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synthesis article

Public participation and climate change adaptation: avoiding the illusion of inclusion

ROGER FEW[1]*, KATRINA BROWN[1,2], EMMA L. TOMPKINS[3]

[1] School of Development Studies, University of East Anglia, Norwich NR4 7TJ, UK
[2] Tyndall Centre for Climate Change Research, University of East Anglia, Norwich, UK
[3] James Martin 21st Century School Fellow, Oxford University Centre for the Environment, Oxford, OX1 3QY, UK

Public participation is commonly advocated in policy responses to climate change. Here we discuss prospects for inclusive approaches to adaptation, drawing particularly on studies of long-term coastal management in the UK and elsewhere. We affirm that public participation is an important normative goal in formulating response to climate change risks, but argue that its practice must learn from existing critiques of participatory processes in other contexts. Involving a wide range of stakeholders in decision-making presents fundamental challenges for climate policy, many of which are embedded in relations of power. In the case of anticipatory responses to climate change, these challenges are magnified because of the long-term and uncertain nature of the problem. Without due consideration of these issues, a tension between principles of public participation and anticipatory adaptation is likely to emerge and may result in an overly managed form of inclusion that is unlikely to satisfy either participatory or instrumental goals. Alternative, more narrowly instrumental, approaches to participation are more likely to succeed in this context, as long as the scope and limitations of public involvement are made explicit from the outset.

Keywords: adaptation; participation; inclusion; coastal zone; managerialism; power; stakeholder involvement; anticipatory strategies

La participation publique est souvent encouragée pour l'élaboration de réponses aux changements climatiques. Plusieurs perspectives participatives à l'adaptation sont ici discutées, en s'appuyant particulièrement sur des études de gestion côtière à long terme au Royaume-Uni et ailleurs. Nous affirmons que la participation publique satisfait un objectif normatif important dans l'élaboration de réponses aux risques des changements climatiques, mais nous avançons que sa mise en œuvre doit incorporer les leçons tirées de l'utilisation du processus participatif dans d'autres contextes. La concertation d'un grand éventail d'acteurs dans la prise de décisions représente des défis fondamentaux pour la politique climatique, émanant surtout des rapports de forces. Dans le cas de réponses anticipées aux changements climatiques, ces défis sont d'autant plus importants que l'échelle temporelle et l'incertitude liées au problème augmentent. Si ces questions ne sont pas bien prises en compte, une tension peut apparaître entre les principes de participation publique et l'adaptation anticipée, laquelle pourrait donner lieu à une forme d'inclusion trop étroitement gérée qui ne satisferait ni le but participatif ou instrumental. Des approches alternatives à la participation et plus étroitement instrumentales seraient plus adéquates dans ce contexte, pourvu que la portée et la limite de la participation publique soient rendues explicites dès le départ.

Mots clés: adaptation; participation; inclusion; zones côtières; « managerialism »; rapports de force; participation des acteurs; stratégies anticipées

*Corresponding author. *E-mail*: r.few@uea.ac.uk

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1. Introduction

The inclusion of a broad range of stakeholders is frequently promoted in policy responses to climate change. References to 'participation', 'stakeholder engagement', 'bottom-up' processes and other terms associated with a discourse of inclusive governance are widespread, but have so far been dealt with largely uncritically within the climate change literature. In this article we discuss prospects for participatory approaches to anticipatory adaptation, drawing particularly on studies of long-term coastal management in the UK and elsewhere to illustrate the challenges inherent in this process.

As we shall see, in practice the term 'participation' has been subject to considerable interpretation, but here we use it principally in the sense of securing the active involvement of a broad range of stakeholders in decision-making and action. Such participation encompasses input into formal decision-making structures, as well as into the deliberative democratic fora that have been advocated particularly strongly in environmental governance in recent years (strongly influenced by Habermas' notions of 'communicative rationality') (see, e.g., O'Neill, 2001; Parkins and Mitchell, 2005). Here we focus principally on public participation in decision-making processes coordinated by governmental institutions and other agencies – rather than on processes emerging directly from the grassroots.

Given widespread efforts to increase public involvement in many spheres of environmental management, the call for an inclusionary approach to tackling future climate risks has been a logical step. This is particularly so for climate change adaptation, which is likely to be organized mostly at a non-global scale (Adger, 2001). Adaptive actions tend to be context- and place-specific, with implications for relatively delimited sets of stakeholders and requiring a knowledge base tailored to local settings. Hence, broad-based inclusion in formulating adaptive strategies has both an ethical as well as a practical value.

