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Supplement of

Declining ozone exposure of European vegetation under climate change and reduced precursor emissions

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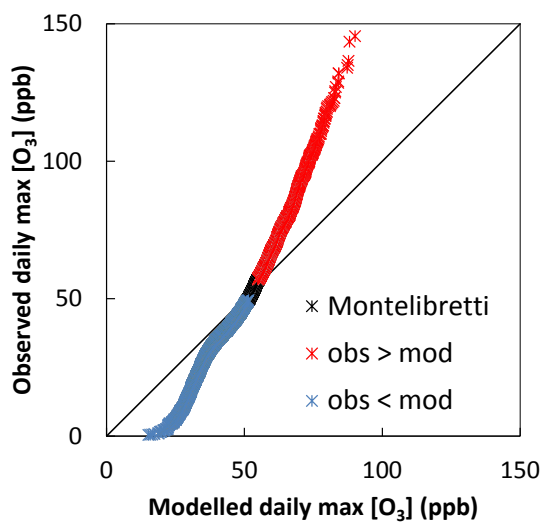
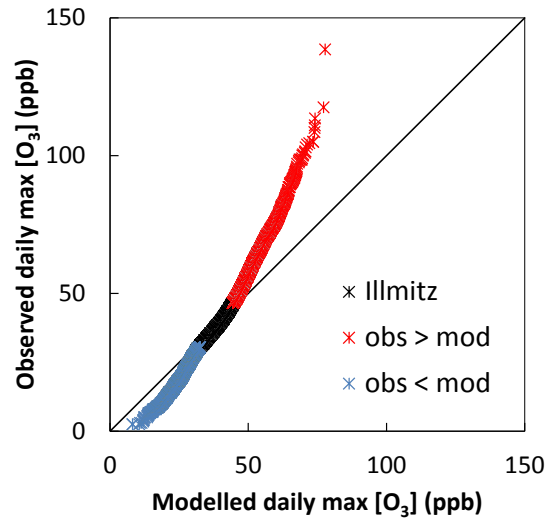
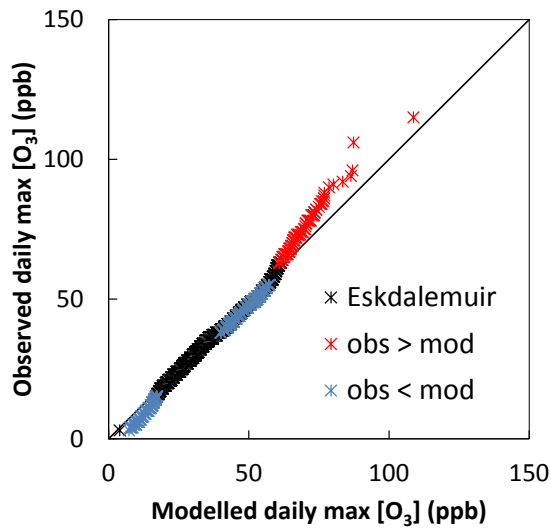
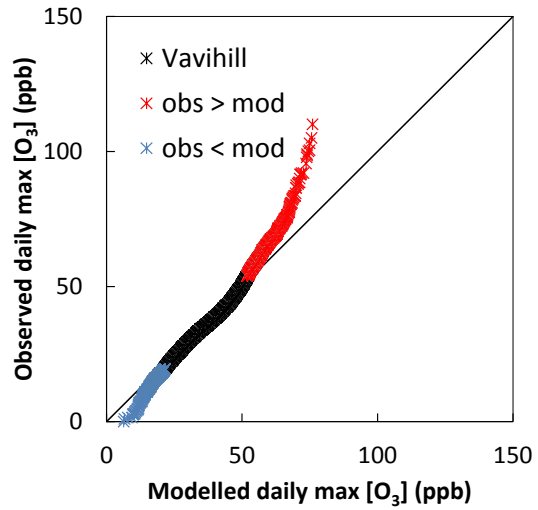
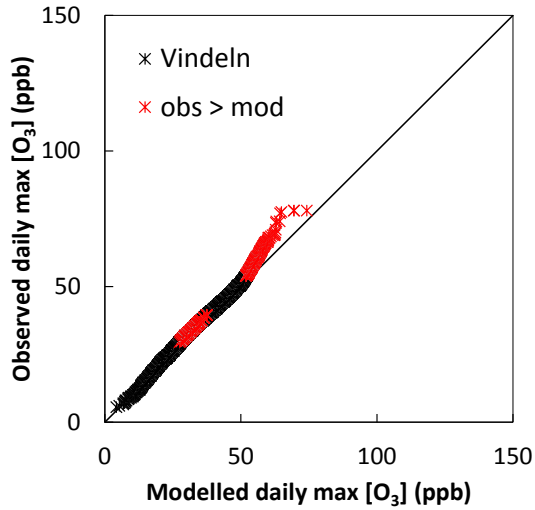


