



THE UNIVERSITY *of* EDINBURGH

Edinburgh Research Explorer

Non-governmental organizations and the environmental movement

Citation for published version:

Yearley, S 2023, Non-governmental organizations and the environmental movement: Challenges in climate change framing. in Z Baker, T Law, M Vardy & S Zehr (eds), *Climate, Science, and Society: A Primer*. 1 edn, Routledge, pp. 77-85. <https://doi.org/10.4324/9781003409748-13>

Digital Object Identifier (DOI):

[10.4324/9781003409748-13](https://doi.org/10.4324/9781003409748-13)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Publisher's PDF, also known as Version of record

Published In:

Climate, Science, and Society

General rights

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



9 Non-Governmental Organizations and the Environmental Movement

Challenges in Climate Change Framing

Steven Yearley

Introduction

Environmental non-governmental organizations (NGOs) and advocacy groups have long been renowned for their stunts and campaigning, not least in relation to issues around climate change. They mount noisy protests in the face of airport construction projects; at international climate negotiations they stage marches and “shadow events” to exert pressure on the delegates; and they have adapted earlier anti-nuclear mobilizations to oppose new coal-fired power stations, fracking, and those carbon capture and storage facilities that depend on links to fossil fuel industries. In the last few years, new groups have emerged that apply direct action in novel ways, such as the Sunrise Movement in the USA. In the USA and Britain, and in numerous other countries, one prominent group is the Extinction Rebellion, known as XR, which was founded in the UK in 2018. XR focuses on direct action events to draw attention to the climate crisis and threats to biodiversity. Its methods resemble those of the Occupy movement that protested banks and capital in the context of economic austerity after the financial crisis of 2007–2008. In one stand-out XR protest, in 2019 a former Paralympic athlete managed to super-glue himself to the top of a British Airways plane at a London airport favored by business travelers, disrupting many flights for the day.

Urgency is the key theme of XR, as memorably communicated by its logo, which uses a stylized “X” to evoke an hourglass or glass timer, highlighting that our time is running out. Some members of XR in Britain then reshaped themselves into the more precisely focused Insulate Britain (2021), a campaign organization demanding that government intervene so that new social housing and the existing stock of dwellings be adequately insulated (it is widely agreed that the UK wastes a lot of natural gas in heating poorly designed domestic spaces). Insulate Britain supporters caused consternation and delays by blocking roads, thus highlighting society’s addiction to fossil fuels. A later spin-off, Just Stop Oil (dating from 2022), built on this tradition of non-violent protest and began by “occupying” trucks transporting petroleum products and by using various means to block traffic on freeways and major bridges. In October 2022, two Just Stop Oil activists threw canned tomato soup at a celebrated Van Gogh picture of sunflowers in London’s National Gallery as part of a move toward protests in the cultural sectors. Safe behind protective glass, the Van Gogh painting was undamaged, but the incident, which was intended to stimulate discussion about what society values and why, sparked outrage.

The stance of these groups is radical. Protestors are often arrested for not compromising their commitments to their goals. They mobilize through social media and to some extent online but have very little administration or overhead, making them distinct from groups such as Greenpeace and Friends of the Earth, who – these days – are professionalized groups with offices and rents to pay, and who need to solicit donations from foundations and middle-class supporters. But this makes it all the more notable that on Just Stop Oil’s website they choose to have a

prominent quote in very large letters attributed to Sir David King, the former Chief Scientific Advisor to the British Government: “What we do over the next three to four years, I believe, is going to determine the future of humanity” (Just Stop Oil, 2023). King made this comment in a speech he gave at the 2021 Climate Emergency Summit in Australia where he went on to say, “We are in a very, very desperate situation.” King’s remark has been cited by XR also; their website invokes him, stating “This stuff is real. The science is clear. Our future is not” (Extinction Rebellion, 2023). The key point is that, despite their activism and spontaneity, their super-gluing and soup-based protests, these climate pressure groups are keen to show that their claims are ratified or endorsed by senior scientific figures. This indicates something important about environmentalism and climate change.

