JCOM

ACTIVISTS AS "ALTERNATIVE" SCIENCE COMMUNICATORS

The ambivalent role of environmental NGOs in climate communication

Simone Rödder

Abstract

Environmental NGOs play a vital role in public climate communication through their awareness-raising activities and educational campaigns. This commentary points to a potentially problematic implication of their role as climate science advocates which includes the general tendency to attribute environmental changes and extreme weather events to climate change. These climate-centric framings, however, may not resonate with the lived experiences and belief systems of local communities, not even in geographically vulnerable areas. I draw on local case studies to show that communities often express a sense of "shared responsibility" between global carbon dioxide emissions and ecologically deleterious local practices such as shrimp farming (in Bangladesh) and cutting trees (in the Philippines). As a consequence, the studies show mismatches between activists' attributions of local circumstances and events, and local communities' ways of knowing their local circumstances.

Keywords

Environmental communication; Science communication in the developing world; Science education

DOI

https://doi.org/10.22323/2.19060303

Submitted: 19th October 2020
Accepted: 19th October 2020
Published: 24th November 2020

Introduction

Environmental non-governmental organisations (eNGOs) have an "elective affinity" to scientific knowledge because "empirical claims about the state of the natural environment are core to their message" [Yearley, 2008, p. 168]. As such, they are obliged to communicate science to discuss problems such as climate change, and their importance as mediators of scientific information in policy and other public arenas has been widely acknowledged [Corell and Betsill, 2001; Doyle, 2009; Jamison, 2010; Yearley, 2008]. Recent empirical studies from around the world demonstrate that eNGOs indeed play a vital role in climate communication through their awareness-raising activities and educational campaigns [Brüggemann and Rödder, 2020a]. The relevance of science communication and

education notwithstanding, it is the aim of this commentary to point to a potentially problematic implication of putting forward climate-centric framings when causally attributing environmental changes and extreme weather events.

While eNGOs have acted as fierce critics of science and associated industries in environmental controversies such as on genetically modified organisms (GMOs), the contrary applies in climate communication: Here, eNGOs and mainstream science find themselves on the same pro-science-pro-environmental side. In this debate, environmental activists join the problem framing of the mainstream climate discourse — global temperature rise, global problem, global governance approach, science-led public and policy debate, and technical fixes as prime solutions [Grundmann and Rödder, 2019]. "Mainstream environmental NGOs have tended to argue simply that one should take the scientists' word for the reality of climate change, a strategy about which they have clearly been less enthusiastic in other cases" [Yearley, 2008, p. 162; Yearley, 1993]. This short commentary is not the place to discuss why this is the case in the climate debate; instead, it focuses on an implication of taking the scientists' word for the reality of climate change: potential mismatches between activists' attributions of local circumstances, and local communities' ways of knowing their local circumstances. I suggest that this advocacy, while aimed to raise awareness by attributing weather events to climate change, may not resonate with the lived experiences of individuals and communities, not even in geographically vulnerable areas. Applying critique of "climate reductionism" [Hulme, 2011] and disaster attribution [Lahsen, Azevedo Couto and Lorenzoni, 2020; Lahsen and Ribot, in review] to the role of NGOs, this commentary looks at local discourses on climate change to identify possible adverse effects of climate-centric causal attribution.

Environmental NGOs and scientific knowledge

Environmentalism has long been professionalised and the multiple roles of eNGOs as science communicators, critics, educators and advocates have been discussed and empirically studied [Jamison, 2003; Jamison, 2010]. A number of studies have focused on their critique of science. In this role, eNGOs articulate the perception of environmental and other risks posed by technology, putting forth *alternative framings of techno-scientific options*. This is, interestingly, also based on (other disciplinary) evidence [Maeseele, 2009; McCormick, 2007]. They "contest the seeming objectivity and neutrality of science by framing it as biased and politically driven and by forming alliances with sympathetic experts (lay-expert collaborations) who provide them with the necessary scientific information and back-up or who are asked to conduct new studies" [Maeseele, 2009, p. 63]. In cases such as nuclear energy and genetic engineering, eNGOs learned how to point to "controversial and unsettled issues in the dominant knowledge, thus bringing internal conflicts and uncertainties into the open" [Weingart, 2004, p. 53]. In these high-tech controversies, and in their role as science critics, eNGOs are on one side of the controversy, while the scientific establishment and associated industries are on the other.

