

# Remaking public engagement with climate change

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## Abstract

As Earth becomes more heated, public engagements with climate change multiply. Despite this increasing multiplicity, assumptions of public deficits still prevail. Dominant perspectives assume a deficit of public understanding where publics are dismissed or communicated to, or a deficit of public involvement where publics are invited to participate in discrete, often one-off, engagements. Given deficiencies of these perspectives, this article suggests a third more constructivist perspective is emerging and necessary which sees public engagements with climate change as constructed through practice, highly diverse, and interrelating in wider systems and ecologies of participation. It opens up new paths for remaking participation, one of which is illustrated through work on ecologising and mapping diverse public engagements with climate change. This is turning around participation to be more reflexive, systemic, responsible and responsive about other diverse, already existing and excluded public engagements in prompting more just and humane ways of addressing climate change.

## Keywords

Remaking participation, mapping public engagement, Publics, climate change, science and technology studies (STS)

## Changing climates of engagement

Relations between the Earth's climate, publics and their engagements are rapidly changing. The common assumption used to be, and often still is, that publics have a deficit of understanding (Wynne, 1991) of complex climate change matters. The corrective has been better information and communication to prompt public acceptance or behaviour change, or otherwise dismiss them as a barrier or threat to 'the transition' that is already set. Rooted in a linear science-led model of governing climate change (Jasanoff & Wynne, 1998), this first perspective on public engagement still persists, including in calls to accelerate the transition (Newell et al., 2022), better

communicate (Corner et al., 2018), gain public acceptance (Tranter et al., 2023), or even 'put democracy on hold for a while' (Lovelock, 2010).

It is now more commonly accepted that addressing climate change depends on the meaningful engagement of society and more, not less, democracy. The past few decades have seen a mainstreaming of more active, interactive and inclusive forms

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of public engagement with climate change. Under this perspective, citizens have been invited to express their views in opinion surveys (Lorenzoni & Pidgeon, 2006) or deliberative processes such as citizens' assemblies (Global Assembly Team, 2022; Willis et al., 2022), contribute in knowledge co-production processes (Miller & Wyborn, 2020) and citizen science projects (Albagli & Iwama, 2022), through to taking action in behaviour change initiatives (Whitmarsh et al., 2021) or community-based grassroots and social innovations (Seyfang & Smith, 2007), and more.

While necessary in their own right, such approaches are underpinned by a second main way of seeing which assumes a deficit of public involvement with climate change that needs to be addressed by inviting individual members of the public to participate in discrete, often one-off, engagement processes. This 'residual realist' perspective (Chilvers & Kearnes, 2016) is based on highly specific pre-given normative models of participation that seek to definitively represent and/or move an external naturally occurring public. For example, this leads to claims of a citizens' assembly definitively representing what 'the UK public' thinks about net zero by 2050 (Climate Assembly UK, 2020: 5), or more ambitiously what the whole globe thinks (e.g. Global Assembly Team, 2022). Yet, it is not possible to include all relevant actors (human and non-human) in a discrete process of participation or co-production, whether in particular localities or globally. Furthermore, while problems of climate change are systemic in nature, most existing engagement approaches under this second perspective are not, focusing on discrete forms of participation in specific parts of wider systems and debates, each with their own particular and often conflicting notions of 'best practice'.

### **Reconceiving public engagements with climate change**

Responding to deficiencies in these first two perspectives and the increasing multiplicity of publics, a third way of seeing, knowing and doing public engagement with climate change is emerging, grounded in constructivist thinking in

science and technology studies (STS) and related social science disciplines. Rather than being realist, pre-given and specific, this perspective views publics, forms of engagement and objects of climate change as *co-produced* and mutually constructed through the performance of diverse collective practices of participation (Chilvers & Kearnes, 2016; see also Eden, 2017; Landström, 2020; Marres, 2012). This has a radically different take which remakes the realities of participation.