At the same time, many authors stress the need to recognize the complex political and social dimensions of decision-making processes on climate adaptation (e.g. Pielke, 1998; Rayner and Malone, 1998; Keeney and McDaniels, 2001) – dimensions that are certainly no less significant at the local scale. Experience in other fields has shown that it is crucial to recognize the subtleties and complexities inherent in efforts to engage the public in decision-making and to avoid simplistic assumptions about the efficacy, transparency and public reach of community involvement processes (Rydin and Pennington, 2000; Cooke and Kothari, 2001). We argue that there are aspects of the climate change problem itself that make these considerations especially relevant to participation in adaptation.

The purpose of this article is to inform processes of public inclusion in decision-making on adaptation by reviewing experience and critiques of participation in other areas of environmental governance, discussing these in the light of recent empirical research on climate change and coastal zone governance in the UK, and drawing broader lessons for climate change adaptation policy.

2. Public inclusion in climate change policy

Calls for public participation in the formulation of adaptive responses are explicit, if not always prominent, in several major policy documents on climate change. Indeed, participation is enshrined in Article 6 of the 1992 United Nations Framework Convention on Climate Change, which calls for Parties to promote and facilitate 'public participation in addressing climate change and its effects and developing adequate responses' (UNFCCC, 1992, p. 17). In the Third

Assessment Report of the Intergovernmental Panel on Climate Change, the conditions listed for enhancing adaptive capacity include 'active participation by concerned parties, especially to ensure that actions match local needs and resources' (Smit et al., 2001, p. 899). The United Nations Development Programme has also recently finalized 'Adaptation Policy Frameworks' for the formulation of climate change adaptation strategies (Lim and Spanger-Siegfried, 2004). These guidelines emphasize stakeholder engagement at all levels, including 'grassroots stakeholder participation' (Wilbanks, 2003, p. S150).

In the UK, the government-funded UK Climate Impacts Programme (UKCIP) has produced a report discussing decision-making for climate change adaptation that makes the following statement:

> The framework stresses the importance of an open approach to decision-making, which takes account of the legitimate interests of stakeholders and affected parties. Where appropriate the decision process should encourage active participation from interested groups (Willows and Connell, 2003, p. vii).

In their collaborative report, the International Institute for Sustainable Development and others reflect on the need to mainstream climate change adaptation processes to 'ensure the effective participation and empowerment of poor communities in key adaptation decisions' (IISD et al., 2003, p. viii), reinforcing the notion that participation of stakeholders in adaptation is critical (Huq et al., 2004). Adaptation to specific climate hazards is also being considered through disaster risk management approaches, as promoted, for example, by Palakudiyil and Todd (2003) and Thompson and Gaviria (2004). When these approaches are applied, local participation in planning for hazards is recognized as being of central importance in generating support for the implementation of the disaster risk reduction initiatives (IFRC, 2004).

3. Participation unplugged: recent critiques

Public participation in decision-making is now a commonly stated objective across most sectors of environmental policy. In both North and South it has been widely advocated, applied and critiqued in fields such as spatial planning, natural resources management, rural and urban development, and coastal zone management (for recent analyses see, e.g., Ellis, 2004; Pimbert, 2004; Treby and Clark, 2004; Williams, 2004). It has been seen as the cornerstone of an inclusive/deliberative approach to planning and governance that places stakeholders' knowledge, opinions and aspirations at the centre of decision-making, as opposed to a managerialist (technical–rational) approach in which professional expertise and bureaucratic control shape policy and practice. Participation has been promoted both instrumentally, as a 'means' of ensuring that decisions are better geared toward their objectives, and as an empowering 'end' in itself, ceding communities greater control over the decisions that affect their lives (Nelson and Wright, 1995; Bloomfield et al., 2001; Parkins and Mitchell, 2005).

Alongside the calls for greater stakeholder involvement in environmental policy, so there has grown an increasing recognition that participatory processes are inherently problematic (Rydin and Pennington, 2000; Cooke and Kothari, 2001). A wide literature has developed critically assessing experiments and experiences in public participation. The difficulties they identify broadly coalesce around two key sets of issues: the different modes of engagement and the extent to which they constitute active participation and hence a meaningful form of inclusion; and the practical and conceptual difficulties in securing broad-based public engagement in the process, including defining

who participates and on what basis. Both sets of issues are intimately connected with interest-based politics and relations of social power (Few, 2003).

