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Bushfire in a Heating World - The Grose Valley Fire Forum

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Abstract

In response to community concerns about management strategies used for a fire in the Grose Valley in the upper Blue Mountains in November 2006, a one-day forum was held with representative community members and fire authorities. This paper outlines how the Grose Valley Fire Forum eventuated, describes the forum process and the resultant action plan, and highlights emerging issues in relation to knowledge transfer and adaptive governance for bushfire management.

Introduction

A one-day forum was organised by the Blue Mountains World Heritage Institute in the upper Blue Mountains in February 2007 with representatives from the local community and fire management authorities. The state Minister for the Environment initiated the forum with the purpose being to address concerns held by community members about management of a fire in the Grose Valley in late 2006. The aim of this paper is to describe process rather than content – that is, how community concerns are taken into account in the bushfire policy process, rather than focusing on the specifics of bushfire management.

Background

The Grose Valley fire started on November 21st, 2006, from two original ignitions (from lightning strikes) near Blackheath in the upper Blue Mountains within the Greater Blue Mountains World Heritage Area (GBMWhA). Two days later the fire was declared a “bushfire emergency “ under the jurisdiction of Section 44 of the Rural Fires Act, where the Commissioner takes charge of fire fighting operations and takes such measures necessary to control or suppress the fire. A multi-agency incident management team was established. Major back-burns rimmed the upper Grose Valley essentially from the townships of Medlow Bath to Mount Tomah. Eight days after the fires started, winds carried the fire further into the valley and across the iconic and highly valued Blue Gum forest. The fire was finally extinguished after burning approximately 14,000 hectares of the valley. Most fortunately, thanks to the firefighters, there was no loss of human life or property.

There were however community concerns about the extensive backburning undertaken to protect the townships from the fire and the impact of the backburning on the species within the World Heritage Area. Media coverage included a local resident speaking on Radio National’s AM program about concerns over backburning that got away and was the cause of the larger fire. This issue was central to the ensuing debate. The Sydney Morning Herald featured the story on its front page. The local Blue Mountains Gazette featured a one-page call from a large group of local residents for an independent review of the management of the fire, and raised broader concerns about fire management within the World Heritage Area.

The Minister invited the Blue Mountains World Heritage Institute, as an independent body, to organise a forum to address the concerns raised by the community. The Institute is a non-profit organisation that supports the conservation of the natural and cultural heritage of the GBMWhA by focusing on the integration of science, management and policy in the region.

The brief to the Institute from the Minister was for a one-day forum involving community representatives and fire authorities to discuss community concerns and to prepare an action plan from the forum to address these concerns. The purpose of the forum was to:

- Brief the community on the management of the Grose Valley fire and the framework and context for the management of fire generally within the World Heritage Area.
- Identify any issues that relate specifically to the management of the Grose Valley fire, and that haven't already been captured and/or responded to within the s.44 debrief report.
- Identify longer term and landscape scale issues relating to the management of fire in the Greater Blue Mountains WHA, particularly in this time of climate change.
- Develop an action plan, which responds to any unresolved issues identified above.

The forum

In accordance with the Minister's brief, the following organisations were represented at the forum: NSW Dept of Environment and Conservation (DEC); NSW Rural Fire Service (RFS); Blue Mountains Conservation Society (BMCS); Nature Conservation Council of NSW (NCC); Blue Mountains City Council; NSW National Parks & Wildlife Service (NPWS) Regional Advisory Committee and the GBM WHA Advisory Council. There were 20 people present, 8 of which were local community representatives, attending on behalf of the Conservation Society and advisory groups.

The community organisations (BMCS, NCC and advisory groups) were requested in advance of the forum to identify issues of community interest and concern to be discussed at the forum. The list of issues presented to the forum covered most aspects of bushfire management, and were summarised under 11 categories (Table 1). Clearly, these issues are generic, and relate to bushfire management in general.

Table 1. Issues addressed at the forum.

#	Issue
1	Concern about the lack of priority given to protection of the ecological values of the World Heritage Area, in the face of an over-riding priority for protection of human life and private property.
2	Biodiversity impacts of frequent fires in the Grose Valley.
3	Effectiveness of review processes in generating real improvements for the future.
4	Implications of climate change for increased fire frequency and intensity.
5	Inadequate funding for research, planning and risk mitigation.
6	Implementation of strategies for risk mitigation and fire suppression in large bushland areas.
7	Capacity of remote area fire-fighting teams (RAFT).
8	Efficiency of fire detection technologies.
9	Aerial attack efficiency and effectiveness.
10	The role of the media.
11	Funding for post-fire recovery.

For each of the issues, a goal statement was prepared at the forum. Each of these goals was then addressed in turn, using a five step problem orientation process to ask a series of questions about each issue, to reach consensus on the exact nature of the problem and finally to arrive at an agreed set of actions (Table 2). Given that what is a problem from one person or group's perspective may not be a problem from another perspective, it was important to use a process to reach consensus on what actually is perceived by the *range* of stakeholders as a real problem and to arrive at a point of common interest.

