

Community involvement in environmental management: thoughts for emergency management

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In recent years, there has been a startling increase in community involvement in environmental management. (For the purposes of this article, environmental management includes natural resource management, and the broader notion of sustainable development.) This field of policy includes traditional concerns of environmental protection and nature conservation, larger problems such as a greenhouse, biological diversity and land degradation, and the integration of these with social and economic policy (it is this integration—or rather the aim for it—that defines sustainable development). The aim of this article is to draw some lessons from environmental management that may be of use to emergency management, although I suspect the reverse might be easier. In such a short space, the treatment will clearly be a slight commentary rather than a sustained analysis.

While lessons can often be profitably drawn from one policy area to another, I believe that with environmental management and emergency management the case for doing so is stronger. The two can be viewed as closely related policy fields. The first and most obvious reason is that environmental and emergency managers cross paths often, as they operate in common substantive situations—fire, flood, sharp pollution episodes, and so on—although often with perhaps quite different agendas, goals and even cultures. The second reason is more important from a policy perspective. Emergency and environmental management face policy and management problems displaying a number of difficult attributes found less commonly, and less commonly in combination, than in most other fields of public policy, including (Dovers 1997a):

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- difficult scales of space and time
- irreversible impacts on natural and human systems
- cumulative effects over time
- occasionally urgent imperatives
- high levels of complexity within and connection between problems
- pervasive risk and uncertainty
- 'systemic' problem causes (rooted in patterns of production, consumption, settlement and governance)
- increasing demands for and expectations of greater community participation, both in policy formulation and in actual management.

So environmental and emergency managers not only must deal with each other in a practical sense, they have common cause in that they deal with, on behalf of society, a suite of problems requiring particular and often not well-developed methods of policy analysis and management prescription. Standard approaches to public policy and administration, usually drawn from experience in fiscal policy or service delivery, may not be too relevant. Environmental and emergency managers should develop closer linkages.

Trends in participation in environmental management

Public participation in environmental management has both the status of an officially stated goal of current policy, and a longer history than many realise. Recent policy (and in some cases even law) arising in the post-1987 era of sustainable development issues a clear call for great participation. The 1992 *Rio Declaration* and related plan of action, 'Agenda 21', were accepted by 179

countries via the UN Conference on Environment and Development, and both call for the involvement of local communities in achieving sustainable development. Australia's response to the global sustainable development agenda, the 1992 *National Strategy for Ecologically Sustainable Development* (ESD), advances community involvement as a guiding principle, as do the numerous national and state-territory policies and programs adhering, at least rhetorically, to the principles of ESD.

Actual policies and programs in resource and environmental management are reflecting this call, with a number of broad kinds of participation discernible (generally, see State of Environment Advisory Council 1996):

- Statutory rights to comment on or object to policies or development approvals, codified in planning, development and heritage law since the 1970s (Robinson 1993).
- Involvement in policy formulation at a more general level, an outcome of the 'consensus-corporatist' mode of recent federal and state Labor governments, as well as of a realisation that there are inherent advantages to wider involvement in policy formulation targeting new or difficult problems. (The current federal government seems less enamoured of this approach, with an apparent return to the in-house, green or white paper mode of policy development. However, I suspect that stakeholder consultation on broad policy is a trend that will not diminish over time.) Major national (i.e. not just Commonwealth) policy emerging in recent years has been constructed in a reasonably inclusive manner, and this is mirrored in state and local jurisdictions. Although slower, often more costly, and

usually somewhat bland in a lowest common denominator sense, these policies stand a greater chance of surviving over time given the investment in them by major players. Examples include the *National Strategy for the Conservation of Australia's Biological Diversity* and the (draft) *National Rangelands Strategy*. In some cases, the joint actions of non-government players provide the impetus for public policy action, with governments then proceeding in an inclusive fashion (e.g. the NFF-ACF's successful push resulting in national support for Landcare; see below). In other cases encouraging moves forward have been made in the absence, or even in spite, of government, such as with the (now-threatened) Cape York Heads of Agreement.