A starting point is the issue of interpretation of 'participation', which has a fundamental influence on how agencies interact with wider stakeholders. The fact that the normative concept of participation can take on different guises in practice has been recognized and discussed in the social science literature for some time. Nearly four decades ago, Sherry Arnstein wrote a brief but widely cited paper exposing the frequently misleading and rhetorical use of the term participation within urban renewal and anti-poverty programmes in the USA (Arnstein, 1969). Much of what was presented as participatory was closer to educating and informing people and securing their support for plans rather than ceding them a genuine voice in shaping those plans. This was an early critique of simplistic notions of democratic pluralism in what was then a growing movement for more active citizen involvement in environmental planning on both sides of the North Atlantic (Healey, 1997). Arnstein's interpretative categorizations have since been revisited by many authors. Writing in a development context, for example, Jules Pretty has developed a typology of real-world interpretations of the term that ranges from 'passive participation', in which people are effectively recipients of information about decisions that have already been made, to 'self-mobilization', where people take initiatives independently of external agencies (Pimbert and Pretty, 1996, pp. 309–310). In between lie consultative mechanisms, in which people are invited to submit opinions on predetermined strategies, and more interactive processes, in which people participate in joint analysis of problems and take greater control over decisions. Thus a range of different interpretations and actions exist under the umbrella term of participation.

For most social analysts, a meaningful interpretation of the term participation must imply a degree of *active* involvement in taking decisions. In this respect, Treby and Clark (2004) challenge the common tendency for 'consultation' – the presentation of proposals for comment and feedback – to be labelled by agencies as 'stakeholder participation'. Indeed, adoption of participation as rhetoric, without real commitment to giving people an effective voice, has been roundly criticized. Many authors have shown how these limited forms of inclusion are embedded within and further enforce persistent, pre-existing relations of social power between agencies and the public, and in the final outcome may do little to weaken top-down styles of decision-making (e.g. Cooke and Kothari, 2001; Davos and Lajano, 2001; Owens et al., 2004). Arnstein (1969, p. 216) argued that 'participation without redistribution of power is an empty and frustrating process for the powerless'.

Even if agencies are willing to loosen their control, giving voice to, let alone empowering, stakeholders has emerged as a far from simple process. Bloomfield et al. (2001) list common problems of public apathy, social disincentives to collective action and the time costs involved in participation, all of which may limit public motivation to take part. It has long been recognized that factors such as self-confidence and respect for authority may differentially shape people's readiness to participate (Sanchez et al., 1988). Low levels of participation may also be linked with agency/stakeholder relations: negative past experiences of programmes, and knowledge and communication gaps (Potter, 1985).

Then there is the question of *who* actually gains a voice. Communities are seldom consensual, homogeneous entities in which people have equal capacity to articulate their concerns (Leach et al., 1997; Brosius et al., 1998; O'Neill, 2001). Different social actors have differing access to a participatory process: there is a pervasive risk that elite or special-interest groups can exert a disproportionate influence on the decision-making process and outcome (Bloomfield et al., 2001; Hillier, 2003). In public meetings, there is often a difficulty for planning agencies in determining whether more active participants, including organized pressure groups, fairly represent the views

of less active community members (Mitchell, 1997; Goodwin, 1998). Where large numbers of stakeholders are involved, there are obvious practical limitations to the breadth of inclusion in democratic fora (Bloomfield et al., 2001; O'Neill, 2001): the resulting choice or self-selection of individuals and organizations again raises problems of representativeness. In addition, in circumstances where interests and values of participants fundamentally clash, the notion that clear consensus positions will emerge on which to base decisions may be highly optimistic (Pugh and Potter, 2003; Owens et al., 2004). Indeed, there is quite likely instead to be a situation characterized by micro-politics, in which actors pursue various overt and covert negotiating strategies to achieve personal ends (Holmes and Scoones, 2000; Few, 2003).