First, it takes issue with the notion that publics engage as individuals (or segments of populations) with set views and actions, suggesting that what publics think, say and do about climate change is constructed differently in the different collective practices (Chilvers & Longhurst, 2016), formats (Kelty, 2020) and 'atmospheres of democracy' (Latour & Weibel, 2005) through which they engage. Second, rather than a deficit of engagement, public engagement with climate change is seen as being highly diverse, multiple and already existing, going way beyond invited institution-led processes to encompass uninvited, citizen-led, emergent and material participations including mundane forms of engagement in everyday life (Marres & Lezaun, 2011; Michael, 2016; Walker & Cass, 2007; Wynne, 2007). Third, these diverse public engagements with climate change do not occur in discrete isolated processes but rather interrelate together in wider systems and 'ecologies of participation' (Chilvers et al., 2018; see also Honeybun-Arnolda et al., 2024a), shaping and being shaped by wider configurations of power.

This third way of seeing turns the problem of participation around from one of public deficits, to emphasise deficits of responsiveness to diverse forms of public engagement and relevance by institutions and those in positions of power. It opens up new possibilities for remaking participation (Chilvers & Kearnes, 2020) with climate change. In addition to being deliberately reflexive and experimental about the construction, emergence and exclusions of participatory practices, and prompting more careful and responsible climate engagements that anticipate their future implications and effects, a further key move is to ecologise participation and map diverse public engagements. This latter path is

now explored to illustrate possibilities for remaking public engagement with climate change.

## Mapping climate-related public engagements

A core sensibility of ecologising participation is an inherent reflexive openness to *other* diverse public engagements, including those that are marginalised, excluded or dominant, and interrelations between them in wider systems. While this can and should be attended to in diverse ways, approaches to mapping participation are emerging that seek to contribute. Mapping in this regard involves tracing, identifying, relating and visualising diversities and stabilities of the practices (how), publics (who), and objects/issues (what) of public engagements with climate change (Chilvers et al., 2021).

Taking the forms, formats and practices of participation (how) through which publics engage as an entry point, the approach of comparative case analysis uses systematic searches and documentary analysis to map numerous diverse cases of public engagement with energy and climate change (Chilvers et al., 2018, 2021, 2023; Pallett et al., 2019). Such mappings reveal systemic inequalities where some forms of participation – like institution-led opinion surveys, deliberative processes, communication and behaviour change initiatives – are more dominant than others. Beyond this, they reveal diverse, already existing and emergent public engagements that are often excluded or unrecognised, including those that are uninvited and citizen-led such as protest, activism, community action, digital participation and everyday practices in the home. These engagements overflow institutional framings to open up to alternative publics, public views, visions and actions – emphasising issues of equity, justice and more radical social change – as well as interrelations between engagements and changes over time that would otherwise be missed. Comparative case analysis and mapping ecologies of participation are now being applied beyond the UK setting in which they were developed, for example, in mapping public engagement with onshore wind energy in the Netherlands

(De Looze & Cuppen, 2023), wind energy developments more widely (Solman et al., 2021), societal transitions in Ireland (Revez et al., 2022), and food waste transitions in Singapore (Rut et al., 2021).

Other approaches foreground the objects and issues (what) of climate change as the main entry point. This includes forms of controversy mapping and digital methods that repurpose online devices and platforms (such as search engines and social media platforms) to map the dynamics of actor alignments and engagements in relation to key climate change-related issues and debates, as well as understanding these digital media as sites for participation. In an early example, Rogers and Marres (2000) studied the landscape of climate change debate on the web by mapping the hyperlinking and discursive positioning of organisations, which has been explored more recently by Waller et al. (2023) in debates over greenhouse gas removal. Digital methods can work with large datasets and allow mappings to be undertaken in real-time.

A further possibility is to take an actor or subject-centred (who) approach to mapping public engagement, where different actors through to publics themselves are involved in mapping their own engagements or how they view others' engagements with climate change in wider ecologies of participation. This can range from openly crowdsourcing cases of public engagement, and citizen social science where public participants map how they and others are engaging with climate change in particular settings, through to ethnographic and interview-based methods (Chilvers et al., 2022). Such actor-centred mappings can further reveal emergent engagements and those obscured or hidden by the above approaches. It is important to explore combining these mapping methods that take different entry points in attending to diverse ecologies of participation.

Mapping participation in these ways creates new understandings and conceptualisations of public engagement with climate change. They offer more comprehensive and plural understandings of publics, their engagements, and their views, visions and actions compared to residual realist or institutionally mediated processes. The usual

focus on the effectiveness and inclusions of participation at the level of discrete public engagement processes linked to specific 'decision moments' is recast in systemic and relational terms, asking: What does it mean to have effective systems of participation and public engagement? What systemic inequalities and exclusions of public engagements exist and what powers, driving forces and vested interests perpetuate them? How do interrelations between public engagements affect their performance and how can this be harnessed in addressing climate change? And how do forms or configurations of participation compare between and circulate across cultures?

