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Fight or flight: Australian research offers an alternative approach for Europe's growing forest fire hazard.

"Staying and defending your home during a forest fire could be your safest option" according to Professor John Handmer, leader of a research group from [RMIT University](#) investigating community self-sufficiency as part of the Australian [Bushfire Cooperative Research Centre](#).

Although this may not seem like the most sensible option as the smoke and flames roar towards your house, evidence of forest fire related deaths in Australia suggests otherwise.

"As people flee their homes to escape the flames, many are overcome by the heat and smoke. Those who try to escape by car run the risk of crashing, getting stuck or driving into even greater danger!"

Professor Handmer spoke ahead of the [Fourth International Wildfire Conference](#) in Seville, Spain. The conference aims to provide a forum for forest fire management leaders, politicians, professionals, researchers and practitioners from throughout the world to discuss and work on fire issues affecting people, communities, resources and ecosystems.

The timing of the conference is critical, coming as European fire managers seek strategies for dealing with a fire threat made worse by expanding urban areas and the effects of climate change.

"As the frequency and scale of forest fires in Europe continues to increase, the authorities need to look further afield for advice on emergency management and public safety policy" Professor Handmer said, adding that "recent forest fires in Southern Europe have shown that evacuation can be dangerous and costly to lives and property."

"In Australia, we recognise that the potential threat from fire far outweighs the manpower and resources available to fight them. We are looking to the public to be part of a more integrated solution"

Unlike other fire-prone areas of the world, where mandatory evacuations are often carried out during serious forest fires, the Australian fire authorities advise people to decide whether they will stay and defend their properties from bushfires, or leave well in advance of the fire-front. This is known as the 'Prepare, stay and defend or leave early' policy.

"If you are not able to leave the path of the fire well before it arrives, the home appears to provide the best protection from the heat, smoke and flames."

Evidence from Australia shows that the main source of ignition for buildings is not flames but embers blown in by strong winds; occupants should extinguish embers while they shelter from the main fire and tackle small fires in and around the home once the fire-front has passed. Professor Handmer's research also suggests that a combination of fast-moving fires and fire retardant building materials and design results in low risk to the occupants of houses.

"As most southern European dwellings are constructed from brick, concrete and tiles which offer good protection from flames, they make the safest place to be if early evacuation is not possible," he said.

However, Professor Handmer warned that if people are to be given the option to stay and defend their homes they may face some hard choices and frightening situations; "One of the most difficult aspects is making sure people are prepared, both physically and mentally" he said, "without adequate funding and attention in the area of community preparedness it simply wouldn't work."

Nevertheless, Professor Handmer strongly asserts that rather than pouring resources solely into expensive hardware such as water-dumping aircraft to suppress large-scale fires, European fire agencies should prioritise the protection of people and property. "In the United States spending on fire-fighting resources has reached a monumental scale, yet they are having larger and more damaging fires every year. Research, education and resources are needed to enable the European public to protect their own assets while also protecting themselves."

The Bushfire CRC was established in 2003 to improve understanding of the complex social, economic and environmental aspects of bushfires. Its partners include fire and land management agencies across Australia and New Zealand, universities, and government agencies including the CSIRO, Emergency Management Australia and the Australian Bureau of Meteorology.

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