Building on these insights and critiques of participatory processes, the remainder of the article examines prospects for participation in climate adaptation. It focuses particularly on decision-making for *anticipatory* strategies, drawing on both recent empirical work and the wider literature on long-term coastal management as an illustration. Much of the debate surrounding climate change adaptation concerns the advocacy of a long-term precautionary approach that seeks strategic planning and action in advance of major climate impacts becoming manifest. Yet, because of the long-term and uncertain nature of climate change, anticipatory response to risks may be particularly complex and contentious (Lindseth, 2003; Tol, 2003; Dessai and Hulme, 2004). It presents difficult choices for society in formulating appropriate responses 'on the ground', especially in cases where adaptation might imply high costs or radical alteration of present-day activities. Given the social power dimensions of participatory processes, we contend that this results in an underlying tension between principles of public participation and climate change adaptive responses. Unless specifically addressed, such tension is likely to undermine and potentially frustrate attempts to promote genuinely inclusive decision-making processes. We later suggest means by which this tension may be resolved.

4. Questions of priority: stakeholder perspectives on the UK coast

The dilemmas of public participation in climate change policy were highlighted in recent qualitative research into ongoing and potential decision-making processes for climate change adaptation in coastal zones of the UK (Brown et al., 2005). In order to illustrate the argument developed in this article, it is useful to discuss in detail some of the results of this work.

The research project aimed to address the question: how can decisions on coastal management be made in the face of climate change? It used two case studies, Christchurch Bay on the Dorset–Hampshire coast of southern England and the Orkney Islands off the north coast of Scotland, to explore how different stakeholders perceived the nature of coastal decision-making in the face of climate change and how they thought decisions, given the long-term and highly uncertain nature of possible impacts, should be taken. In Christchurch Bay, discussions centred on risk from flooding and coastal erosion. In Orkney the principal focus of discussion was on climate risks to transport between the islands and to and from the mainland.

In both locations, data collection was based on: in-depth interviews with stakeholders, including residents groups, community-based organizations, economic and recreational sectors, local authorities, regional authorities and public agencies; consultation of documents; and observation of planning meetings. Following initial analyses of the findings, participatory research workshops with stakeholders were convened to explore further perspectives on future coastal management. Discussion focused especially on questions of timing and scale of adaptive decision-making to long-term climate risks (see Brown et al., 2005).

Options for climate change responses were discussed, based on three types of adaptive responses synthesized from the literature on coastal zones and climate change: protect, accommodate or retreat (Bijlsma et al., 1996; Klein et al., 2001). Although these categories have been critiqued as being too narrow and primarily about coastal defence issues, they were a useful way of framing the potential adaptive options in both sites. They can be equated to: (1) *control the problem* (decrease its probability of occurrence); (2) *cope with the problem* (reduce sensitivity to the problem); (3) *avoid the problem* (limit its potential effects). For Christchurch Bay, society can adapt to increased threats from flooding and erosion by increasing coastal protection measures (via hard and soft defences); accommodating the risk (e.g. building elevated buildings, modifying urban drainage systems); or retreating from the hazard (gradually abandoning dwellings and relocating settlements). In Orkney, options for adaptation to future threats to transport similarly include: measures to maintain present services (e.g. raising and protection of harbour infrastructure); reorganizing activities so that they are less sensitive to weather-related disruption (e.g. re-routing of ferries, provision of reserve farm space to cover livestock shipping cancellations); or reducing dependence on transportation (e.g. through greater economic self-sufficiency, shifts in work patterns, or withdrawal of settlement from remote islands).

Project participants were then asked to consider how coastal management decisions on these options should be made. Discussion focused particularly on the timing of decision-making, broadly in terms of whether anticipatory strategies should be developed and implemented in advance or whether responses to changing risks should be reactive. Discussion was also oriented around the scale of decision-making, and the extent to which decisions should be controlled by local input as opposed to national policy. The detail of these deliberations is provided in Brown et al. (2005). Here we consider some key findings that contribute to the argument presented in this article.

The two research sites are highly contrasting in their physical, economic and social settings, and in the broader pressures they face. In terms of spatial planning, for example, a key issue in Christchurch Bay is development control, while in Orkney the strongest priority tends to be promotion of economic development, particularly on the outer islands. In both, however, similar basic impediments were evident in people's readiness to consider anticipatory adaptation. It is important to stress that these impediments were by no means just a matter of public understanding of the science of climate change. They were often more fundamental in nature and associated with present-day costs, as well as with the long time-frames and scientific uncertainty that accompany the adaptation discourse.