Interestingly, the contrary is the case in the climate debate: Here, eNGOs and mainstream science find themselves on the same pro-science-pro-environmental side [Gough and Shackley, 2001]. Studies have investigated their strategic use of scientific information for environmental communication [Fähnrich, 2018] and their role as *advocates of science-based problem framings* in cases such as the Ozone hole

and, most notably, anthropogenic climate change. Quoting Yearley [2008], Maeseele points out that they thus "align themselves with the scientific establishment whose claim to objectivity is thereby strengthened" [Maeseele, 2009, p. 63; on the structural tension between advocacy and accuracy, see Yearley, 2008]. In this role, they act as advocates of both, the natural environment and climate science.

Scientific knowledge and climate change

Climate change is only accessible via a comprehensive scientific, technical and institutional infrastructure which historian of science Paul Edwards has tellingly written about as "the vast machine" [Edwards, 2010]. The concept of dangerous anthropogenic climate change as a decade-long increase in average global temperature [Intergovernmental Panel on Climate Change, 2013], or, more recently, as overshooting a permissible global carbon budget [Lahn, 2020], is not something that individuals directly experience [Mormont and Dasnoy, 1995; Stehr and Storch, 1995]. Extreme weather or changes in vegetation or seasons can be experienced, yet climate is in place-based and culturally embedded ways socially constructed and linked to the scientific concept of climate change [Hulme, 2017; Hulme et al., 2009]. As an example, communities do not necessarily draw a link between experiences of extreme weather, such as a heat wave, and global warming [Ungar, 1992; Ungar, 2014].

As we have argued elsewhere [Brüggemann and Rödder, 2020b, p. 6], connecting everyday experiences of weather phenomena to climate change has in fact long been regarded as a misunderstanding of the scientific concept. Yet, as Jasanoff [2010] points out, it is an obvious way to help individuals make sense of climate change. Moving on from the misunderstanding-paradigm, a research field has emerged in climate sciences that explicitly aims to assess the connection between extreme weather phenomena and climate change, the science of event attribution. The aim of this field is to link extreme weather events to anthropogenic climate change (https://www.worldweatherattribution.org/). The field has made great progress in recent years, yet the assessment of certain types of events such as droughts and hurricanes remains uncertain [Otto, 2020]. It is also evident that local vulnerability and exposure are major risk factors in addition to the meteorological hazards. This is of particular importance because the causal attribution of weather events to climate change suggests the attribution of responsibility for causing as well as for resolving the problem; a task which the science of event attribution willingly takes on [Otto and Brackel, 2019]. That the link between extreme weather events and climate change now is a research focus may be interpreted as a response to the mismatch of scales between climate science and every-day experiences in both time and space [Brüggemann and Rödder, 2020b, p. 6]. With the advent of event attribution as a scientific enterprise, there is an increasing capacity, and desire, to attribute events such as heat waves, droughts and floods to climate change; and even its protagonists acknowledge the potential for an opportunistic use in complex matters of responsibility [Otto and Brackel, 2019].

Social scientists go further in their critique and call attention to the political nature of event attribution [Lahsen, Azevedo Couto and Lorenzoni, 2020; Lahsen and Ribot, in review]. Lahsen and colleagues argue that "analytic frames that indicate different causal chains thus shape how environmental damages and threats are viewed, and whether and among whom they do or 'should' prompt remedial action, and of what kind. In short, they establish responsibility" [Lahsen and Ribot,

in review]. The authors furthermore observe that both scientific and popular discourses tend to conflate extreme weather events with the ensuing disasters, attributing both to stressors 'from the sky' rather than to pre-existing vulnerabilities on the ground. With regard to the second phenomenon — disaster, loss and damage — the authors emphasise that it is a function of vulnerabilities on the ground as much as of the weather event itself: "An extreme event will cause no damage in a well-prepared community. Double that extreme with anthropogenic climate change and well-prepared communities still may not be damaged. But a vulnerable community may have damages that scale with the force of the hazard. Vulnerability plays an empirically causal role in the losses and damages" [Lahsen and Ribot, in review].