Climate Framing and the Role of Science

This conspicuous role for scientific authority arises precisely because the convincingness of these groups’ message depends on the notion that their claims have a basis in factual accuracy – that they are not simply matters of opinion or ideology, but can withstand expert, scientific scrutiny. Environmentalists, more than any other type of campaigner, need to persuade the public that things are *in fact* the way they say things are, even when some of the claims they are making seem – at first glance at least – to be counter-intuitive or implausible: that methane-heavy “burps” from cows and sheep can warm the atmosphere significantly, that minute plastic spheres in cosmetic products can end up accumulating in ocean creatures, or that burning coal, gas, and oil can unsettle the entire global climate. Most other social movement claims are based around justice, fairness, or rights, as with the Civil Rights movement, the Women’s Movement, and activism around LGBTQ+ identities. In the case of climate change, a big challenge has been to express the strength of evidence for the reality of climate effects and to combat those who have set out to sow doubt. The difficulty for environmentalists arises from two sources. In part, there is the fact that climate change has generally been a gradual process so that ordinary people have mostly not been able to detect it or distinguish it from general weather variability on a casual basis. This means that environmentalists have had to rely on the social authority of science to argue that the climate is indeed changing and that particular instances of observed changes are attributable to anthropogenic causes. Second, since climate change has arisen primarily from fossil fuel consumption (and is thus tied to all sorts of economic activity), attempts to take steps to combat global warming have been opposed or questioned by many in industry and intensive agriculture, by lots of vehicle manufacturers, by right-leaning politicians and policy makers (who are often inclined to view it as a left-wing attempt to regulate the market), many bankers, and most directly by fossil fuel industries and producers themselves. Even some established labor unions have voiced skepticism, based on perceived threats to workers’ livelihoods. All of these groups, motivated by ideological, economic, or political concerns, have questioned the scientific basis of climate change, which can make the environmentalists all the more insistent that science be granted authority.

Since their formation in the 1970s, celebrated environmental movement organizations in the Global North have often protested against the establishment, including establishment scientists, over issues such as nuclear power, agricultural chemicals, and the desirability of genetically modified crops and foods. In the climate case, environmentalists have thus found themselves in an unusual situation. What they see as the world’s leading environmental problem is fully endorsed by the mainstream scientific community and, in principle at least, by most world governments whose representatives have now signed off on six sets of Intergovernmental Panel on Climate Change (IPCC) reports and, overwhelmingly, signed up to the 2015 UN

WHY WE REBEL

Scientists have spent decades writing papers, advising governments, briefing the press: all have failed. What is the point in documenting in ever greater detail the catastrophe we face, if we are not willing to do anything about it?

Academics are perfectly placed to wage a rebellion: we exist in rich hubs of knowledge and expertise; we are well connected across the world, and to decision-makers; we have large platforms from which to inform, educate and rally others all over the world, and we have implicit authority and legitimacy, which is the basis of political power. We can make a difference. We must do what we can to halt the greatest destruction in human history.

