

# The 2006/07 Victorian Great Divide Fires: Building improvement through grounded theory

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## ABSTRACT

Grounded theory as proposed by Strauss and Corbin<sup>1</sup> offers fire management personnel the opportunity to reflect on their experience, perceptions and feelings within the social context of a fireground. The Victorian regional Debrief process 2006/07 provided a forum of reflection for Country Fire Authority (CFA) and Department of Sustainability and Environment (DSE) personnel in East Port Phillip, North West, North East, South West East, South Far West and Gippsland regions. This year's regional Debrief process was developed from historical and experiential data gathered from the local level and 2005/06 debrief data. 6 themes were developed as a framework for grounding people in their fire management experience.

The themes constructed were:

- 1) Information flow to the community
- 2) Fire-ground command
- 3) Coordination (with other agencies and upwards)
- 4) Logistics
- 5) Communications
- 6) Planning

This framework enabled participants to revisit their fireground experience and reflect on the progress of action items which emerged from previous fire seasons by exploring what's working well, what needs improvement and what needs to be put in place between fire season 2007/08. This reflexive approach to debriefing meant people's fire management experience provided the context from which the insights were thematically coded for improvement. An independent facilitator challenged participants at the individual and group levels. At the individual level, participants focussed on action items that they needed to carry forward from the session. At the group level, participants developed an action plan to identify gaps in practice that need to be filled. A key learning has been the importance of a structured process to ensure that individual diversity of experience coupled with action items for next years fire season are recorded and followed through for implementation at local, regional and state levels. This process has ensured that the action items developed remain true to the fireground experience of debrief participants. The grounded approach has proved a valuable social scientific tool for involving people at all levels in an improvement process.

## Key Words

Social science; research methods; debrief process; improvement; fire management.

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<sup>1</sup> AL Strauss & JM Corbin (1997). Grounded Theory in Practice, Sage Publications.

## **Introduction**

The 2006/07 Victorian wildfires were the longest in State's recorded fire history. The early onset of fires on August 16 was as unprecedented as it was atypical. The fires eventually joined to create what has become known as the Great Divide Complex Fires which burnt c. 1.2 million hectares. There were also a multitude of other fires (Tawonga Gap burned 33,500 hectares, Tatong burned 33,000 hectares) which had the potential for greater loss and damage.

The Great Divide fires lasted 69 days with thousands of community volunteers and career emergency service personnel across state, regional and community levels working in partnership to ensure that the fires were eventually brought under control (for further discussion see: Smith, 2007). A further component to the response was the support and assistance from New Zealand, US, Canadian and interstate colleagues.

The major Victorian fires of 2006/07 have impacted on many peoples lives from social, economic and environmental standpoints. The losses were not as significant as they may have been though homes, commercial property, stock, crops and natural assets have been affected.

Despite the protracted nature of the fire season, it is generally accepted that the losses were not as significant as they might have been (see Chief Officer's response to the Reviews of Major Fires 2006/07 in Smith 2007). After the conclusion of the fires, and in line with due diligence and sound practice, CFA and DSE jointly commenced a far reaching review process underpinned by a coordinated series of debriefs, operations analyses and investigations of accidents.

### **Great Divide Complex Fires: Another major emergency**

The turn of the decade has been marked by prominent national and international naturally occurring incidents such as:

- 2002 – 2003 Victorian Bushfires;
- 26 December 2004, Indian Ocean Tsunami;
- August 2005, Hurricane Katrina;
- 2006 US Mega Fires;
- 2007 Greek wildfires.

These incidents have created new challenges for emergency service organisations. Policy makers and operational emergency service personnel continue to develop and implement strategies to protect community safety.

Similarly, The Great Divide Complex Fire 2006/07 in Victoria was an emergency on a very large scale. The fires lasted 69 days with thousands of community volunteers and career emergency service personnel across state, regional and district levels working in partnership to ensure that the fires were eventually brought under control.

Commentaries suggest that the major fires in Victoria 2006/07 could become the norm. Climate change, drought and Victoria's naturally occurring severe fire weather means emergency service personnel and volunteers will need to operate under increasingly challenging conditions (see for example: Smith, 2007). If as predicted, fire seasons become more protracted fatigue is likely to increase with more demands being put on all personnel involved in campaign fires. The future of debriefing must continue to be relevant to the specifics of the fire season. People's experience will need to be incorporated into any learning outcomes initiated from review of fire operations. This paper

proposes the value of grounded theory as *one* methodology for ensuring that the debriefing process remains relevant, apt and appropriate into the future.