Anthropologists and geographers have indeed found that communities interpret meteorological events differently depending on their individual and collective vulnerabilities [Hulme et al., 2009] and that geographically vulnerable communities attribute the damages that they sustain to pre-existing social conditions [Ribot, Faye and Turner, 2020]. Stressing climate change may thus not resonate with their lived experiences and priorities and may even "read false to those affected when they view their precarity as a result of the local political-economic situation" [Lahsen and Ribot, in review]. In effect, the climate-centric framing both contradicts lived experiences and blackboxes alternative, and potentially more complete causal attributions. The authors instead call for a multi-causal analytic framework to understand the causes of weather impacts and urge that the political use of climate change as an explanation requires cultural and place-based sensitivity. So let's return to our question of the role of NGOs in climate communication with a look at some cases and places.

Environmental NGOs and local discourses

It is often through educational programmes that local or Western eNGOs try to create climate change awareness and motivate behavioural change among local communities in vulnerable areas mainly in the Global South; and it seems to be due to these programmes that the communities learn about the scientific concept of climate change [Brüggemann and Rödder, 2020a]. In the examples I discuss in the following, a strong interest of eNGOs in attributions to global climate change interacts and at times clashes with local communities' often broader attributions regarding the phenomenon itself, as well as who is responsible for it.

In a study of a Bangladesh community, located in a flood-prone coastal area, Mahmud [2020] demonstrates the major role of eNGOs in framing the climate issue for farmers and fishermen. He finds 250 active NGOs in the region, both Western transnational NGOs which work with local partners as well as national and local NGOs, who actively communicate climate change as part of their disaster management programmes. As a consequence, attributions to climate change were often induced by NGO officials who conduct awareness programmes: "The organisation people are telling us that climate change is the main reason for [. . .]" was a phrase that the interviewer repeatedly heard from community members [Mahmud, 2020, p. 224]. While phenomena such as increased salinity and rising tidal surges were regarded as 'not new', their increasing prevalence was attributed to the hitherto abstract concept of climate change. Yet, the interviewees also named local practices as causes, e.g. shrimp aquaculture as a source of increased salinization. Rather than attributing any ecological problem to the global issue of

climate change, the community members claimed agency, and responsibility: "We should not always blame others for the problem" [Mahmud, 2020, p. 224]. The community's discourse (as represented in interviews) originates in both their personal experiences and perception of changing environmental conditions combined with what they have heard about climate change. The term is taken up (partially with skepticism and caution, partially with embrace), rather than in any way emerging from the local discourse. Mahmud concludes that it is a combination of local place identity formed through experiences of regional geo-hazards, media information and eNGO communication that lets the community make sense of climate change.

Beyond this first case of awareness of the multi-causal nature of local environmental problems, there is a second example which shows a profound mismatch between eNGOs' attributions of changes to climate change, and the local community's way of explaining its local circumstances. In her study of the Maasai in Tanzania, anthropologist Sara de Wit finds that the ways in which climate science is translated by, among others, eNGOs clashes with the Maasai's religion and culture [2020]. De Wit suggests three reasons for this clash. The first is that the scientific concept of climate change is perceived by the Maasai as an attack on their religion: in their local language, the same word (Eng'ai) denotes God, sky (or heaven), and rain. Drought and rain thus are the domain of God [likewise Donner, 2007, for Fijian belief systems]. Discussing the future meets resistance for the same reason: "Only God knows" [de Wit, 2020, p. 182]. Secondly, the Maasai view changing weather and unreliable seasons as normal conditions of their life, and the ideal of a "stable climate" therefore seems strange. Thirdly, there is no cultural stability either as the Maasai deal with a switch from a nomadic to a semi-nomadic lifestyle which they associate with a decline of culture and morals. De Wit concludes that the absence of climate change awareness is not primarily rooted in a lack of knowledge but constitutes an "attempt to remain faithful to one's own set of norms, values, beliefs" [2020, p. 163]. In her view, in contrast to the scientific approach of event attribution, it is not fruitful to disentangle climatic and societal changes. Instead, the story of climate change needs to accommodate the Maasai's ontology in which society, morals and nature are interwoven, "a way of living that ceases to make sense when purged of Eng'ai" [de Wit, 2020, p. 199].