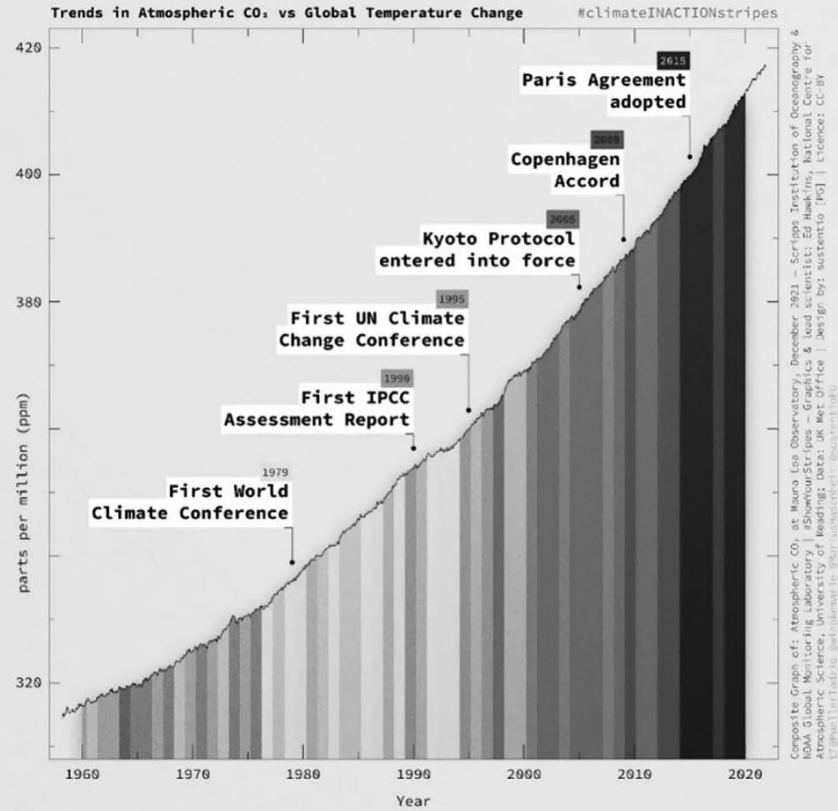


Figure 9.1 Screenshot of homepage of Scientist Rebellion.

Source: See <https://scientistrebellion.org/>.

Paris Agreement to combat climate change. A large part of environmental NGOs' efforts – even those with scientists on their staff – have accordingly been directed at restating and emphasizing mainstream findings, identifying novel ways to publicize the message, and countering the claims of global-warming skeptics.

It is in this context that new climate movement (NCM) groups, such as Just Stop Oil, have come to focus on the need for urgent action and have picked tactics that are designed to shock societies into change. They accept governments' decarbonization ambitions, but they want the action to be greatly accelerated. In the face of attempts by some political figures and some industry lobbyists to cast doubt on the growing international scientific consensus on climate change, NGOs of all sorts have tended to highlight the central scientific findings and to emphasize that scientific findings are rigorous and methodical. Famously, at the "Camp for Climate Action" at London's Heathrow Airport in 2007, environmentalists protesting plans for further airport expansion carried a huge banner declaring "we are armed only with peer-reviewed science" (Bowman, 2010, p. 177). They were expressing – they insisted – not their own views but the message of science, and they were stressing that scientific claims should be trusted because they are based on robust quality-control mechanisms such as peer review. This close relationship between NGOs and scientific warnings about climate change was further intensified in 2019 in the leading scientific journal *Science* where a short article (a letter) by Gregor Hagedorn of Berlin's Natural History Museum and several co-authors sought to demonstrate that the climate concerns of young protesters are scientifically justified. Hagedorn was also one of the founders of Scientists for Future (S4F), an intended scientific counterpart to the Fridays for Future movement, which is discussed below (Scientists for Future, 2023). A similar group, Scientist Rebellion, is composed of scientists who are "uniting against climate failure" and who support "civil disobedience to demand emergency decarbonisation and degrowth, facilitated by wealth redistribution" (Scientist Rebellion, 2023). The group is well known for having leaked an advanced draft of the latest IPCC report (IPCC AR6 WGIII) for fear that it would be watered down through horse-trading between national delegations and governments.

The force and clarity of NCM campaigns are buoyed by avoiding uncertainty and discord about scientific views, an observation that is supported by Rödder and Pavenstädt's (2023) work on NCM groups such as XR and the Sunrise Movement. Drawing on recent NCM publications and on fieldwork with protestors, these authors note that "A striking feature, again shared across the NCMs under study, is that they picture science as a unified actor, which communicates with one voice" (2023, p. 35; for XR specifically, see also Hinks and Rödder, 2023). It is worth noting here that the NCM's vision of a unified science speaking with a single voice is rather different from that found in STS, which tends to regard science as, typically, more plural.