Figure S1. Modelled (3 m above ground) and observed daily maximum ozone concentration (ppb) at five sites in Europe. Red colour: observations more than 2 ppb higher than model, blue colour: observations more than 2 ppb lower than model, black colour: difference between modelled and observations in the range of ± 2 ppb.

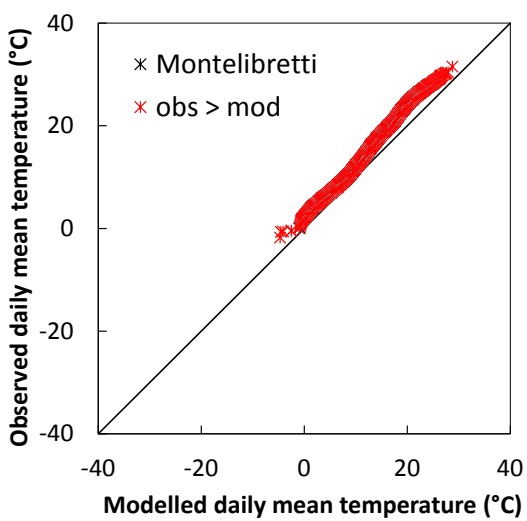
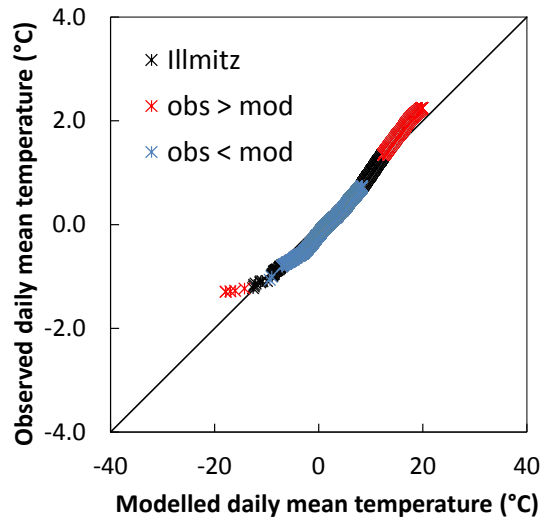
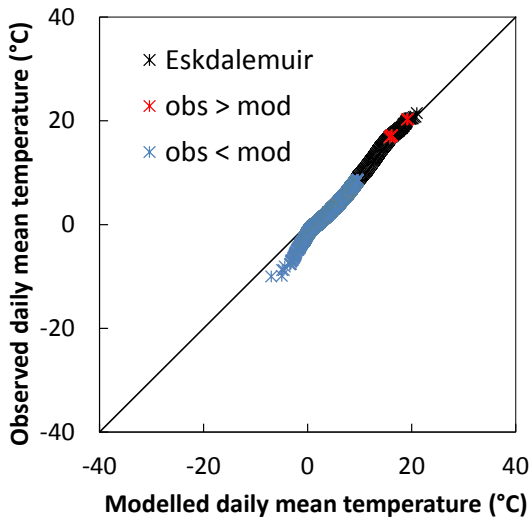
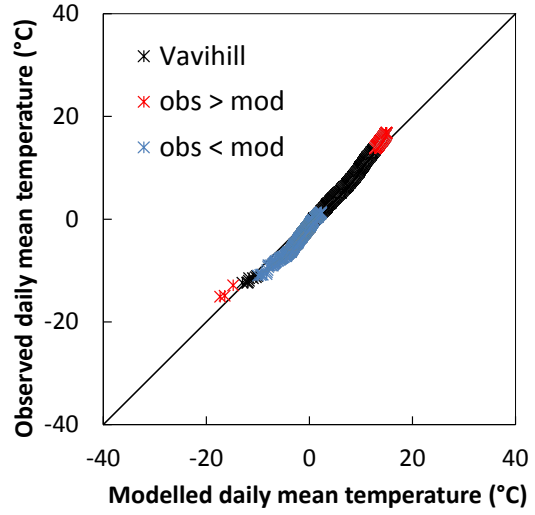
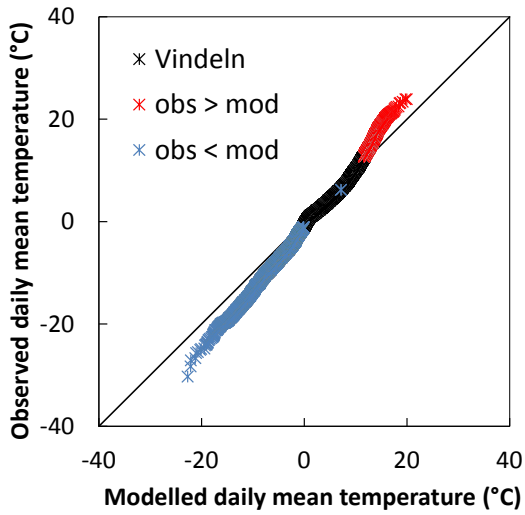