A third case exemplifies how multi-causal understandings of problems and solutions may help create framings that address both climate change as well as other local environmental problems. In an ethnographic study on the Philippine Island of Palawan, Thomas Friedrich also finds a major role for eNGOs' educational activities in shaping discourses on climate change [2020]. On Palawan, climate change is perceived as one natural hazard among many, and "the discourse on climate change may have served more as post-hoc justification than original motivation for past and present behaviour" [Friedrich, 2020, p. 114]. It is thus neither knowledge of, nor belief in, anthropogenic climate change that makes a behavioural difference. Rather, eNGO-mediated climate communication reinforces pre-existing beliefs and values, strengthens the community's traditionally strong environmentalism and validates their rejection of practices such as cutting trees or burning garbage. On Palawan, the local discourse on climate change is subordinated to a general sustainability discourse; climate change appears not as a distant, global problem and responsibility but as a means to tackle local socio-economic problems.

Eventually, there is evidence that stressing climate change may not always be the most promising means to achieve climate mitigation. Based on an insightful small data case study from Brazil, Lahsen, Azevedo Couto and Lorenzoni [2020] have argued for greater place-based sensitivity in climate attribution and communication. Their analysis of media content shows that Brazilian environmental leaders from both science and politics explicitly downplayed attributions to climate change because they aimed at holding national and local decision makers accountable and pressure them to enhance disaster resilience and preparedness. The authors evaluate this as a strategy that is well adapted to the particularities of Brazilian policy and politics of blame and thus more appropriate than a climate-centric framing of extreme weather events, which draws attention away from the local and national level toward international arenas and responsibility. "While climate-centric framings of disasters rightly call attention to the primary responsibility of Northern countries for causing climate change, they can also displace blame and responsibility from local decision makers who can reduce societal vulnerability to the impact of extreme weather events, whichever the role of climate in them" [Lahsen and Ribot, in review].

Conclusions

This commentary points to an ambivalent role of eNGOs as activist communicators of climate science. It argues that environmental movements' pro-science-pro-environmental advocacy, while aimed to raise awareness by attributing weather events to climate change, may, as an unintended consequence, not resonate with the lived experiences of individuals, even in geographically vulnerable areas. Local case studies from around the world have indicated that communities often express a sense of "shared responsibility" between global carbon dioxide emissions and ecologically deleterious local practices such as shrimp farming (in Bangladesh) and cutting trees (in the Philippines). Eventually, attributions to global climate change may not be seen locally (as well as by analysts) as the most promising route to climate mitigation. Instead, and despite the best of intentions, attributions to the global climate problem may serve local authorities well in taking responsibility away from local causes and vulnerabilities such as resource mismanagement, more general environmental degradation and other political failures. While a specific weather event might occur all of a sudden, floods, storms, draughts and landslides are in principle expected events.

As the cases have shown, an interest of eNGOs in attributions to global climate change interacts in various ways, and at time clashes, with local communities' often broader attributions for the phenomenon itself as well as for who is responsible (both for causing and solving it). The idea that humans can strongly influence or be in control of the climate furthermore counters thousands of years of religious philosophy and indigenous belief systems worldwide [Donner, 2007, p. 232]. Due to a social hierarchy of expertise, which puts scientific knowledge on top and lived experience, religious philosophy and anecdotal evidence below, a hierarchy of attributions emerges. For the science communication scholar as well as practitioner, the conclusion is to be as critical towards attempts of environmental NGOs to act as an educator who has the 'true' attribution as we are with other communicators of science. In climate communication, we shall not fall prey to the linear and technocratic thinking that eNGOs helped to reveal and review in the first place.

References

Brüggemann, M. and Rödder, S., eds. (2020a). Global warming in local discourses: how communities around the world make sense of climate change. Cambridge, U.K.: Open Book Publishers.
URL: https://www.openbookpublishers.com/product/1177.

— (2020b). 'We are climate change: climate debates between transnational in local discourses'. In: Global warming in local discourses: how communities around the world make sense of climate change. Ed. by M. Brüggemann and S. Rödder. Cambridge, U.K.: Open Book Publishers, pp. 1–29.
URL: https://www.openbookpublishers.com/product/1177.

