations?](#) *New Books in Environmental Studies*. October 2021.
- [Climate lawfare: Fighting climate change in court.](#) *ClimateCast with Tom Heap* May 2021.
- [Can the law fight climate change?](#) *Law in Action. BBC Radio 4*. March 2021.

1.4 Books

- [Climate Litigation in a Changing World](#) (2023) Spier J. Eleven Publishing.
- [Climate Change, Public Health, and the Law](#) (2018). Cambridge: Cambridge University Press.

1.5 Webinars

These webinars and other resources are available on the Faculty of Public Health website:

[Public Health Ethics, Law and human rights for the future of humanity](#)

- [Involving respiratory physicians in public health litigation to address air pollution](#)
Presentation by Professor Sir Stephen Holgate, Medical Research Council (MRC) Clinical Professor of Immunopharmacology at the University of Southampton. Conference on Strategic Litigation and Public Health, University of Liverpool, 15-16 June 2023.
- [Involving paediatricians in public health litigation to address air pollution](#)
Presentation by Professor Ian Sinha, Consultant Respiratory Paediatrician at Alder Hey Children's Hospital and Honorary Professor of Child Health at the University of Liverpool. Conference on Strategic Litigation and Public Health, University of Liverpool, 15-16 June 2023.
- [Climate Change Litigation at the European Court of Human Rights](#)
Organised by the Law & NCD and the International Law and Human Rights Units at the University of Liverpool, in collaboration with European Public Health Association Law and Public Health Section, the UK Faculty of Public Health and other partners (21 March 2022).
- [Climate change, public health and strategic litigation](#)
Organised by the Faculty of Public Health in collaboration with the Groningen Centre for Health Law (GCHL), EUPHA law, ethics and environment and health sections, Greenpeace, ClientEarth and other partners (7 October 2021).

Other webinars:

- [Field epi response to the climate and health crisis](#)
International Association of National Public Health Institutes, 2023
- [Strategic Climate Litigation: insights from global experience](#)
London School of Economics and Political Science (3 July 2020)
- [Addressing the Impacts of Climate Change through Law and Policy](#)
Network for Public Health Law & American Society of Law, Medicine and Ethics (22 August 2019)

1.6 Articles

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2. Toolan N, Marcus H, Hanna EG, Wannous C. Legal implications of the climate-health crisis: A case study analysis of the role of public health in climate change litigation. *Plos one*. 2022 Jun 15;17(6):e0268633.

3. Patterson DW, Harvey R, Matkovic V, Hesselman M, Tahzib F. Post COP26: legal action now part of public health's environment and climate change toolbox. *European Journal of Public Health*. 2022 May 31.
4. Marlies Hesselman (2021) 'Climate Change as a Global Health Threat in International Climate Law and Human Rights Law, in Toebes B. et al, *Global Health Law Disrupted: COVID-19 and the Climate Crisis* (TMC Asser, Preadviezen No. 148) 87-130 ([open access](#)).
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14. Burger M, Gundlach J, editors. *Climate Change, Public Health, and the Law*. Cambridge University Press; 2018 Oct 25.
15. Grace Nosek, *Climate Change Litigation and Narrative: How to Use Litigation to Tell Compelling Climate Stories*, 42 *Wm. & Mary Env'tl. L. & Pol'y Rev.* 733 (2018).

1.7 Online courses

1. [Air pollution and health: an introduction for health workers](#), OpenWHO

Annex 2: International legal and policy framework

| Treaty / convention / guidance | Year | Notes |
|--|------|---|
| United Nations Framework Convention on Climate Change (UNFCCC) | 1992 | Aims to reduce atmospheric concentrations of greenhouse gases and prevent dangerous anthropogenic interference with Earth's climate system. |
| UNFCCC Conference of the Parties (COP) | 1995 | The UN holds an annual COP to advance the UNFCCC. |
| Intergovernmental Panel on Climate Change (IPCC) | 1998 | A UN body charged with advancing scientific knowledge about anthropogenic climate change. |
| Paris Agreement | 2015 | An international treaty developed under the UNFCCC. Aims to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels. |
| International environmental law | | Aims to control pollution and the depletion of natural resources within a framework of sustainable development. Covers topics such as biodiversity and climate change. |
| International human rights law | | By becoming parties to international (UN) and regional treaties, States assume legal obligations to respect, to protect and to fulfil human rights. |
| Regional – Europe | | |
| Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters | 1998 | Adopted by the United Nations Economic Commission for Europe (UNECE). It links environmental rights with human rights. |
| Maastricht Recommendations on Public Participation in Decision-making in Environmental Matters | 2015 | A practical tool to assist officials in carrying out public participation procedures for projects, programmes, policies and legislative acts related to a wide range of subjects. These include developing climate-related strategies. |
| Regional – Latin America and Caribbean | | |
| Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement) | 2018 | Both an environmental and human rights treaty. Aims to ensure the right of all persons to have access to information in a timely and appropriate manner, to participate significantly in making the decisions that affect their lives and their environment, and to access justice when those rights have been infringed. |