Figure S2. Modelled (2 m above ground) and observed daily mean temperature ($^{\circ}\text{C}$) at five sites in Europe. Red colour: observations more than 1°C higher than model, blue colour: observations more than 1°C lower than model, black colour: difference between model and observations in the range of $\pm 1^{\circ}\text{C}$.

Table S1. Accumulation period and methods used to calculate AOT40 and POD1 in different parts of Europe. For the May-July AOT40 calculation modelled O₃ concentrations representing 3 m above the ground was used. In all other calculations in the table, O₃ concentrations from the lowest model layer (~30 m) were used. Stomatal conductance (g_{sto}) parameterisations are taken from Mapping Manual (CLRTAP, 2011).

	Northern Europe (NE) (Sites: Vindeln and Vavihill)	Atlantic Central Europe (ACE) (Site: Eskdalemuir)	Continental Central Europe (CCE) (Site: Illmitz)	Mediterranean Europe (ME) (Site: Montelibretti)
AOT40	May – July; 8-20 CET	May – July; 8-20 CET	May – July; 8-20 CET	May – July; 8-20 CET
Fixed period	April – September; daylight hours (solar radiation >50 W m ⁻²)	April – September; daylight hours (solar radiation >50 W m ⁻²)	April – September; daylight hours (solar radiation >50 W m ⁻²)	April – September; daylight hours (solar radiation >50 W m ⁻²)
AOT40 Ozone sensitive period	The start (end) was defined as when the daily average temperature exceeds (fall below) 5°C five consecutive days; daylight hours (>50 W m ⁻²)	The start (end) was defined as the first (last) day the daily summed g _{sto} exceeds 30% of the theoretical max. daily summed g _{sto} based on ACE Scots pine parameterisation; daylight hours (>50 W m ⁻²)	The start (end) was defined as the first (last) day the daily summed g _{sto} exceeds 30% of the theoretical max. daily summed g _{sto} based on CCE Norway spruce parameterisation; daylight hours (>50 W m ⁻²)	The start (end) was defined as the first (last) day the daily summed g _{sto} exceeds 30% of the theoretical max. daily summed g _{sto} based on ME Holm oak parameterisation; daylight hours (>50 W m ⁻²)
POD1 Fixed period	The accumulation period based on latitude and altitude; NE Norway spruce parameterisation	The accumulation period based on latitude and altitude; ACE Scots pine parameterisation	The accumulation period based on latitude and altitude; CCE Norway spruce parameterisation	The accumulation period based on latitude and altitude; ME Holm oak parameterisation
POD1 Ozone sensitive period	The start (end) was defined as when the daily average temperature exceeds (fall below) 5°C five consecutive days; NE Norway spruce parameterisation	The start (end) was defined as the first (last) day the daily summed g _{sto} exceeds 30% of the theoretical max. daily summed g _{sto} based on ACE Scots pine parameterisation; daylight hours (>50 W m ⁻²)	The period was assumed to occur when the air temperatures fall within the T _{min} and T _{max} thresholds of the f _{temp} relationship, in line with the parameterisation used; CCE Norway spruce parameterisation	Year round growing season with a fixed period of reduction in g _{sto} during summer when soil water deficits are commonly high, in line with the parameterisation used; ME Holm oak parameterisation