Applying Australia's Stay or Go Approach in the U.S. Would it work?

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Introduction

There are a number of similarities between fire management concerns in the United States and Australia. Both countries have large areas with fire dependant ecosystems, a significant wildfire hazard, and an increasing number of houses being built in high fire risk areas. Despite these similarities, there are a number of important differences in how the two countries manage fire including the approach each uses in working with fire threatened communities. The U.S. emphasizes evacuating residents while Australia encourages those who are prepared to stay and defend their properties. (This is described as "Leave Early or Stay and Defend" but for simplicity it will be referenced here as Stay or Go). There has been a growing interest in the United States in exploring alternatives to mass evacuation such as adoption of the Australian model. A singular focus on mass evacuation can be problematic for a number of reasons. Evacuation in the face of rapid fire movement and/or limited egress routes can place lives at more risk than having individuals remain in their community. In addition, an increasing number of homeowners appear to be refusing to evacuate. In these circumstances it is worth considering how to ensure that those who don't want to or can't evacuate safely understand the appropriate response to be able to stay safely. This presentation will assess in what ways circumstances between the two countries are or are not similar enough for adoption of such an approach to be appropriate. It also will touch on differences between "Stay or Go" and "Shelter in Place."

Methods

In the Spring of 2007 ten weeks were spent in Australia working with the Country Fire Authority of Victoria which has one of the oldest and most active programs in working to inform homeowners how they can safely stay and defend their properties. During this time, I met with researchers, managers, volunteer fire fighters and members of the public from the States of Victoria, New South Wales, and Western Australia. I also presented information about findings from research in the U.S. that might be of interest. This laid the base for interesting and interactive discussions. In the process, I gained a broad understanding of the underlying logic and scientific support for the Australian policy, the specific programmatic steps they have been taking to ensure its effective implementation, and some of the remaining challenges. I also gained insight into areas of similarity and difference between the two countries that might affect U.S. adoption of their approach.

Results

First, Shelter in Place (SIP), which as used in reference to wildfire does not seem to have a consistent meaning, is not necessarily the same as the Australian Stay or Go approach- although

the two are often treated as equivalents. SIP is generally described as a fairly passive process where any individuals who stay would simply passively shelter in fire resistant structures. When the passivity of the SIP approach was described to Australians, it was greeted with horror as something that would endanger lives. The Australian process is an active one – if the homeowners aren't well prepared and actively protecting their home before, during (from within the house), and after the fire front passes through, they shouldn't stay.

An institutional difference that may play a role is the fire management agency structure. In the U.S., wildland fire management is primarily handled by five federal agencies, all of which are responsible for some aspect of land management. By default these land management agencies have often become responsible for protecting structures from wildland fires. In Australia, land management and fire management are by and large handled by separate agencies at the State level. While the land management agencies are responsible for fire management on their lands, the responsibility of protecting houses – whether from a structural fire or from a bushfire — resides in a separate agency which operates primarily from an emergency management perspective.

Other potential differences that would need to be considered in determining appropriateness of adoption can be broken into two general categories: fire behavior and human behavior. In terms of fire behavior, differences in vegetation type and housing and construction patterns that could affect house ignition and safety of staying would need to be considered. One Australian researcher who looks at these issues indicated that although vegetation differences should not be overlooked, the more important of the two variables were differences in housing and development patterns. For instance, in Australia, metals roofs have long been a standard and preferred construction practice; whereas metal roofs are not as prevalent in the U.S. where, until recently, wood shingle roofs have been popular in many fire prone areas. In terms of human behavior, having individuals stay and protect their property requires clear understanding of fire dynamics and the significant physical and psychological resources that are required of individuals who stay. Australia has developed and laid the groundwork for its approach over more than two decades. Their outreach work is quite clear about two key items – that most houses are lost through ember attack and that radiant heat is the primary cause of death from wildfire. This knowledge is integral to understanding their concept that "People protect houses and houses protect people."

Although a number of differences, such as development patterns and housing construction styles, mean that blanket adoption would likely not be appropriate in the United States, in localized situations the Australia approach could be a viable option. However, even where appropriate in terms of fire behavior and home ignition issues, effective adoption would require that significant resources are directed toward working with the public, both before and during an event, to ensure that individuals and communities are physically and mentally prepared to make the safest decision for their situation when faced with an approaching wildfire. Without a clear understanding of fire dynamics and the physical and psychological requirements of remaining in place, the risk is that individuals may decide to leave at the last minute, the least safe option available.