For both sites, analysis of the discussions revealed a mix of opinions on the merit and desirability of strategic action to address climate impacts at the local scale. In a generic sense, concern over future climate change impacts was manifest in the discussions, and reflected in statements such as: *'we should think ahead to alleviate prospective problems and need to start planning now'* (workshop participant, Orkney); and *'we can't not act and then in decades' time get into trouble for doing nothing'* (workshop participant, Christchurch Bay). However, though many people acknowledged that advance strategic planning might be prudent, beyond these generic statements few people were prepared to advocate concrete adaptive measures undertaken now or in the short term. In part, uncertainty about long-term impacts combined with potential present-day costs was seen as an impediment to action, with corresponding statements such as: *'we should make investment for the future, but not if acting without proof'* (workshop participant, Orkney); and *'anticipatory action in society of any kind can be dangerous if we get it wrong, which we often have done in the past … it has its risks, economically and politically'* (workshop participant, Christchurch Bay). Competing short-term priorities for coastal management and funding were also highlighted during the workshops, reflected in the words of one local stakeholder that '*money*

spent on planning for possible climate impacts might be better spent sustaining local communities' (workshop participant, Orkney). Several people in both workshops argued that response to climate risks should in essence be reactive, with suggestions, for example, that: *'we can monitor for now and then react as changes become more clear'* (workshop participant, Christchurch Bay).

At both sites, the overall balance of responses did not suggest that a platform of support would emerge on the need for an anticipatory programme of action. A mixture of competing values and priorities, and concerns over costs, together with the uncertainty and imaginative intangibility of the long-term climate change problem suggested that an open forum composed of a range of local stakeholders would not collectively endorse adaptive action in the near term, however it was formulated. Interview material backs up the findings from workshops, and also suggests that decisions on any long-term option pursued in the present would almost certainly have to contend with strong dissenting voices. Such an outcome is not necessarily problematic, if public engagement in climate change discussions is carried out on the basis of deliberative democracy and consensus building, with a goal of empowering communities to decide more effectively on their future development. It can prove problematic, however, if the drive behind a participatory process is institutionally predefined: to formulate a climate adaptation strategy for the coastal zone.

In their context, the findings are by no means unusual. They resonate with those of Treby and Clark (2004), for example, who claim that strategic, long-term approaches to shoreline management planning in the UK are hampered by countervailing public attitudes that favour 'hold the line' approaches. Public support for 'sustainable development' notions of long-term strategic action and intergenerational equity cannot be assumed:

> It appears that while the public are engaging with the decision-making process, they are failing to address the drivers of the process, i.e. the need for more sustainable approaches to environmental management (Treby and Clark, 2004, p. 354).

Hillier (2003) has also described how popular opinion expressed through participatory fora can tend to run counter to long-term strategic planning, because of the dominance of short-term interests.

However, our findings do raise critical issues about public participation in climate change policy. If the pursuit of adaptation to climate change is a predetermined goal, and if stakeholders cannot be 'trusted' to decide collectively on an adaptive path because of competing priorities and short-term interests, what would be the result of a participation process? If an agency is seeking public inclusion as a means to design an anticipatory adaptation strategy, how will countering voices be accommodated?

In this respect it is useful also to examine briefly people's responses from the case study workshops and other material on the scale of decision-making, and particularly the question of whether coastal adaptation should be centrally or locally driven. The deliberations of local stakeholders revealed a spectrum of views on the appropriate locus of decision-making power, from those advocating citizen control to those arguing for a greater mix of responsibilities between the state and local communities. The call for local 'ownership' of decisions and associated actions came out particularly strongly in Orkney, expressed, for example, in the statement: '*Local people know best how to manage the islands'* (workshop participant, Orkney). On the other hand, there was a perception among many participants at both sites that the nature of the climate change problem requires planning driven by the strategic, technical and financial capabilities of central government. One participant from Christchurch Bay claimed: '*governments have to drive the*

decisions and have to employ the right agencies to do it – they are the only ones with financial muscle and power' (interviewee, Christchurch Bay).

Of particular note in terms of this article, several of the planners and agency staff we interviewed in the case studies were openly sceptical of the scope for public participation in the context of strategic adaptive response to climate change, though they acknowledged that greater community consultation was a procedure within which they would have to work. Indeed, in one case, there was an appeal for higher authorities to bring in more generalized guidance (e.g. Planning Policy Guidance notes) that would circumscribe the decision-making ability of a local authority – in engaging with the public the local authority would then be able to circumvent any opposition that might disrupt strategic action. In the words of one former official, there is utility in *'taking strategic decisions away from the local level'* (workshop participant, Christchurch Bay).

