

Ecosystem Post-Wildfires Effects of Thasos Island

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Abstract : Fires are one of the main types of disturbances that shape ecosystems in the Mediterranean region. However nowadays, climate alterations towards higher temperature regimes results on the increased levels of the intensity, frequency and the spread of fires inducing obstacles for the natural regeneration. Thasos Island is one of the Greek islands that have experienced those problems. Since 1984, a series of wildfires led to the reduction of forest cover from 61.6% to almost 20%. The negative impacts were devastating in many different aspects for the island. The absence of plant cover, post-wildfire precipitation and steep slopes were the major factors that induced severe soil erosion and intense flooding events. That also resulted to serious economic problems to the local communities and the ability of the burnt areas to regenerate naturally. Despite the substantial amount of published work regarding Thasos wildfires, there is no information related to post-wildfire effects on the hydrology and soil erosion. More research related to post-fire effects should help to an overall assessment of the negative impacts of wildfires on land degradation through processes such as soil erosion and flooding.

Keywords : erosion, land degradation, Mediterranean islands, regeneration, Thasos, wildfires

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