

# How expert bushfire incident managers anticipate worst case scenarios: Seeing the future earlier

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## What are worst case scenarios?

- Low-probability high-consequence events that can be underestimated because they are rare
- Different scenarios to different people - depends on the context and the role being carried out

## Examples of barriers that can interrupt considering or delay acting on worst case scenarios

- Cognitive overload
- Lack of awareness of the big picture
- Personal attitude to risk
- Feelings of failure/helplessness
- Believed implications of 'crying wolf'
- Fear of losing control of incident to 'outsiders'
- Perceived community criticism for scaremongering



## Research methodology

Thirty interviews about a past problematic or challenging incident were conducted with highly experienced decision makers in incident management roles.

## Major Findings

- Majority of experts considered anticipation of worst case scenarios a critical aspect of incident management
- Often a range of scenarios was considered: best case - most likely - worst case
- Scenarios varied with respect to role, responsibilities and past experiences
- Experts often had a number of back up plans to deal with a range of eventualities
- Worst cases helped to keep the big picture in mind
- Challenges to anticipating the worst:
  - Dynamic uncertain conditions
  - Time pressure can influence the quality of options analysis
  - Difficulty of forward planning
  - Focus on 12 or 24 hour timeframes



## What can happen when worst case scenarios are not anticipated?

- The risks of the fire may be underestimated
- Signs that the situation is deteriorating may not be detected
- There may be a lack of planning for extreme events
- This could lead to unacceptable incident outcomes



How do you anticipate if this will develop into this?



<http://www.abc.net.au/news/stories/2006/12/22/1817302.htm>

## Examples of interview quotes

- "There's two major areas of **bad outcomes**... one was the fire breaking out of the park and threatening private property so that was something we looked at each day... and fortunately and **due to good management** we were able to catch it when that break out did occur and the planning and operations were very firmly in place to deal with that **eventuality**."
- "So it's almost like trying to encourage them to think past that next shift... **to think forward**... this is sort of "**what if?**" **scenario based**, where do we think we're going to stop this fire? or where do you think the best chance of pulling it up?"
- "When a fire was as destructive as that and took a run that it did and took out 1000+ hectares in an afternoon, people then want to say well we need to stop it in the shortest possible time so we'll put this control line in here, but you're never going to stop it there, the **time and space** to construct it and establish a break just isn't there and so you should be looking well I've got this, this, this one and this one, **that's worst case scenario** and that's a third of the state..."
- "If you start throwing things in that are a little bit too far out, that's when you sometimes get the glazed look and the question of "are you serious? But that's still a day and a half away." Well yeah, **a day and a half's not very long** because we only going to be here for one part of that, then the other part I'm going to be asleep and then I'm going to be back so it's not very far for me."