### **Debriefing in an operational review context**

Emergency service workers operate in what Brown and Eisenhardt (1997) refer to as a high velocity change environment. High velocity change environments create significant challenges for organisational capacity and capability. As a result, emergency service and fire response personnel, need to make decisions under conditions which are constantly changing. Wildfires such as those in Victoria 2006/07, pose a threat to natural and private assets, require an ongoing response effort which can last months. Paradoxically these events are becoming more frequent when more resources are being invested in firefighting capacity, fire risk management, community fire awareness and joint agency coordination. Furthermore, there have been numerous inquiries, with multiple recommendations for improvement (see for example Esplin inquiry: 2003). Despite significant investment in wildfire preparedness and planning a protracted campaign impacts on the people involved in the suppression effort.

The aim of the Great Divide Complex Fire debriefing process was twofold:

- to recognise and deal with the personal impact of involvement in fires; and
- continuously improve the joint organisation's fire-fighting capacity.

Good practice and due diligence demand that a debriefing process follows fire incidents involving CFA and DSE. Senge (1990) states that 'localness' from knowledge closest to organisational issues, (regardless of formal position or group membership) offers the best opportunities for resolution.

The 2005/06 and 2006/07 (see for example: Smith, 2006 & 2007) fire seasons demanded a suppression effort that was complex, lengthy and diverse in terms of the resources and personnel involved. This was reflected in the scope of the associated debrief process.

### **Debriefing: Principles and methodology**

The 2006/07 debrief process engendered six major debriefs for a single complex of fires. The process was guided by the principles outlined in the DSE's **Fire Management Manual 9.1: Recovery (n.d.)**. The principles recognise the importance of:

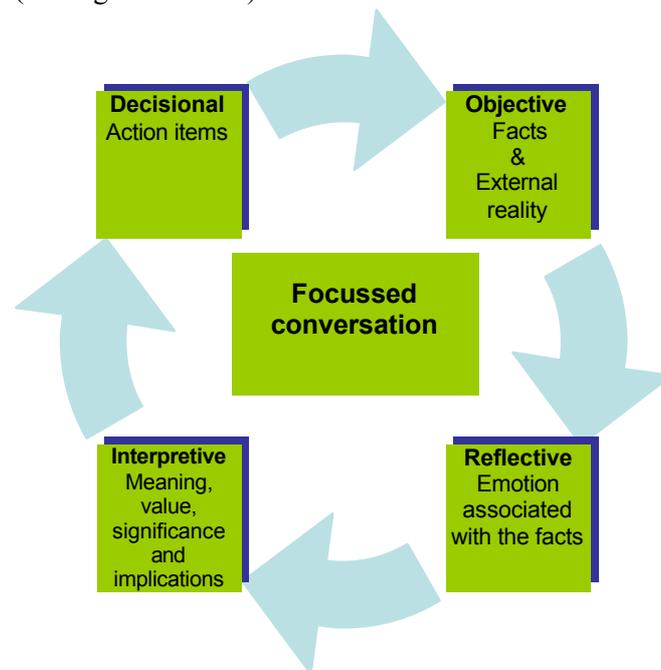
- commitment to structured reflection to defuse and capture learning and acknowledge successes;
- creation of an environment where confidentiality is paramount, so that personal issues raised stay within the confines of the debriefing;
- recognising the work effort of all involved in the fire suppression event;
- understanding the importance of individual recovery;
- input from all involved and or affected by the fire incident;
- clear focus on issues, not individuals involved;
- facilitation of open discussions, allowing for constructive criticism and proposal of possible solutions;
- systematic recording of issues, suggestions and recommendations arising from each debrief;
- appropriate system for the objective analysis of data, to ascertain the critical issues, identify improvements and initiate positive changes;
- maintaining a positive approach by summarising the main issues and listing future actions to improve performance building on the experiences of the incident.

In essence, a debrief process is generally motivated by:

- the need to gather information to improve performance; and
- a psychological need to talk through a significant incident (see for example: Gray, 2007, for further discussion).

## Great Divide Complex Fires 2006/07: The Debrief process

This years debrief process was underpinned by focused conversation techniques often referred to as **Objective, Reflective, Interpretative and Decisional** methods (Stanfield, 2000). Such methods provide participants with a structured process to reflect on their experience. An external facilitator was employed to ensure that the process was independent and that people were given the opportunity debrief. This created an environment to help ground participants in their individual fire experience. Focused conversation methods provide for a process cycle of reflection which demands that people consider the facts while relaying their personal feelings before moving to key decisions and actions to underpin improvement (see Figure 1 below).