Table 2. Problem orientation and issue exploration process*

*Adapted from Clark, T.W. 2002. "The Policy Process: a practical guide for natural resource professionals." Yale University Press. U.S.

1. Clarify goals in relation to the issue	<p>What goals or ends do we want?</p> <p>Are people's values clear?</p> <p>(there may be an over-riding goal and then more specific goals to operationalise the over-riding goal)</p>
2. Describe trends	<p>Looking back at the history of the issue, what are the key trends?</p> <p>Have events moved toward or away from the specified goals?</p> <p>Describe both past and current trends.</p>
3. Analyse causes and conditions	<p>What factors, relationships, and conditions created these trends, including the complex interplay of factors that affected prior decisions? (e.g. environmental, social, political factors)</p> <p>i.e. what explanations are there for the trends?</p> <p>What management activities have affected the trends?</p> <p>What are the conflicts about different approaches to address the issue?</p>
4. Projection of developments (e.g. if no action is taken to address the issue)	<p>Based on trends and conditions, what is likely to happen in the future (e.g. if nothing is done differently).</p> <p>If past trends continue, what can we expect?</p> <p>Is the likely future the one that will achieve the goals?</p> <p>What future possible developments are there (e.g. politically, environmentally e.g. how will climate change affect the problem)?</p>
5. Decide on any actions to address the problem	<p>If trends are not moving toward the goal, then a problem exists and actions need to be considered.</p> <p>What other policies, institutional structures, and procedures might move toward the goal?</p> <p>What research, analysis, or public education may be needed?</p>

The final outcome of this process was a list of 11 goals with a total of 50 associated actions. Given that the focus of this conference is on implications of climate change for bushfires, table 3 presents the example of how the issue relating to climate change was addressed, to derive a list of actions for that goal.

Table 3. Problem orientation process for developing an action plan to address climate change implications for bushfires.

Issue	Implications of climate change for increased fire frequency and intensity.
Goal	To prepare for the more extreme conditions associated with climate change, by addressing the policy and management implications for control strategies and landscape management.
Trends	<ul style="list-style-type: none"> • Fire detection and suppression efforts are inadequate ie climate change is “upping the ante” • Increased frequency of lightning strikes • Ecological research and monitoring of change is increasing • Risk mitigation - lack of knowledge of success • To date there has been no policy and management response to climate change implications. ie inaction.
Conditions	<ul style="list-style-type: none"> • Technologies for fire detection are expensive • Lack of baseline ecological data (it has been difficult to plot the impact of climate change on the broad range of species due to the lack of sufficient baseline data from which to work) • Risk mitigation - no assessment of success (how well are we doing at risk mitigation? - this is the first step in addressing climate change) • Research needs to be translated into policy and management • Level of complexity breeds uncertainty in relation to appropriate policy and management response (the level of complexity makes it hard to know what to do; and what climate change will mean at the level of ecosystems eg what changes are to be expected?)
Projections	<ul style="list-style-type: none"> • Increased fire frequency and intensity • Significant decline in overall biodiversity in GBM World Heritage Area • Significant decline in eucalypt species (number, variety and range) • Stress on hanging swamps and associated invertebrate species • Further increased frequency of lightning • Increased arson with growing population • Habitat fragmentation limits species migration to compatible environments • Conflict on all levels likely to increase • Risk to values likely to increase • eg Aboriginal cultural heritage values under increased threat • Carbon credits for managing native forests may yield more fund
Actions	<ul style="list-style-type: none"> • Use forum outcomes to advocate and lead improved dialogue and action to address key issues regarding climate change and start to influence policy change • Enhance preparedness, detection and rapid fire response capacity of fire authorities in response to fire ignitions • Investigate opportunities for increased resourcing for risk mitigation and for bushfire behaviour research • Research priorities <ul style="list-style-type: none"> • Efficacy of current risk mitigation in the Blue Mountains • Climate change impacts on hanging swamps • Underlying shifts in environmental conditions and effects on fire • Climate change implications for fire behaviour and invasive species • Plant dispersal in relation to climate change, quantifying ecological processes and habitat requirements critical to species persistence and ability to migrate

Responsibility for implementing the actions was assigned to the organisations present at the forum, as well as the Blue Mountains Bushfire Management Committee and the Bushfire Coordinating Committee. The full action plan is available at www.bmwhi.org.au and there will be an annual review of the actions and their implementation. DEC and RFS are addressing its implementation as a priority.