However, there were also signs that tactical attempts to control and contain the process of local stakeholder involvement might bring its own problems. Many of the non-governmental stakeholders were well aware of the power relations that tend to operate in agency/community interactions, and were sceptical of the rhetoric that may imbue claims of public participation in decision-making. One local stakeholder stated: *'If you ask for people's views but already have made decisions, that's worse than not consulting at all. People will be up in arms'* (interviewee, Christchurch Bay).

Building on the issues raised in these case study discussions, we now consider key aspects of social power in participation in greater depth.

5. Power matters: managerialism and containment

We argue that power is of fundamental importance and has to be very explicitly taken into account when considering the objective of participation. We have already made reference to the role of social power in inclusive processes, and a common tendency for pre-existing power relations to persist in participatory fora despite the claims that they promote bottom-up decision-making. Various authors have shown how participatory processes in a range of contexts can end up as more or less 'controlled' by the organizations promoting them (e.g. Cooke and Kothari, 2001; Davos and Lajano, 2001; Pugh and Potter, 2003). In a UK context, Owens et al. (2004) and Treby and Clark (2004) reveal how an ongoing technical–managerialist style of top-down decision-making has tended to persist in the face of new rhetoric and experimentation with participatory and deliberative approaches. In part, this is because of a retained appeal of 'expert'-driven styles of environmental management. It may also be associated with fundamental differences between agencies and local actors in how values are constructed and articulated, particularly in what constitutes the notion of 'the public interest' (Ellis, 2004).

As O'Neill (2001, p. 493) warns, under such conditions deliberative fora may result in an illusory 'consensus', that in fact owes more to the exercise of institutional power than 'the exercise of the power of reasoned public conversation'. Few (2001, 2003) has described a process whereby planning agencies have (consciously or subconsciously) attempted to steer stakeholder participation toward support for predetermined goals by forging tactical alliances, blocking dissent and avoiding scope for conflict. The result may be described as 'containment' of participation.

The managerialist preconditions for containment can already be identified in the literature on strategic coastal planning, as well as in the perspectives on participation reported above from Christchurch Bay and Orkney. A major recent report from the 'Foresight Future Flooding' project in the UK refers to advocacy for participation in its discussion of governance frameworks for future flood and coastal management (Evans et al., 2004). However, a close reading of the text reveals a language and a justification for inclusion that has overtly managerialist tones. Part of

the rationale for community involvement is that 'it obtains community consent' and 'is also likely to lead to less-contested outcomes if management plans receive broad local support' (Evans et al., 2004, pp. 202–203). The report also points out problems in that strategic decisions (taken at larger scale) may not always match the needs of local people. Indeed, Adger (2001) has argued that global environmental discourses on issues including climate change tend to generate generic policy blueprints that cannot readily translate to the local scale.

Containment may therefore be evident in current attempts to generate greater participation in coastal planning in the UK. Participation can become geared towards getting local views to fit with predetermined strategies. For example, Treby and Clark (2004) discuss shoreline management planning in the UK and reveal a common disjuncture between local priorities and agency-level attention to large-scale coastal processes. They advocate a more flexible approach to participation, but recognize that, at present, there is strong danger that the dictates of 'required outcomes' will act to constrain the role of participants to tokenism. Control also extends to who participates. The role of coastal zone planning agencies as 'gatekeepers' in controlling stakeholder access to participatory fora is illuminated in a detailed analysis of stakeholder roles in planning in Norway by Buanes et al. (2004). They note that inclusion and exclusion of stakeholders is a highly political issue that is strongly dependent on the administrators' perceptions of legitimacy, leaving inclusion open to bias toward supportive stakeholders.

These managerialist tendencies are likely to emerge in an arena of strategic planning where there is a fundamental conflict between scales of interest. Questions of scale have become prominent in recent discussions on environmental governance and are intimately connected with politics and power (Meadowcroft, 2002). The political process of containment of participation has a 'logic' in situations where it can act to facilitate intervention that has perceived disbenefits at the local scale. When public participation threatens to undermine agency objectives, a managerialist approach to control over decision-making is likely to be reasserted.