**Figure 1:** Focussed conversation process cycle

Each debrief session began with participants defining the key challenges. An independent facilitator brought each group through the process cycle associated with focussed conversation. This grounded people in their own individual fire experience, before enabling people to reflect as a group to capture the key issues which needed to be addressed. Grounded theory enables people to reflect on their feelings, attitudes and perceptions relating to an experience within a social context. The major fires in Victoria 2006/07 provided the specific context from which the issues for action emerged.

Each of the issues from the 6 regional debriefs were coded under six themes. Strauss and Corbin (1997) have stressed the importance of allowing the collected data to inform the key themes under investigation. The issues were classified under six themes which first emerged from the 2005/06 major fires in Victoria. The themes were subtly altered to reflect the nature of the major fires of 2006/07. The six themes were:

1. Information flow to the community
2. Fire-ground command
3. Coordination (with other agencies and upwards)
4. Logistics

5. Communications
6. Planning

The focussed conversation method underpinned by grounded theory was used across the six regions. Such a process provided a forum for shared learning within each region. Hussey and Hussey (1997) stress the importance of a sound methodology to ensure that any data collected is valid and reliable. An important part of the process was enabling the participants within the regional debrief to take responsibility for developing action items. This meant that action items were grounded in the situational fire context from which they emerged.

The action items were coded within a detailed transcript of each regional debrief and presented back to the fire managers (DSE) and regional managers (CFA) to disseminate to debrief participants. Grounded theory stresses the importance of adopting an approach which enables participants to revisit the data. This information also sat at the empirical core of the report of the **Key Issues Identified from Operational Reviews of Major Fires in Victoria 2006/07**.

### **Building improvement through grounded theory**

The focussed conversation method underpinned by grounded theory yielded data which remained true to the regional participant's experience. Grounded theory stresses the importance of participant reflection on the process and data (Strauss et al., 1997). The second stage of the process involved appointing theme owners to work through the data. These theme owners were selected from the regional debriefs and management from within both DSE and CFA. Each theme group was required to input data into a project on a page template. This required the theme owners to work with a dedicated group to code the raw data which emerged from the regional debriefing process. This enabled the theme owners to structure the data and elucidate the key learnings for the 2007/08 fire season.

A further component of building improvement was the joint CFA and DSA annual workshop which required each of the theme owners to present on the progress of projects. A process such as the focussed conversation method coupled with grounded theory provided a useful medium for collecting collating and analysing the data that emerged from the regional debriefing process. The theme owners currently provide progress reports to the CFA-DSE Partnership Development Group.

### **Conclusion**

From an organisational standpoint, the focussed conversation method was a key process which helped people reflect on their experience of the major fires in Victoria 2006/07. This process may also be used to as a tool to facilitate learning in other contexts within DSE and CFA which require an improvement outcome.

A key learning from this year's process been the importance of a structured process to ensure that individual diversity of experience coupled with action items for next years fire season are recorded and followed through for implementation at local, regional and state levels. However, the challenge still remains to ensure that all action items are completed before the beginning of fire season 2007/08. There are contrasting needs across each of these levels.

The process has resulted in what Argyris & Schon (1978) refer to as *single loop learning*. Single loop learning occurs when organisations make incremental adjustments to processes and practices. In some instances the debrief process provides the basis for longer term *double loop learning* which involves the reframing of how the organisations of DSE and CFA coordinate their response to major fires. A strong outcome from this years debrief process was the progression from '*joint operations*' to '*integrated operations*'.

From a social scientific standpoint, the focussed conversation method coupled with grounded theory has improved the validity and reliability of the regional debrief data collection. Furthermore, the

general process has been mapped which enables the project owners to evaluate the how the process can be amended to better serve the needs of both organisations across state, regional and district levels in the future (see Appendix 1 for process map). Checkland & Scholes (1999) have suggested that organisations need to map their process before improvement can begin. The debrief process is an integral part of the learning process in both DSE and CFA. Hence, it needs to be clinically examined for improvement opportunities on annual basis.

In his opening statement of the report **Key Issues Identified from Operational Reviews of Major Fires** Ross Smith (2007, pg. 6) comments:

*'The immediate outlook for the 2007/08 fire season promises no encouragement for any significant improvement to the seasonal conditions that prevailed during 2006/07.'*

With this in mind the role of the debriefing process needs to continue to change to meet the demands of what are likely to become protracted fire seasons.

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## Appendices

Appendix 1: Process map of 2006 / 07 debrief process