Corell, E. and Betsill, M. M. (2001). 'A comparative look at NGO influence in international environmental negotiations: desertification and climate change'. *Global Environmental Politics* 1 (4), pp. 86–107.
https://doi.org/10.1162/152638001317146381.

de Wit, S. (2020). 'What does climate change mean to us, the Maasai? How climate-change discourse is translated in Maasailand, Northern Tanzania'. In: Global warming in local discourses: how communities around the world make sense of climate change. Ed. by M. Brüggemann and S. Rödder. Cambridge, U.K.: Open Book Publishers, pp. 159–205.
URL: https://www.openbookpublishers.com/product/1177.

Donner, S. D. (2007). 'Domain of the Gods: an editorial essay'. *Climatic Change* 85 (3-4), pp. 231–236. https://doi.org/10.1007/s10584-007-9307-7.

Doyle, J. (2009). 'Climate action and environmental activism: the role of environmental NGOs and grassroots movements in the global politics of climate change'. In: Climate change and the media. Ed. by T. Boyce and J. Lewis. Bruxelles, Belgium: Peter Lang, pp. 103–116.

Edwards, P. N. (2010). A vast machine: computer models, climate data and the politics of global warming. Cambridge, MA, U.S.A.: MIT Press.
URL: https://www.jstor.org/stable/j.ctt5hhds1.

Fähnrich, B. (2018). 'Digging deeper? Muddling through? How environmental activists make sense and use of science — an exploratory study'. *JCOM* 17 (03), A08. https://doi.org/10.22323/2.17030208.

Friedrich, T. (2020). 'Communication and knowledge transfer on climate change in the Philippines'. In: Global warming in local discourses: how communities around the world make sense of climate change. Ed. by M. Brüggemann and S. Rödder. Cambridge, U.K.: Open Book Publishers, pp. 77–120.
URL: https://www.openbookpublishers.com/product/1177.

Gough, C. and Shackley, S. (2001). 'The respectable politics of climate change: the epistemic communities and NGOs'. *International Affairs* 77 (2), pp. 329–346.
https://doi.org/10.1111/1468-2346.00195.

Grundmann, R. and Rödder, S. (2019). 'Sociological perspectives on earth system modeling'. *Journal of Advances in Modeling Earth Systems* 11 (12), pp. 3878–3892.
https://doi.org/10.1029/2019ms001687.

Hulme, M. (2011). 'Reducing the future to climate: a story of climate determinism and reductionism'. *Osiris* 26 (1), pp. 245–266.
https://doi.org/10.1086/661274.

— (2017). Weathered: cultures of climate. 1st ed. Thousand Oaks, CA, U.S.A.: SAGE Publications Ltd. https://doi.org/10.4135/9781473957749.

Hulme, M., Dessai, S., Lorenzoni, I. and Nelson, D. R. (2009). 'Unstable climates: exploring the statistical and social constructions of 'normal' climate'. *Geoforum* 40 (2), pp. 197–206. https://doi.org/10.1016/j.geoforum.2008.09.010.

Intergovernmental Panel on Climate Change (2013). 'Summary for policymakers'. In: Climate change 2013: the physical science basis. Contribution of working group I to the fifth assessment report of the Intergovernmental Panel on Climate Change. Ed. by T. F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P. M. Midgley. Cambridge, U.K. and New York, NY, U.S.A.: Cambridge University Press. URL: https://www.ipcc.ch/report/ar5/wg1/.

Jamison, A. (2003). 'The making of green knowledge: the contribution from activism'. *Futures* 35 (7), pp. 703–716. https://doi.org/10.1016/s0016-3287(03)00023-5.

— (2010). 'Climate change knowledge and social movement theory'. *Wiley Interdisciplinary Reviews: Climate Change* 1 (6), pp. 811–823. https://doi.org/10.1002/wcc.88.

Jasanoff, S. (2010). 'A new climate for society'. *Theory, Culture & Society* 27 (2-3), pp. 233–253. https://doi.org/10.1177/0263276409361497.

Lahn, B. (2020). 'Changing climate change: the carbon budget and the modifying-work of the IPCC'. *Social Studies of Science*, 030631272094193. https://doi.org/10.1177/0306312720941933.

Lahsen, M. and Ribot, J. (in review). 'The political nature of causal attribution: climate change and the attribution of extreme weather events and crises'. *Wiley Interdisciplinary Reviews: Climate Change*.