Because of scale issues, anticipatory adaptation to climate change is inherently susceptible to the process of containment, particularly where the response entails a radical intervention. As we have observed in our study of Christchurch Bay and Orkney, a discourse of adaptation, reflected in institutional aims and presented in real terms as action 'on the ground', runs a high risk of encountering elements of local opposition, especially under conditions of scientific uncertainty and long-term risk. For adaptation, the scale dilemma is complex, as there are evident local benefits to be gained from adaptive action. However, in the main these are intergenerational benefits, destined to be captured for future generations through action by the present generation. They may entail costs for the present population of a locality, especially in cases where adaptation does not address existing hazard states or is associated with radical change such as the phased relocation of settlement. As with spatial scale issues, these temporal scale disparities represent, in part, a classic public goods dilemma. Where there is a conflict of interest between spatial or temporal scales, there is always likely to be tension between actors who take a strategic perspective and those advocating prioritization of problems that have spatial or temporal immediacy.

That potential for tension need not undermine efforts to open up decision-making on climate change response. However, it is likely to do so if a predetermined institutional drive toward anticipatory adaptation already exists. If public participation is staged against such an institutional background, how could alternative deliberative outcomes of non-adaptation or reactivity be accommodated? If the imperative is to adapt, managerialism must be reasserted in some form. There may be a stated commitment to stakeholder inclusion in deciding how to respond to climate risks, but attempted containment of the public participation 'exercise' is a likely consequence.

If top-down decisions follow public meetings and other fora in which people are ostensibly given a voice but have little real chance of influencing decisions, the result is likely to be public dissatisfaction. Such a danger was noted by local stakeholders interviewed for the Christchurch Bay case study, and a coastal planner there also warned of the risks of raising people's expectations that they might influence the fundamental decisions. Containment is therefore a risky tactic in itself: public dissatisfaction with illusory participatory exercises can often lead to heightened mistrust, hostility, defiance and opposition (Few, 2001; Spash, 2001; Treby and Clark, 2004). Under such circumstances, participatory exercises can potentially do more harm than good.

6. Fostering meaningful inclusion in adaptive decision-making

Experience from many fields of environmental management, spatial planning and development has highlighted the complex issues associated with public involvement in decision-making processes. Attempts to foster inclusion in response to climate change risks face the same set of issues, but in this context the problems are potentially heightened because of the scientific uncertainty and intergenerational time-frame of most climate change impacts. Drawing on research in coastal areas of the UK, this article has considered the implications that such considerations may have for approaches to public inclusion in decision-making on climate change adaptation.

The instrumental nature of the call for adaptation, tightly focused around a specific desired outcome of reducing vulnerability to climate change impacts, is always likely to promote participation as a means rather than as an end. Yet even within such parameters, fostering public inclusion in decision-making on practical adaptation to climate risks appears particularly problematic for agencies charged with responding to future climate change. An open participatory process that cedes a genuine voice to stakeholders on fundamental decisions is appropriate if the purpose is to define overall priorities for society or to galvanize broad-based deliberation of climate change issues. It may also function effectively if and when climate impacts begin to have tangible effects on environment and society: as a decision process for reactive adaptation. However, participation of this form, we argue, is basically incompatible with the formulation of anticipatory adaptation. Even if some stakeholders may be supportive of anticipatory intervention, the outcome of deliberation is unlikely to produce a consensus strategy to address long-term and uncertain consequences with low immediate salience. A 'participatory' process that appears to do so is likely to have been subject to managerialism and containment, in part through the selective inclusion, co-option, and/or exclusion of stakeholders.

One reaction to such difficulties in engaging the public in a climate change adaptation decision process might be to retreat from public involvement in strategic planning. Indeed, there may be an instrumental logic to the act of restricting public inclusion in this endeavour. Hillier (2003, p. 162) talks of a 'backlash' to participatory decision-making among some spatial planners, who already seek to retreat from engagement with the public 'so that they can make rational decisions untainted by emotions or popular opinion'. However, the existence of one logical path does not necessarily preclude others. We suggest that, rather than retreating in the face of participatory difficulties, climate change adaptation needs to forge an honest and creative deliberative approach that both can be more democratic and can yield genuine benefits for the process of societal adaptation.

Crucially, if a planning agency has an instrumental goal of facilitating a strategy for anticipatory adaptation, then there is a need to recognize how that necessarily limits the ambitions of inclusion and be explicit from the outset about the true scope of public involvement. In order to avoid containment, and prevent confusion and alienation on the part of stakeholders, it is important

not to promote public involvement as a 'bottom-up' process of decision-making. It cannot be so, if the most fundamental decision has already been made. Instead, the *purpose*, *limits* and *expected outcomes* of participation need to be carefully specified, and the value of the process underlined by assurances that it will have a real impact on the formulation of policy (Spash, 2001).

