



40 years of fire history in SE France: What's the story?

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MAIN QUESTIONS OR ISSUES THAT YOU ADDRESSED

The Southeast is the part of France the most impacted by wildfires, both in terms of number and burned area. SE France has also the longest fire history recorded (since 1973, regional fire database Prométhée) and the fire issue is expected to worsen with the-going global change, especially in its northern area. So, studying what happened in this part of France during the 42 past years shows how fires varied in space and time.

LOCATION AND ECOSYSTEM INVESTIGATED

Southeastern France has been divided into three regions (from the North to the Southeast) according to socio-environmental variables of each geographical district composing this study area.

KEY FINDINGS OF YOUR RESEARCH

Fire metrics (number of fires and burned area) varied spatially throughout SE France, the southern region (which also the driest and warmest region characterized by high population density) being the most impacted, especially by large fires. Fire metrics also varied temporally with a significant decrease in the number of fires (medium and large size fires) and burned area, especially since 1990, regardless of the region of SE France. This decrease is mostly due to better fire suppression and prevention since the big fires that occurred in 1990 (reinforced after the big fires in 2003). However, this was not always efficient especially when severe fire weather conditions occurred that are expected to worsen in the future. The knowledge of fire causes was poor on average in SE France, the southern region having the poorest with a high proportion of fire due to unknown cause, however, this knowledge greatly improved since 1997. Indeed, teams for the investigation of fire causes were created at that time, in order to pinpoint, as often as possible, the exact ignition source. With this improvement of fire knowledge, a temporal variation of the fire causes was highlighted, except for lightning mainly. Fire causes also varied spatially, fires due to agricultural works being more frequent in the northern part of the area and those to undetermined arson in the southern part of SE France but this latter cause provoked the strongest impact in terms of burned area, regardless of the region.

HOW DID YOU ANSWER THE MAIN QUESTIONS OR INFORM THE ISSUES?

A spatio-temporal variation in fire metrics, knowledge and causes of fires was highlighted in SE France.

HOW MIGHT/WILL IT INFLUENCE FIRE MANAGEMENT DECISIONS OR PRACTICES?

The improvement of the knowledge of fire causes allows a better fire prevention in pinpointing with more accuracy the exact ignition source and/or the arsonist's motivation. Fire suppression and prevention played a large part in the decrease in the number of fires (especially fires of medium and large size) and burned area, regardless of the region but their role was hindered during extreme climatic conditions (i.e., long drought, heat waves and strong wind in 2003).

WHO IS THE MAIN END-USER OF YOUR RESEARCH?

The main user would be the fire and land managers.

CONGRESS SESSION

Case Studies & Lessons Learned

