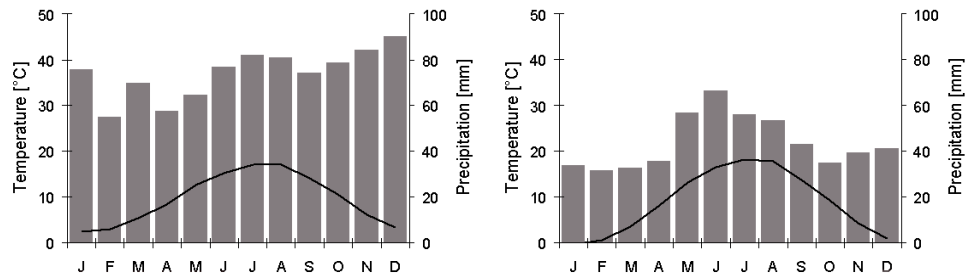
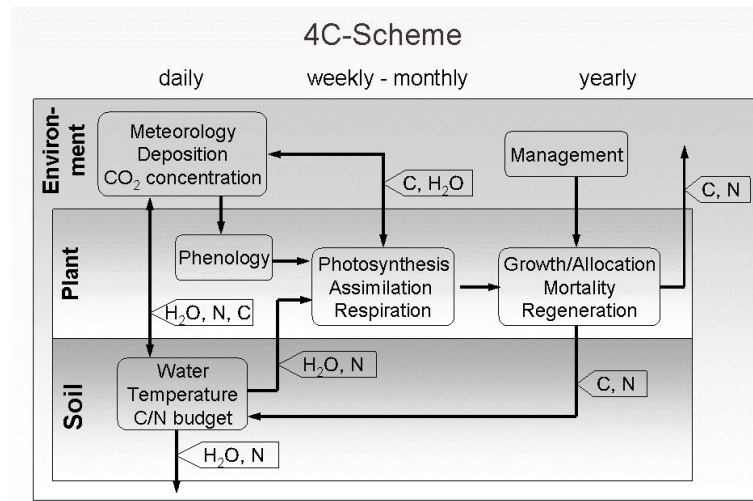


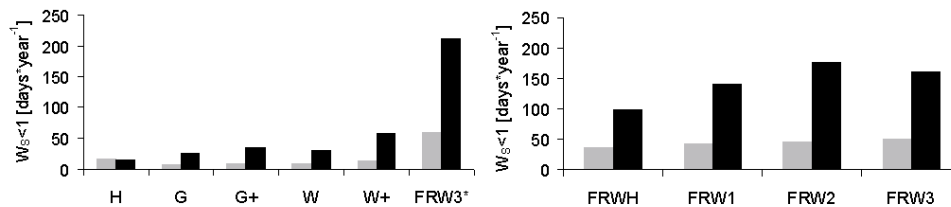
# **Online Material**



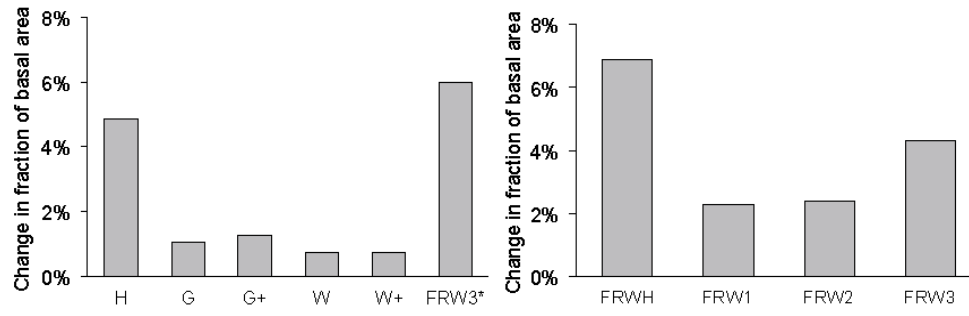
**Figure S1.** Climate diagrams for the Speulderbos (NL) (left) and Freienwalde (GER) (right). The bars represent monthly mean precipitation and the lines monthly mean temperature for the period 1958–2002.



**Figure S2.** Scheme of the 4C model adapted from Kint et al. (2009). Further model description in Section 2.2.



**Figure S3.** Mean annual number of days where tree water demand exceeds soil water supply for the Speulderbos (left) and Freienwalde (right). Black bars for Douglas-fir and grey bars for beech. The scenario realisation codes are explained in Table III.



**Figure S4.** Change in proportion of basal area covered by beech in relation to the initialised proportion for the Speulderbos (left) and Freienwalde (right).