- Regional planning and development activities, that are growing apace. While initially focusing on economic development, a number of regional planning initiatives now grapple with the integration of environment, social and economic aspects in the longer term (the prime aim of sustainable development). Some of these are 'bottom-up' initiatives, borne of local concern, whereas others are government sponsored, and many a combination of both.
- In some cases, inclusion of stakeholders in formalised management arrangements, regionally or sectorally. Examples include the Great Barrier Reef Marine Park Authority and the arrangements overseen by the Australian Fisheries Management Authority. In Victoria, the Land Conservation Council from 1970 has operated a moderately inclusive approach to regional and sectoral inquiry in environmental management, with a deal of success relative to other jurisdictions, although recent changes diminish both the scope of participation and the agency's autonomy.
- Integrated, whole or total catchment management arrangements, varying from informal linking mechanisms to formal trusts with statutory backing. The degree of community involvement varies, with some dominated by government agencies and others by community groups (the 'representativeness' of the latter can be debated in some cases).
- Last, but most apparent, involvement in local scale, on-ground

environmental management and monitoring. Hundreds of groups across the country are engaged in environmental monitoring activities (Alexander et al. 1996). More than 3000 district-scale Landcare groups are engaged in education, investigation and demonstration activities. In addition, numerous other 'care' and 'watch' programs and movements have been established, focusing on coasts, fish, soils, water quality, frogs, dunes and so on. Broadly, such groups attract government support on a short-term basis, mostly to cover administrative costs, employ facilitators or to fund demonstration projects. The routing of some Telstra privatisation moneys through the Natural Heritage Trust guarantees that some such programs will continue to be reasonably well-lubricated for a few more years at least (the longer-term prospects are less clear). In terms of leading edge examples in environmental policy and management, such local-scale Australian programs are being closely examined internationally.

Another relevant trend, although not strictly community involvement, is the growing attention paid by private firms and industry sectors to environmental management, both as required by legislation and under the growing move to self-regulation. The relevance lies in the fact that the bulk of workers are employed in the private sector, and this trend is seeing many more of them engaged in environmental management as part of their working lives. As in most things, the division between work and 'not work' (including the voluntary sphere where community engagement is usually seen as residing) should not be seen as absolute. (One must ask whether the most famous 'community-based' program, Landcare, is in fact more a 'private-sector' program, given that small firms (i.e. family farms) dominate.) With the increased attention to safety and risk issues in the workplace, this link also exists in emergency management.

While the range and amount of community involvement in resource and environmental management has increased and appears to still be increasing, it is a mistake to believe that such arrangements are new or novel. Statutory rights to be notified of and object to development on environmental grounds date to decades-old planning law in most states. More strategic and substantive involvement has a long history in non-urban

resource management in Australia (does emergency management share a similar history?). In NSW, Pasture Protection Boards addressed issues such as feral pests and weeds from 1912, and River Improvement Trusts were active from 1948. While these government-enabled but community-run bodies, at times, did things we would now frown upon (like channelising rivers), they were concerned with resource management as defined by their times, and enjoyed greater statutory and administrative support and a longer expected lifespan than many modern equivalents. Such arrangements we might call 'firm'. There is a salutary general reminder in this history, but there may also be real lessons in a policy and institutional sense (Dovers 1996). There is a tendency to write off previous approaches in the fervour of new programs; witness Landcare, where proponents claim the 'old' extension approach to soil conservation failed, and that we need something wholly new, ignoring that that the 'old' approach achieved a good deal and that what we do now relies enormously on past efforts. Building better policy and management capacities over time requires a constancy of attention and preparedness to learn and evolve ('adaptive' approaches) not often enough found in recent environmental policy, where 'ad hocery' and short-term policy fashion have dominated (see Dovers and Mobbs 1997).