Although this alignment between a unified voice of science and the invoking of top establishment scientific figures such as Sir David King would seem to confer appreciable benefits onto environmental NGOs, there is also a sense in which it places these NGOs in a dilemma. One aspect of this dilemma relates to the aforementioned urgency. However, many scientific investigations take a lot of time. The cycle for producing the reports of the IPCC, for example, typically lasts five to seven years. It is hard to be urgent and as thorough as possible. The occasional errors that have crept into IPCC reports have been relentlessly exploited by those who wish to discredit the IPCC, so there are clear incentives to be careful and painstaking. Second, NGOs' statements in favor of the objectivity of the scientific establishment's views mean that it is hard to distance themselves from scientists' conclusions on other occasions without appearing arbitrary or inconsistent. The case of genetically modified organisms (GMOs) used in agriculture is revealing in this light since it is difficult for NGOs to insist on the simple correctness of scientific views over climate change but to disagree with the

apparent establishment position on GMOs. Relatedly, a reluctance to criticize mainstream science threatens to make NGOs too accepting of establishment policy positions, for example, about the scope for future technologies to remove carbon dioxide from the atmosphere. As a consequence, this leaves NGOs with only a derivative stance on all policy matters since – lacking supercomputers or polar research stations – they cannot easily generate new, fundamental knowledge about the climate themselves. Environmental activists know that support from the scientific community is a key asset in their campaigning. But it does not always deliver the boost that they hope for since scientific processes may lack the urgency that activists seek and there is a risk that activists become the “junior” partner in their relationship with scientific experts.

Alternative Framings

Although NGOs’ link to science is very close, even in the case of the most recent organizations such as Just Stop Oil, that does not exhaust the strategies open to environmental groups. There are, for example, things that they can act on within the parameters of accepted science and already-agreed policies. One of the most straightforward options is to focus on the extent to which existing greenhouse gas pledges are being carried through into practice. International climate agreements call on countries to meet specific emissions targets. NGOs can accordingly involve themselves in monitoring and in publicizing countries’ successes (or failures) in meeting commitments. Of course, greenhouse gas monitoring tends to be a technical or scientific exercise, but the logic of this strategy is not about science. Rather, it is more a question of making sure people do what they have promised. Indeed, one of the distinctive things about the 2015 Paris Agreement was that the countries that signed up set their own detailed targets, so there is a lot of monitoring work to do. Research and monitoring groups have emerged to play key roles here – Climate Action Tracker seeks to monitor pledged and actual emissions, while the Global Carbon Project offers an independent check on the overall carbon budget.

In a related way, climate NGOs have sought to get governments and sub-national political entities (cities and regions, for example) to declare a “climate emergency.” No specific policy measures are tied to such a declaration, but it has been a popular campaigning objective precisely because it obliges governments to acknowledge how serious the climate issue is, and makes them answerable for taking action. In parliamentary democracies, the idea of declaring a climate emergency has also been popular with parties in opposition or out of government because it allows them to position themselves as more inclined to act than the party currently in office.

On a similar basis, environmental pressure groups can target actors and institutions who are responsible for or are investing in activities with large associated greenhouse emissions. Activists can address institutions or holders of capital who have – or wish to be seen to have – high ethical principles. US-based lobby group 350.org (named for the target CO₂ concentration of 350 parts per million) called upon universities and other institutions to divest from companies tied to fossil fuels. Student bodies have been effective in putting pressure on universities, particularly US and other private universities (for example, the Colleges at Oxford and Cambridge in the UK), that may hold large investment portfolios, to get them to move their money out of carbon-intensive investments. Subsequently, 350.org linked up with the left-liberal UK newspaper, *The Guardian*, to run a joint campaign targeting large-scale private funding bodies, including the UK’s Wellcome Trust, to persuade them to divest from fossil fuel shares. The gigantic Norwegian sovereign wealth fund has also been keen to be seen as an environmentally sensitive and sustainable form of investment. Universities and research-funding bodies, it should be

noted, have no specific reason to hold energy shares, other than the idea that such investments are likely to be of long-term value. Promoting divestment becomes symbolically important and may also act to put downward pressure on the value of this type of asset.