Lahsen, M., Azevedo Couto, G. de and Lorenzoni, I. (2020). 'When climate change is not blamed: the politics of disaster attribution in international perspective'. *Climatic Change* 158 (2), pp. 213–233. https://doi.org/10.1007/s10584-019-02642-z.

Maeseele, P. (2009). 'NGOs and GMOs'. *Javnost — The Public* 16 (4), pp. 55–72. https://doi.org/10.1080/13183222.2009.11009014.

Mahmud, S. (2020). 'Living on the frontier: laypeople's perceptions and communication of climate change in the coastal regions of Bangladesh'. In: Global warming in local discourses: how communities around the world make sense of climate change. Ed. by M. Brüggemann and S. Rödder. Cambridge, U.K.: Open Book Publishers, pp. 207–240. URL: https://www.openbookpublishers.com/product/1177.

McCormick, S. (2007). 'Democratizing science movements: a new framework for mobilization and contestation'. *Social Studies of Science* 37 (4), pp. 609–623. https://doi.org/10.1177/0306312707076598.

Mormont, M. and Dasnoy, C. (1995). 'Source strategies and the mediatization of climate change'. *Media, Culture & Society* 17 (1), pp. 49–64. https://doi.org/10.1177/016344395017001004.

Otto, F. E. L. (2020). 'Extreme weather events and local impacts of climate change: the scientific perspective'. In: Global warming in local discourses: how communities around the world make sense of climate change. Ed. by M. Brüggemann and S. Rödder. Cambridge, U.K.: Open Book Publishers, pp. 241–257. URL: https://www.openbookpublishers.com/product/1177.

Otto, F. E. L. and Brackel, B. v. (2019). Wütendes Wetter: Auf der Suche nach den Schuldigen für Hitzewellen, Hochwasser und Stürme. Berlin, Germany: Ullstein.

Ribot, J., Faye, P. and Turner, M. D. (2020). 'Climate of anxiety in the Sahel: emigration in xenophobic times'. *Public Culture* 32 (1), pp. 45–75. https://doi.org/10.1215/08992363-7816293.

Stehr, N. and Storch, H. v. (1995). 'The social construct of climate and climate change'. *Climate Research* 5 (2), pp. 99–105. URL: https://www.jstor.org/stable/24863408.
Ungar, S. (1992). 'The rise and (relative) decline of global warming as a social problem'. *The Sociological Quarterly* 33 (4), pp. 483–501. https://doi.org/10.1111/j.1533-8525.1992.tb00139.x.
— (2014). 'Media context and reporting opportunities on climate change: 2012 versus 1988'. *Environmental Communication* 8 (2), pp. 233–248. https://doi.org/10.1080/17524032.2014.907193.
Weingart, P. (2004). 'Science in a political environment'. *EMBO reports* 5 (Suppl. 1), S52–S55. https://doi.org/10.1038/sj.embor.7400230.
Yearley, S. (1993). 'Standing in for nature: the practicalities of environmental organizations' use of science'. In: Environmentalism: the view from anthropology. Ed. by K. Milton. London, U.K.: Routledge, pp. 59–72. https://doi.org/10.4324/9780203449653.
— (2008). 'Environmental action groups and other NGOs as communicators'. In: Handbook of public communication of science and technology. Ed. by M. Bucchi and B. Trench. London, U.K.: Routledge, pp. 159–171.

Author

Simone Rödder is Assistant Professor of Sociology of Science at Universität Hamburg. She has an academic background in biology and sociology and is trained as a journalist. Her research explores communication across boundaries and focuses on science communication, science journalism, inter- and transdisciplinarity, and the science-policy interface. She recently published "Organisation matters: towards an organisational sociology of science communication" in the *Journal of Communication Management* (2020, doi/10.1108/JCOM-06-2019-0093) and co-edited "Global Warming in Local Discourses: How Communities around the World Make Sense of Climate Change" (2020, Open Book Publishers, Oxford, https://www.openbookpublishers.com/product/1177).
E-mail: simone.roedder@uni-hamburg.de.

How to cite

Rödder, S. (2020). 'The ambivalent role of environmental NGOs in climate communication'. *JCOM* 19 (06), C03. https://doi.org/10.22323/2.19060303.

ISSN 1824-2049. Published by SISSA Medialab. jcom.sissa.it