Dry, warm forests may still be sensitive to warming that exacerbates periodic drought. Large areas burned in conjunction with recent drought and warming in mountain forests of the southwestern United States (Williams et al. 2010) show that the largest fires there coincided with reduced precipitation, higher temperatures and earlier spring snowmelt (Westerling et al. 2006). Land use and fire suppression in southwestern forests also led to fuel accumulation and changes in fuel structure. The interaction of fuel changes with climate change and variability likely contributed to increased fire frequency and fire severity, but the relative importance of these causes is not known (Williams et al. 2010). Recent severe drought could convert large portions (>50%) of southwestern U.S. forests to non-forest vegetation due to fire, beetles and other climate-related factors (Daniau et al. 2010), substantially altering fire regimes.

As in higher latitude forests, drought-driven increases in fire flammability drive increased fire in tropical forests. However, short-term reductions in precipitation, rather than elevated temperatures, are the dominant influence on wildfire in tropical forests due to their higher temperatures (Goldammer and Price 1998). While on average increased aridity is projected for Amazon, Mexico and Congo forests across many climate models, the greater uncertainty associated with projected patterns of precipitation make future fire predictions in these tropical forests more uncertain as well.

Diverse forests in many regions of the globe have the potential for increased fire in the coming decades due to changes in temperature, precipitation or both. Changes in climate and disturbance may substantially alter vegetation in ways that feed back to or limit changes in forest wildfire.

**Selected references**

- Dai A (2010) A quantitative index of global fire based on discontinuous sedimentary charcoal records (Goldammer et al. 2008). The use of the past 2 ka as a qualitative index of global fire based on discontinuous sedimentary charcoal records (Daniau et al., unpublished data). The use of the past 2 ka as a qualitative index of global fire based on discontinuous sedimentary charcoal records (Camill et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) is a global composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data) as a composite of 30 sedimentary charcoal records (Daniau et al., unpublished data) and that for the past 20 ka as a global composite of 400 sedimentary charcoal records (Camill et al., unpublished data).