University and high-school students have pioneered other initiatives too, including promoting vegetarian or vegan dining facilities for students and calling on their institutions to use catering budgets in climate-friendly ways. The distinctive thing with this kind of approach is that, aside from continuing to affirm the reality and urgency of the problem of climate change, there is no significant science communication challenge involved. Campaigners no longer have to argue about the adequacy of emissions targets; they focus instead on creating a moral concern not to invest in certain kinds of stocks or to avoid serving students methane-producing meat products.

Over the last 15 years, environmental NGOs have taken prominent roles in another kind of approach with practical policy relevance: re-conceptualizing the issue as about turning off the supply or leaving carbon unburnt. NGOs have also adopted a pioneering role in taking forward such arguments. Thus, Oilwatch – a network NGO set up in Quito, Ecuador, in 1996 with members from Latin America, Africa and Asia – was established to oppose the expansion of hydrocarbon extraction especially in tropical, biodiverse regions. During the negotiations over the United Nations treaty that preceded the Paris agreement, Oilwatch proposed a moratorium on new oil activities instead of emissions targets. It developed this idea in a report a decade later (2007), arguing that the UN agreement had failed to stop the expansion of the oil industry, that tropical forests were under threat from hydrocarbon prospecting, and that the only successful strategy would be to agree to leave large quantities of oil in the ground (this became known as LINGO, leave it in the ground). This was adopted as the strategy of the then-president of Ecuador to avoid the development of oil extraction in the forests of the Yasuní National Park (the specific zone is known as Yasuní-ITT, for the Ishpingo-Tambococha-Tiputini prospecting block, and is a celebrated biodiversity hotspot). He sought to raise international funds equivalent to half the projected value of the reserves in order to compensate his nation for keeping the oil underground and to allow Ecuador the resources to keep habitats intact. The scheme attracted high-level international support and the money was to be administered by a Trust Fund of the United Nations Development Programme (set up in 2010). The project was further endorsed by environmental NGOs and by celebrity backers including Leonardo DiCaprio. In the end, insufficient funds were offered in the initial years and President Correa reversed the policy in 2013 blaming a lack of international support. Oil extraction later began.

This approach, focusing on the role of suppliers and concentrating on ways to keep hydrocarbons in the ground rather than on reducing emissions, was presented in an adapted form four years after Oilwatch in a report by the Carbon Tracker Initiative (Leaton, 2011), based in London. Carbon Tracker's analysis highlighted that there is only so much carbon that can be emitted before the targeted 2°C rise will be exceeded. Anyone whose wealth relates to fossil fuel reserves after that point will find that the reserves may be unrealizable and therefore of much-diminished value. Carbon Tracker directed this message to investors and institutional shareholders rather than to oil-rich states, warning that their long-term assets could become devalued. As Jacobs (2016) expresses it:

If governments acted on their own commitments, it would leave many of the world's fossil fuel companies with "stranded assets," unable to continue planned production and with heavily devalued share prices. The world's stock markets and pension funds were effectively sitting on a "carbon bubble."

(2016, no pagination)

Seen in this way, therefore, holding oil or gas investments beyond a certain level is financially very risky, and current investment portfolios underwritten by the presumed future value of fossil fuel reserves may be drastically overvalued. Carbon Tracker presented this idea very cogently and in a manner far more tailored to institutions than Oilwatch, and achieved recognition for their idea from significant market actors.

Environmental NGOs have discovered various ways of acting on climate change that manage to side-step the challenges created by sticking very close to science. They have focused on policy promises rather than on scientific targets and they have campaigned by following the money rather than the scientific results. With these alternative strategies in mind, let us now turn to the School Strike protests and their identification of young people as a distinctive kind of political actor.