Kinds and levels of participation

With such a wide array of more participative arrangements emerging, it is useful to consider the different forms that participation might take, and how this matches with the purpose at hand. Arnstein's (1969, p. 217) well-known 'ladder' of citizen participation (see *Table 1*) can serve as a basis.

This is a useful enough schema to categorise what is happening. If we draw a continuum in environment management between being told after the fact

Citizen control Delegated power Partnership	(Degrees of citizen power)
Placation Consultation Informing	(Degrees of tokenism)
Therapy Manipulation	(Non-participation)

Table 1: Ladder of citizen participation

at one end and fully delegated management responsibilities at the other, most current public participation and community engagement would fall toward the 'lower' end of this scale. Would a similar result be obtained in emergency management? Very often, however, such a ladder is used to argue the case for the 'higher' levels of participation as being preferable at all times. However, while one might agree with such a general proposition as a political ideal (as I do), the strictures of public policy and administration, and sometimes the nature of the problem being dealt with, suggest a more differentiated view. In brief, the following considerations are relevant, and enable a more detailed (and thus more bothersome and complicated) view of the issue.

- At times, 'lower' or more limited forms of participation are inevitable and even preferable. An obvious example is emergency management—when a fire front or flood peak is closing fast there are strong arguments for what Arnstein terms 'manipulation'. This recommends, of course, that community participation should not be left too late. Clarity about the 'stage' or nature of the problem is needed—that is, are we dealing with policy formulation, ongoing monitoring, demonstration, preparedness, management or urgent response, or a combination thereof?
- Constitutional and legal constraints may limit the application of higher levels of participation in some cases, at least if we accept or must operate within the existing political system. Agencies legally responsible for management tasks may find that they must balance statutory responsibility and accountability with the desire or need to include more people in decision making or planning (this also supports earlier rather than later inclusion in a process). There is a tension between representative parliamentary democracy and the delegation of greater power to local communities. This of course raises the matter of political change, to create systems whereby higher forms of participation are possible (e.g. community resource management forums with real powers), which I will not explore here.
- There is the issue of choice—some people may not wish to be engaged, either through trust in the process, lethargy, disinterest, or whatever. This however leaves open the ques-

tion of allowing people to exercise this choice in an informed manner, recommending open, transparent processes with good information provision. (There are cases, though, where one might suggest coercion rather than choice to participate, such as with disease control or national security.)

- There is the issue of cost, in terms of time and human and economic resources. Real participation does not come cheaply, for either the community or public agencies. A recent comparative policy study covering both environmental and emergency management found that less top-down, more collaborative policies raised additional difficulties in implementation (May *et al.* 1996). If such matters are not attended to in a timely fashion, participatory processes may disintegrate needlessly.
- The different propensities and abilities of groups within society to participate, whatever their desire to do so, should be kept in mind. Arnstein (1969, p. 217) put it that 'each group encompasses a host of divergent points of view, significant cleavages, competing vested interests, and splintered subgroups'. This invites sensitivity to differing cultural preferences, literacy standards, and so on. It also requires recognition that community-based groups are not singularly concerned with environmental management narrowly defined, but with a range of social and economic issues. Landcare groups address problems of salinity, erosion and so on, but also form as a result of population and economic decline in rural areas, and a perceived deterioration of cultural and social institutions and cohesiveness (Carr 1997). Community involvement needs to be viewed as not only addressing tangible needs of environmental protection or resource management, but also intangible 'universal human health needs' such as social and emotional support networks, opportunities and incentives for learning and creative behaviour, short-term goal achievement cycles and aspirations of a kind likely to be fulfilled, and an environment and lifestyle conducive to a senses of belonging, involvement, achievement and challenge (Boyden 1987).
- Allied to this is the issue of representativeness, that begs two considerations relevant here, whether it is a

public agency seeking community involvement or a community demanding involvement. First, what comprises a 'representative' group or body? This is an area where different groups within society have different expectations and understandings, and where agencies may find themselves, perhaps unwittingly, engaged in misrepresenting a community. Second, what degree or kind of representation is optimal, in terms of effectiveness of policy or management processes, in the context of a particular situation? This will vary enormously.

