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Summary

The effects of vegetation fires on biological systems are complex, interactive and occur over a range of spatial, temporal and biological scales. To understand these effects it is useful to adopt the theoretical approach of 'ecological stoichiometry', which is focused on how the balance of energy and multiple elements in biological and ecological systems affects the properties of organisms and ecosystems. Frequent fire may alter the stoichiometry of ecosystems by increasing light intensity and soil phosphorus concentrations, and by reducing moisture availability and soil carbon and nitrogen concentrations. These stoichiometric shifts may influence the responses of organisms, ecosystems and landscapes to fire.

Research Expertise

- Fire ecology
- Soil chemistry and biology
- Ecological stoichiometry
- Biogeochemical cycling