Generational and Related Framings

As befitted *Time* magazine's person of the year for 2019, Greta Thunberg was hardly out of the news from the start of her School Strike for Climate through to the abrupt temporary end of politics-as-normal caused by Europe's COVID-19 virus outbreak in early 2020. She gave speeches to crowds of activists and young people across the world, and addressed politicians and UN bodies. Her personality and guileless approach spoke to her authenticity and conviction while, through the development of her School Strike campaign (generalized as Fridays for Future), she achieved what many analysts of social movements identify as a critical success. That is, she identified in the school-age activists a new and potentially coherent political actor that could press for action on climate change without the compromises and split loyalties of existing political leaders.

Part of the triumph of the School Strike idea was that, unlike in most regular strikes, participants had little to lose by striking: they lost neither wages nor pension benefits and their actions were often endorsed by educational authorities. Nor was it much of a hardship for the strikers; many school students may well have preferred to join in strikes once a week than to attend classes. But the essential point was that school strikes represented and crystallized a segment of society that felt the urgency of the climate issue without having really been complicit in causing the problem. Here was a cohort, mostly born after the signing of the first major international climate agreement at the end of the 1990s (the UN Kyoto Protocol), who felt that their adult lives were going to be overshadowed by a vast problem that they had not caused and from whose causing they felt they had derived no great benefit.

In her numerous speeches, Greta Thunberg focused on two kinds of claims. One was essentially the argument reviewed at the start of this chapter: that politicians the world over are not listening to the grave warnings coming from the scientific community. She implied that there was a single scientific view and preferred to point political leaders to scientific reports than to repeat the claims herself. Her demand was that leaders listen to what was already known. Her second claim was moral: today's adults have known about the problem for decades but have failed to do enough about it. Though they speak about a sustainable future for coming generations, they are not delivering on that ideal. On the contrary, they are leaving a problem for their children which they (the adults) had been too weak to address.

In the sociological literature on social movements, one principal line of thought argues that the truly historic social movements are the ones that develop a new collective actor with newly identified goals and ambitions. The Women's Movement, for example, articulated the interests of women, diagnosed the sources of their oppression, and devised strategies for their emancipation; the movement has developed through several "waves" in which these steps have been

broadened and enlarged. The School Strike movement and Fridays for Future started to achieve the same in relation to climate. They have defined an actor on a generational basis, an actor who faces a very uncertain future through no fault of their own. This outlook is well expressed in some movement organization names: XR clearly makes possible the thought of extinction. In Italy, a high-profile group in 2023 has adopted the name *Ultima Generazione* (Last Generation) (The Guardian, 2023).

This sense of a distinctive orientation toward climate change is potentially powerful. It could lead to a willingness to adopt more rapid or far-reaching measures than have been seen to date, where official targets expect net zero even in the pioneering nations only by around 2050. But the sense that younger citizens might literally be members of the last generation appears to be correlated with detectable levels of anxiety. In one large-scale international study, with a thousand respondents in 10 countries, a majority of respondents answered that they believed “the things I most value will be destroyed” and that “humanity is doomed” (Hickman et al., 2021).

Environmentalism’s close connection with scientific claims and with the authority of science offers many benefits to the movement. But, as STS studies have shown, holding too close to the authority of science can bring disadvantages too. Scientific results are often provisional and may take a long time to produce. In some cases, scientific views are based on scientists’ judgment. In these ways, science does not have the unified character ascribed to it by NCMs. There is also a great deal of difference between STS understandings of science and how it is likely taught as a singular scientific method in high schools, including the high schools of the student strikers. As this chapter has indicated, there are many ways that climate activists can effect change and many of them involve side-stepping scientific claims, focusing instead on governments’ pledges or the investment decisions of schools and colleges. In this sense, the climate anxieties of a new generational actor can perhaps beneficially be channeled into the abundance or plurality of ways citizens can engage productively with climate change.