- It would seem that shared concerns or causes are, if not necessary, then highly important to purposeful community engagement. Tuan (1979) described common threats as crucial to community cohesiveness throughout human history, be these threats from nature or other people. For instance, there is presently great hope that the enormous success with Landcare (at least in terms of number of groups) can be transferred to other sectors and problems. Yet it is not clear how this will proceed—Landcare operates at a very human (rural district) scale and in a sector with a common cause (land degradation) and where the family farm is the overwhelmingly common unit of management. How this can translate to, for example, publicly-owned forests, sparsely-peopled rangelands, or dense, diverse urban settings is not at all clear. This is an issue given much attention in the intellectual fields of risk perception and risk communication, although to what practical effect in emergency management I will not venture to judge.
- Different levels of participation may be appropriate for different purposes. This not only applies *across* problems, but also *within* the context of a specific problem or process—people will want and need to move up and down the ladder, so to speak. For example, an individual or group may wish to be closely involved in monitoring aspects of environmental management, but less so in later management. Or someone's interest could be served by inclusion in general policy formulation, but not in implementation, or *vice versa*. This requires detailed understanding and wide discussion of the problem being addressed, the community involved, and the process of participation.

- Finally, there are limits to voluntarism. It needs to be remembered that it is not only in the field of environmental management (or emergency management) where people are alternatively being asked to be involved or are asking for involvement—there is the whole voluntary sector (rather large already in Australia) comprising neighbourhood security, schools, sporting associations, service clubs, children and youth activities, charities and so on. There are only so many hours left in a week after work, household activities, raising children and leisure! This raises the matter of the priorities of individuals, communities, governments and society as a whole, and the issue of the kind and degree of coordination across community-based programs, and of public sector support required for these.

All this suggests that identifying different modes of participation and matching these to as comprehensive as possible an understanding of the detail of policy and management processes, and of the affected or interested population, is of great importance. In the simply utilitarian terms of policy instrument choice, community participation is often painted as a singular policy instrument, whereas it clearly is deeply diverse, and this should be reflected in the approach to defining, allowing, encouraging and using it. Similarly required is a matching level of detail and comprehensiveness in delineating the particular sub-sets of environmental management (and emergency management) to which public participation-as-policy instrument should or might be applied. One size will not fit all—a message as valid to those promoting community involvement as it is to those blindly advocating market mechanisms or blanket regulation (Dovers 1995).

Discussion

To consider these issues a little further, we can ask what lies behind the recent increase in community participation in environmental management. What does it mean, and what are the prospects? First, there are the 'good' reasons.

- Community demand for a 'say' in matters affecting them has been recognised, and is progressively becoming an accepted part of the practice of public policy and administration, and of resource and environmental management.
 - A genuine move, where it is possible, toward a more participatory form of democracy, entailing a greater level of civil debate between communities, governments, firms and professional groups.
 - A realisation that policies and management strategies will be more effective if they are well understood by affected communities who, through involvement in their formulation and implementation, enjoy some sense of ongoing ownership and control.
 - Relatedly, a valuing of the contribution of local knowledge and expertise in policy and management, particularly in terms of adapting general goals to local contexts, and ensuring appropriate flexibility in implementation.
 - Community involvement is one product of an ongoing search for new and novel approaches to an emerging and difficult area of policy and management, with the aim of building a more comprehensive toolkit of approaches and policy instruments. This is confirmed by the continuing exploration of other, less traditional approaches in environmental management such as interdisciplinary and cross-sectoral research and communication, property rights, economic instruments, industry self-regulation, and negotiative mechanisms.
- On the other hand, there are some less good factors that may be operating.
- The search for new approaches might be viewed as desperation on the part of governments who have found that attending environmental issues is difficult, particularly without attending the systemic links between these problems and underlying causes in patterns of production, consumption and governance.
 - Then there is the constant problem of shifting policy fashion, where particular approaches become 'all the rage' for a period of time, diverting attention from the failure or disappointment of previously fashionable approaches, but themselves are not persisted with for long before the next fashion is adopted.
 - Abrogation of political responsibility in an era of reduction of the state, with community-based initiatives replacing, rather than extending or consolidating, previous, more 'top-down' approaches. 'Community involvement' can be (and in some case has been, I would argue) a veil