An honest, informed approach to participation will better enable agencies to tailor inclusive processes of decision-making to the task in hand. There is a growing understanding among researchers and practitioners that blueprint approaches to public participation are of limited generalizability, particularly when dealing with complex environmental issues characterized by contested priorities, differing scale-dependent values and intergenerational implications. Instead, flexibility may be the key. Owens et al. (2004) are among those who reject a simplistic polarization between technical–rational (managerialist) and inclusive/deliberative procedures. Both have attendant issues, and neither tends to be applied in a strictly purist sense. In environmental appraisal work they support instead a tailoring of approach to different contexts, based on 'sensitive selection or constructive combination of approaches' (Owens et al., 2004, p. 1950). In adaptation planning, some situations may be better suited to expert-led discussion, but with public inclusion providing a democratic check on the value judgements of experts (Renn, 2006).

Once the parameters for decision-making are made clear, we argue that there may still be an important role for genuine attempts to engage the public proactively in strategic adaptation to climate change. Participation, in this more narrowly instrumental sense, can provide a mechanism through which to guide how a commitment to anticipatory adaptation is *implemented*. However, in order for the participation to be meaningful, this would then require a retreat from managerialism and a preparedness among agencies to place trust in the deliberative capabilities of stakeholders to propose plans that are both effective and equitable. Designing such a process is not easy, and turning deliberations into concrete decisions is equally difficult. However, some clear messages can be synthesized from the literature and from our own experiences in conducting deliberative fora and participatory research.

First, including the appropriate people from the start is critically important. Any participatory process will only gain legitimacy if the relevant stakeholders are included and if effort is invested in finding out who is 'important' in policy, meaning both who is most influential and also who is most likely to be affected by decisions and actions (Mikalsen and Jentoft, 2001; Brown et al., 2002). Sensitivity to inequalities of social power is again crucial here, in order to avoid domination of dialogue by those with greater resources in terms of communication, social/political networking, and experience in decision-making processes. The participatory approaches that are likely to successfully engage key stakeholders need to be assessed: different social contexts may require different approaches, especially in order to attract and sustain dialogue with 'hard to reach' stakeholders who may be reluctant to contribute their time or knowledge to the process. Significant preliminary effort may need to be invested in meeting with stakeholder groups to build trust and enthusiasm in the decision-making process, to underline the relevance for them of discussing climate change adaptation, and to show how participation can be informative, constructive and rewarding. Various types of stakeholder analysis and inclusionary techniques have been tried and tested and a wide literature exists from different areas of management science and natural resource management (see Grimble et al., 1994; Brown et al., 2002).

Second, whatever approach to inclusion is selected, legitimacy of the process requires that engagement with stakeholders goes beyond a minimalist 'consultative' approach of staging a meeting, presenting proposals and asking for comment. Stakeholders must have a genuine opportunity to construct, discuss and promote alternative options. Wherever possible, agencies

should endeavour to create a forum for proactive deliberation that meets the principles of equity, reciprocity, trust, transparency and openness outlined by Mitchell (1997): a forum for sharing information, perceptions and concerns that encourages each participant to express their views and to explore alternative avenues of response. Cooperative decision-making tools can be deployed to aid the process (see, e.g., Stirling and Mayer, 2001; Brown et al., 2002; Renn, 2006).

Generally, active participation and deliberation is best supported through working with relatively small groups and using a range of participative tools. In the exploratory workshops conducted by the authors in Christchurch Bay and Orkney, for example, the format included facilitated discussions, small group discussions, ranking and re-ranking exercises, and group policy 'mapping' tools (Brown et al, 2005). The methods employed were designed specifically for addressing the time-frames and scientific uncertainty surrounding climate change issues, encouraging participants to take a long-term perspective and asking them to consider a set of 'envelopes of possibility' to indicate the range of possible local impacts on which decisions would have to be based.

Such approaches, tailored both to problem and context, require commitment of time and enthusiasm, but they are more likely to yield the trade-offs and constructive formulation of common interests that promote broadly supported decisions (Tompkins et al., 2002; Lindseth, 2003). Overcoming entrenched viewpoints – including those of agencies – is by no means easy, but without such a goal, inclusion in climate change adaptation runs the risk of illusion.

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