Further Reading

- Bocking, S. (2004) *Nature’s Experts: Science, Politics, and the Environment*. New Brunswick, NJ: Rutgers University Press.
- Dunlap, R. E. and Brulle, R. J. (eds.) (2015) *Climate Change and Society: Sociological Perspectives*. New York: Oxford University Press.
- Rödger, S. and Pavenstädt, C. N. (2023) “‘Unite behind the science!’ Climate movements’ use of scientific evidence in narratives on socio-ecological futures.” *Science and Public Policy*, 50(1), pp. 30–41.
- Thunberg, G. (2019) *No One is Too Small to Make a Difference*. Harmondsworth: Penguin.
- Yearley, S. (1992) “Green ambivalence about science: Legal-rational authority and the scientific legitimation of a social movement.” *British Journal of Sociology*, 43(4), pp. 511–532.

References

- Bowman, A. (2010) “Are we armed only with peer-reviewed science? The scientization of politics in the radical environmental movement.” In Skrimshire, S. (ed.), *Future Ethics: Climate Change and Apocalyptic Imagination*. London: Continuum, pp. 173–196.
- Extinction Rebellion (2023) “Extinction Rebellion.” Available at: <https://rebellion.global/> (Accessed May 22, 2023).
- Hagedorn, G., Hagedorn, G., Kalmus, P., Mann, M., Vicca, S., Van den Berge, J., van Ypersele, J., Bourg, D., Rotmans, J., Kaaronen, R., Rahmstorf, S., Kromp-Kolb, H., Kirchengast, G., Knutti, R., Seneviratne, S.I., Thalmann, P., Cretney, R., Green, A., Anderson, K., Hedberg, M., Nilsson, D., Kuttner, A., and Hayhoe, K. (2019) “Concerns of young protesters are justified.” *Science* 364(6436), pp. 139–140.

- Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, R. E., Mayall, E. E., Wray, B., Mellor, C., and van Susteren, L. (2021) "Climate anxiety in children and young people and their beliefs about government responses to climate change: A global survey." *The Lancet Planetary Health*, 5(12), pp. e863–e873.
- Hinks, E. K. and Rödder, S. (2023) "The role of scientific knowledge in Extinction Rebellion's communication of climate futures." *Frontiers in Communication* (Published online ahead of print March 27, 2023). DOI: 10.3389/fcomm.2023.1007543.
- Jacobs, M. (2016) "High pressure for low emissions: How civil society created the Paris climate agreement." *Juncture*, 22(4).
- Just Stop Oil (2023) "Just Stop Oil." Available at: <https://juststopoil.org/> (Accessed May 22, 2023).
- Kendon, M., McCarthy, M., Jevrejeva, S., Matthews, A., Sparks, T., and Garforth, J. (2021) "State of the UK Climate 2020." *International Journal of Climatology*, 41(2), pp. 1–76.
- Leaton, J. (2011) "Unburnable carbon – Are the world's financial markets carrying a carbon bubble?" *Carbon Tracker Initiative*. Available at: <https://carbontracker.org/reports/carbon-bubble/> (Accessed May 22, 2023).
- Oilwatch (2007) *Keep Oil Underground: The Only Way to Fight Climate Change*. Bali: Oilwatch.
- Rödder, S. and Pavenstädt, C. N. (2023) "'Unite behind the science!' Climate movements' use of scientific evidence in narratives on socio-ecological futures." *Science and Public Policy* 50(1), pp. 30–41.
- Scientist Rebellion (2023) "Scientist rebellion: Our positions and demands." Available at: <https://scientist-rebellion.org/about-us/our-positions-and-demands/> (Accessed May 22, 2023).
- Scientists for Future (2023) "Scientists for future." Available at: <https://de.scientists4future.org/> (Accessed May 22, 2023).
- The Guardian (2023) "Rome climate protesters turn Trevi fountain water black." Available at: www.theguardian.com/world/2023/may/21/rome-climate-protesters-turn-trevi-fountain-water-black (Accessed June 13, 2023).