behind which governments reduce other programs or diminish their own responsibilities (for a general argument, see Dovers and Lindenmayer 1997). This suggests that, in terms of positive environmental change, the result might be zero sum rather than consolidation and advance. A discussion of Landcare in this light is provided by Martin and Woodhill (1995).

I would suggest that none of these reasons dominate, but operate together in a sometimes bewildering and complex fashion—hence the tendency for a mix of optimism and scepticism on the part of many observers. The challenge is to sort through the good and less good factors, and through the many and varied possible contexts, so as to arrive at a more differentiated and thus effective understanding of, and approach to, the issue.

It would be comforting to believe that the better reasons dominate, and we can analyse what is going on through seeking evidence that this is the case or not. To do this, we need to interrogate existing or proposed schemes for public participation and seek to ascertain whether they seem to be:

- designed for permanence
- designed carefully for a given specific context
- constructed to extend and improve existing approaches
- supported with financial, informational and institutional resources sufficient for the tasks they are being expected to undertake.

That is, is community involvement apparently becoming an accepted part of the landscape of public policy and administration, or not? In environmental management, the answer is mixed—some good things seem to be happening, but on the other hand there is a reliance on annual funding rounds, little in the way of coordination across the emerging array of programs, and expectations are often far larger than the commitment of resources. We might call such arrangements 'flaky'. What is the case for emergency management?

Public participation in resource and environmental management is at the point where, although great advances have been made, these need to be consolidated if they are going to last, let alone be built upon. Participation needs to be 'institutionalised'—not in a formal, top-down manner, but in an enabling sense of providing the wherewithal. Without such underpinnings, there is

great potential for public participation to become a source of cynicism and disappointment—another short-lived policy fashion tried but not persisted with, part of a longer history of policy 'ad hocery' and policy amnesia.

Two important obstacles to fuller community involvement stand out and apply equally, I suspect, to both emergency and to environmental management. The first is that community involvement, if undertaken in a genuine and non-cynical fashion, challenges professions and disciplines to accept that their own work and prescriptions should be subject to a 'democratised' peer community, including both other professions and disciplines and the broader community, and to profit from this. Obvious examples of different understanding would be the debate over actual versus perceived risk in emergency management, or the often very different prioritisation of environmental management problems between 'experts' and laypersons (and, indeed, within any particular community). Community involvement represents not only a challenge to government and the public, but to the 'epistemic' (knowledge-based) communities such as ecologists, environmental risk assessment practitioners, or emergency management professionals. We are some way from working out how the various players can most productively work together. Moreover, there is a largely unexplored tension between the move to broader participation on the one hand, and the increasing use of what can be rather arcane and inaccessible information technologies and decision support systems on the other (Healy and Ascher 1995; Wong 1997). This tension should be solvable, but will take considerable time, forethought and cooperation.

The second obstacle is that both environmental and emergency management operate in the face of rising demands and escalating problems, but from a base in a public sector that is at best static, or more often shrinking. Marketisation, downsizing, privatisation, outsourcing, corporatisation and withdrawal of the state are the common manifestations. While this trend is generic, the case can be put that for environmental and emergency management it is particularly difficult, given that they are long-term, collective public projects complicated by poorly assigned rights and responsibilities, pervasive uncertainty, and great complexity. How does the state handle such issues when

it is timidly shrinking? (Generally, see Self 1995; specifically, see Dovers 1997b). There are, of course, both pros and cons. For example, marketisation of the water sector offers managerial efficiencies and prices better reflecting the value of the natural resource. However, other aspects may not fare as well under corporatised management arrangements, such as community involvement, cross-catchment integration and (relevantly for emergency management) flooding. The marketising of policy and management arrangements where contingencies are crucial will always be problematic, but precious little discussion has taken place on this.