Matters arising from the forum

Transparent open inquiry? It is important now to turn to the question of how successful the forum was in terms of addressing community concerns. The discussion at the forum was productive, friendly, open and willing, and from the perspective of the Rural Fire Service, the forum served as an effective circuit-breaker. However the community representatives were concerned and disappointed that copies of the Section 44 debrief report were not available for the forum as anticipated. While this was partly overcome through verbal presentation and comment, it limited the ability to reach consensus on the factual basis of what happened on the fire ground and to move forward productively from this point of consensus. Community representatives expressed their dissatisfaction with this situation, and it must be noted that the forum was therefore not able to engage effectively on specific issues of the control strategies used on the Grose Valley fire. This left the community with a feeling that there was a lack of transparency and open inquiry. It is a reality that in these times of litigation and with a media all too willing to 'beat things up', the political machine goes into action and centralised bureaucratic control inhibits reflexivity and open inquiry.

Implementing the action plan. The one-day forum sought to achieve a lot. The action plan is long, with a total of 50 actions and it is important to caution against expectations that agencies can deliver on all of the actions; any plan of action must be practical and achievable. DEC and the RFS are commended for their early commitment to implementing this action plan.

The whole is greater than the sum of the parts. The long list of actions exists within a complex system of economic, social, and political realities. Focusing on each of the actions in turn without addressing the system of governance within which they are embedded, may fail to bring about lasting change that can avoid future conflict. The systemic issues of governance (eg centralised hierarchical structures of government which tend toward rigidity when they need to be adaptive) are often at the core of conflicts over bushfire management, and cannot be addressed in a fragmented way. They need explicit attention 'outside the heat of the fire'. Focusing on individual actions can overlook the questions about the organisational processes that are at the core of the issues eg why haven't we been assessing success of risk mitigation efforts? Why isn't research being translated into policy and management? How can we learn to cope with complexity and uncertainty? The trends and conditions mapped out during the forum provide a valuable reference point for beginning to work through these issues of process.

Funding. Government funds to support bushfire management are urgently needed, and this is reflected in the forum report by the number of actions focusing on procuring funds.

Concluding remarks

This forum and the ensuing action plan, to be most effective, require an on-going process of inquiry into the broader context for bushfire policy and management. Three key aspects of this context that need attention are mentioned below.

Community involvement in the policy making process

A big challenge in bushfire management is how to better integrate valid and appropriate community interests with those of fire management agencies. Over recent years, the public

has come to demand and expect a greater say in decision-making processes that impact upon their local environment. This trend can only be considered to increase under the pressures of climate change which will 'up the ante' in terms of resource management and community engagement and concerns. The Grose Valley Fire Forum represented a step forward in this process of better integrating community knowledge and interests into local natural resource management. A key issue raised by concerned residents in the Blue Mountains was the need to better capture and utilise local knowledge. The same call is commonly heard from Indigenous communities. It is essential that fire fighters have the backing of communities, and to secure this the communities needs to feel empowered, not disempowered, in the decision making process. To date, disempowerment is common and new approaches are needed to overcome this.

Integrating science with policy and management

Implementation of research and presentation of its outcomes needs to be done with careful consideration of its integration with policy and management - the habit is to neglect this part of the process. During this conference we have been presented with modelling data to show implications of climate change for bushfire behaviour over the next 100 years. The models are startling and call for urgent policy responses. We have also seen the complexity of ecological impacts of fire regimes, and the existing gaps in knowledge. Yet integrating scientific data into policy and management is a major challenge, as is knowledge transfer in general. Far more priority needs to be given to this end of the research process.

Governance and adaptive management

What sorts of policy processes and management regimes are needed to handle future demands in bushfire management? Uncertainty, complexity, increased community participation and emerging multiple interests – all of these elements demand new approaches. Adaptiveness across policy processes and across institutions and bushfire management regimes is urgently needed. Tolhurst (this conference) highlighted the importance of the use of adaptive management, and the organisational challenge of adaptiveness within bureaucratic structures. For adaptive management to be possible, it needs to be enabled by adaptive governance. Our knowledge in relation to bushfire management is incomplete; there is limited data on which sound decisions can be confidently made. We need new approaches to making decisions where we don't need to pretend to know the answers. The complexity and uncertainty cannot be addressed through the traditional fragmented disciplinary, legislative, departmental approach to governance.

Issues discussed at the Grose Valley forum highlighted the urgent need to look explicitly at the institutional and human barriers to more adaptive bushfire management, and the need for more effective integration of science into decision-making. An annual review of the action plan needs to include explicit attention to the broader policy and organisational processes. In this era of climate change, conflict over bushfire management can only be expected to increase. The Grose Valley Fire Forum raises broader issues relating to governance and knowledge transfer. We need to get better at meaningful transfer of knowledge between domains (scientific, indigenous, local community, land managers and politicians) and the Grose Valley Fire Forum will have been a success if it can mobilise knowledge transfer in relation to bushfire in a heating world.

For the full report and action plan go to www.bmwhi.org.au

Disclaimer: this paper does not necessarily reflect the views of the Blue Mountains World Heritage Institute