

# WILDFIRE AND ENVIRONMENTAL PRESSURES ON FOREST ECOSYSTEM SERVICES IN NORTH MACEDONIA AND SERBIA (A REVIEW)

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Forest ecosystems in the Western Balkans face increasing pressure from climate change, wildfires, and landscape transformation. Rising temperatures, prolonged droughts, and lower amounts of precipitation with erratic distribution heighten fire danger. Demographic shifts, particularly rural depopulation, lead to land abandonment and unchecked fuel accumulation, creating conditions for larger, more intense wildfires. These fires severely degrade forests, amplifying climate change impacts and undermining vital ecosystem services in a self-reinforcing cycle. Despite growing concerns, a consolidated, comparative review of wildfire impacts on forest ecosystem services and management in Serbia and North Macedonia is lacking. A 2012 Brussels conference identified these nations as highly vulnerable to climate-induced ecosystem changes, projecting increased wildfire frequency, negative agricultural impacts, and reduced potential for sustainable ecosystem service management. The conference also underscored the complexity of managing interconnected services in fire-affected or climate-altered zones. Recent IPCC assessments confirm these climatic conditions and the concerns they pose for intensified wildfire risk and eroding ecosystem resilience in both countries. This study reviews relevant climate scenarios and wildfire research and national forestry policies in Serbia and North Macedonia. Utilizing the Millennium Ecosystem Assessment (MEA, 2005) and International Classification of Ecosystem Services (FAO, 2019), it explores how wildfires and climate-driven pressures impact forest ecosystem services. It also examines forest management practices supporting ecosystem resilience and service delivery, concluding with a comparative analysis of findings between the two countries.

**Keywords:** Forest protection, Climate Change, Wildfires, Forest management, Ecosystem services