Conclusion: participation firm or flaky?

The concluding message is straightforward enough: community involvement in environmental management is far from simple, or even unequivocally a good thing at all times. Thus there is a need to be careful and clear, matching the detail of degree and kind of participation in the light of detail of the context, the community and the problem. We have yet to find the balance between 'firm' arrangements (i.e. fire brigades, pasture protection boards, etc.) and 'flaky' ones (unsupported in the longer term). Both of these have their advantages—the firm arrangements are more purposeful and long-lived, but the flaky often more progressive and inclusive. The rational administrative mind prefers the firm, the progressive political mind prefers the flaky. It seems to me that emergency management has more of the former, environmental management more of the latter, and certainly both policy sectors could learn much from each other (and not only regarding participation).

Over the next few years, in a number of policy fields, the tension between these two general styles of public participation will be explored further. Can communities take on more tasks and power in a manner consistent with the accountabilities and controlling instincts of the administrative state? The benefits of both—genuine, convenient or disingenuous—will doubtless be advanced in an adversarial manner. Hopefully we can move beyond that to a situation where we build broader and genuinely empowering involvement, but sensitively differentiated according to problems and the needs of communities, and supported by sincere informational and institutional infrastructure. Rather

than arguing whether we want our participation firm or flaky, we might seek to make the firm a little flakier and the flaky a little firmer, the best of both worlds.

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Rescue team receives awards

Queensland Rescue is part of the Department of Emergency Services in Queensland. The service operates three Bell 412 helicopters covering the entire Queensland coastal region from the Gold Coast to Thursday Island. The helicopters are based in Brisbane, Townsville and Cairns and perform search and rescue, medical operations, bushfire suppression and assist communities affected by disaster such as cyclones through evacuation, resupply and medical retrieval.

Each helicopter carries a crew of three, consisting of the pilot, and air crew officer responsible for winch operations and assisting with navigation and communications, and a rescue officer, who performs down-the-wire rescue duties. The rescue officer is also responsible for passenger safety and is usually a trained ambulance officer or paramedic.

On March 9 1997, the service performed the rescue of two Canadian sailors, Robin and Maggi Ansell, from their foundering yacht, the *Orca*, in near cyclonic conditions off Townsville. Caught up in Tropical Cyclone Justin, the Ansell's were rescued from a rubber dinghy after rescue from the deck was impossible due to the violent pitching of the yacht.

The yacht was located using an EPIRB, a locating device that homes in on a radio distress signal, and through a flashing strobe on the deck of the yacht.

What made the rescue more notable was the distance from shore for a helicopter—about 165 nautical miles—and the narrow window available for the rescue at the site—about twenty minutes due to fuel limitations. On reaching the area, the helicopter located the stricken yacht within three minutes and in another sixteen minutes of often precarious work took the couple on board. The rescue was also fortunate in that the helicopter and crew had only just returned from flood operations at Mt. Isa, in Queensland's interior, that afternoon.

Team members Peter Hope (pilot), Ian Callaghan (air crew officer) and Angus McDonell (rescue officer) were awarded the Eurocopter Golden Hour Award by the US-based Helicopter Association International.

Angus was also awarded the Australian Bravery Medal by the Australian Government for his part as the rescue crewman, while Peter and Ian were given a Commendation for Brave Conduct for their role. The awards were made by the Governor-General.

For information about Queensland Rescue's operations, contact Wayne Ripper, Acting Director of Aviation Services, GPO Box 1425, Brisbane, Queensland, 4001, tel: (07) 3247 4137, fax (07) 3247 4207.



Angus McDonell (left) and Ian Callaghan (picture courtesy of the Townsville Bulletin)



Queensland Rescue's Bell 412 demonstrates a sea rescue