Mapping and ecologising participation also transforms public engagement with climate change in practice. It calls for new entities, organisational forms and institutional architectures capable of mapping, connecting and creating diverse forms of public engagement across systems, while linking them to policy and practice in new ways. One such model is public engagement observatories, such as the Observatory for Public Engagement with Energy and Climate Change established in the UK Energy Research Centre (UKERC) (see Chilvers et al., 2022) which maps diverse forms of public engagement on an ongoing basis and puts these mappings into practice. Relatedly, Jenny and Betsch (2022) have suggested a more specific and aggregative observatory model to support decision-making on behavioural insights. Through a series of collective experiments UKERC's Public Engagement Observatory is showing how mapping public engagement can make a difference in climate policy-making (Paradies et al., 2021), make low-carbon innovations more responsive to societal values and concerns (Honeybun-Arnolda et al., 2024b), explore public issues in climate assessments (Waller & Chilvers, 2023), enhance the design of democratic innovations like citizens' panels and situate them in wider landscapes of participation (Chilvers & Stephanides, 2023), and form the basis for new distributed participation processes, such as distributed deliberative mapping (Bellamy et al., 2022; Chilvers et al., 2021).

This is demonstrating how mapping public engagement can prompt greater reflection, responsiveness and reflexivity about publics, participation and climate change-related issues (cf. Pallett &

Chilvers, 2013). Here the impact of participation is not only narrowly targeted in a linear fashion on specific decision moments as per a residual realist framing, but seeks to be of potential relevance to all system actors in supporting distributed governance, responsiveness, reflexivities and responsibilities across wider systems. While the current public engagement landscape is geared towards discrete forms of participation working in isolation, more systemic approaches are needed in how engagement is organised, governed, studied, resourced and evaluated. While they have so far been explored at local, organisational and national levels, observatories and mapping public engagement should also be developed at international and global scales in ways that go beyond existing discrete engagement processes like global citizens' assemblies (Global Assembly Team, 2022; although see Stevenson & Dryzek, 2014).

Mapping public engagements is not without significant challenges, which also create opportunities. First, it creates awareness that it is not possible to map all public engagements. All instances of participation and mappings of them are partial, framed in particular ways, and therefore have exclusions. What this does, however, is make us acutely aware of the uncertainties and indeterminacies of public engagements and their representations. In the same way that climate scientists have been challenged to express uncertainties about their models and assessments, social scientists and engagement practitioners need to be more humble in openly expressing the uncertainties and exclusions of participation and public representations. Second, mapping public engagement raises ethical questions about whether all engagements should be mapped. What about public engagements that are deliberately hidden or de-publicised for example? This gets us thinking about the implications, effects and possible downsides of participation (and mappings thereof) and the need for all public engagements with climate change to be more responsible about this. Third, opening up to diversity and difference creates challenges for decision-makers faced with urgent climate actions. While some may see this as a problem, the aforementioned collective experiments are showing how opening up to diverse public engagements can produce more socially robust evidence and publicly accountable decision-making.

## Turning around public engagement

Mapping and ecologising public engagement forms part of new ways of seeing, knowing and remaking participation as constructed, diverse and systemic. This turns around public engagement from a focus on public and democratic deficits that need to be corrected to accelerate an accepted top-down transition, to an appreciation that publics are already engaging with climate change in so many different ways that need to be better recognised and responded to in their own rights, in climate governance and by those in positions of power. Not only can this prompt institutional responsiveness, and critical reflection on their underlying assumptions and purposes, as more promising relational conditions of trust (Otto et al., 2023). It suggests and enables a more people-centred approach that starts with publics and their diverse already existing engagements in order to address climate change as a heterogeneous *public issue* rather than one first and foremost defined by science (cf. Wynne, 2010). More ambitiously perhaps, it suggests an alternative conception of participation and democracy that goes beyond the definitive representation of autonomous individuals in discrete procedures, to account for and be reflexive about the multiple collectives through which they engage in addressing public problems like climate change. Public engagement is never complete. Continually staying alive to *other* public engagements, ways of knowing and doing holds out hope for more just and humane ways of addressing and being with climate change.

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