

Literature review of 1 scientific journal article on climactic change

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Literature Review al Affiliation) Literature Review The journal article “ Climatic and human influences on fire regimes in mixed conifer forests in Yosemite National Park, USA” aims at identifying the influence of interannual and interdecadal climate variation and changes in land use on fire regimes in Yosemite National Park, California (Taylor & Scholl, 2012). The article is relevant to phenomenon management since it shows how interannual and interdecadal climatic variation influence fire occurrence and extent thus helping to manage fire regimes. The study relied on mined data about fire frequency, fire return interval, fire extent, and season of fire in a span of 400 years (Taylor & Scholl, 2012). The study adopted superposed epoch analysis, correlation analysis, and contingency analysis to identify the relationships between climate and fire occurrence (Taylor & Scholl, 2012). The study used correlation analysis with a 10-year and 15-year time scale for interdecadal variation and a superposed epoch analysis with seven-year time scale for interannual variation in climate and fire (Taylor & Scholl, 2012). The researchers used autocorrelation functions and auto-regressive moving average models to conduct the study.

The results depict central Sierra Nevada as a fire prone area with 308 fire years identified within 400 years. Interactions among climate patterns defined fire regimes. Euro-American settlement, implementation of fire exclusion policy, and land use change led to a reduction in fire occurrence and extent (Taylor & Scholl, 2012). The study also established a positive fire return interval distribution based on land use period (Taylor & Scholl, 2012). Interannual variation correlated with variation in instrumental climate indices while climate variation influenced fire extent at interdecadal time scales

(Taylor & Scholl, 2012). Apparently, the authors answered the hypothesis since they showed how interannual and interdecadal climate variation and land use changes influenced fire occurrence and extent. There is further analysis on how future climatic changes will influence fire regimes in central Sierra Nevada. Interestingly, the authors show how climatic changes and land use influence fire regimes thus introducing other potential factors that can define forest development.

Reference

Taylor, A. H., & Scholl, A. E. (2012). Climatic and human influences on fire regimes in mixed conifer forests in Yosemite National Park, USA. *Forest Ecology and Management*, 267, 144-156.