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## Investigating woody species resprouting in response to fire

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Fire is a major disturbance in natural ecosystems and more extreme fires are predicted to occur in the future. Plant species can survive or resist wildfires and adapt to fire-prone regimes by exhibiting fire-related plant traits such as serotiny and heat-simulated germination. Resprouting is one of the most common plant traits that confer resilience to fire, promoting rapid post-fire recovery and affecting ecosystem dynamics. We investigated the relationships between the abundance of resprouting woody species, fire return interval and fire intensity in three regions: Europe, Australia and South and Central America. Species abundance data were obtained from the SplotOpen database while resprouting information are derived from regional and global databases, field information and the literature. Fire return time and fire intensity at each site were estimated using remotely sensed observations (MODIS MCD64CMQ, MODIS MCD14ML and Fire Atlas). We show that the abundance of resprouting woody species decreases with increasing fire return interval but that resprouters are most abundant at intermediate levels of fire intensity. These patterns are seen in all the three regions. Given that the abundance of resprouting woody species is strongly related to the fire regime, it should be possible to model their distribution in an optimality framework. Since the abundance of resprouters will affect ecosystem post-fire recovery, it is important to include this trait in fire-enabled vegetation models in order to simulate ecosystem dynamics adequately.