

Trends in wildfire burn severity across Canada, 1985 to 2015

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Supplementary Material 7

SM7. Results at the pixel level.

Several studies report dNBR information at the pixel level. We have therefore produced similar analyses but only with the coniferous subset to control for crown closure and species composition and over Canada.

SM 7a. Seasonal trends in burn severity

A significant quadratic trend is observed between julian date of ignition and dNBR for the coniferous subset (fig. S7.1) showing a trend similar to that observed with the $dNBR_{event}$ (Figure 4B).

SM 7b. Burn severity and increasing annual area burned

No significant trend were observed between dNBR and the annual area burned (Fig. S7.2). This results is similar to the analysis done at the event level (Fig. 6B).

SM 7 c. Burn severity over time

No significant trend was observed with dNBR over time (fig. S7.3). Again this results is similar to the analysis done at the event level (figure 7B).

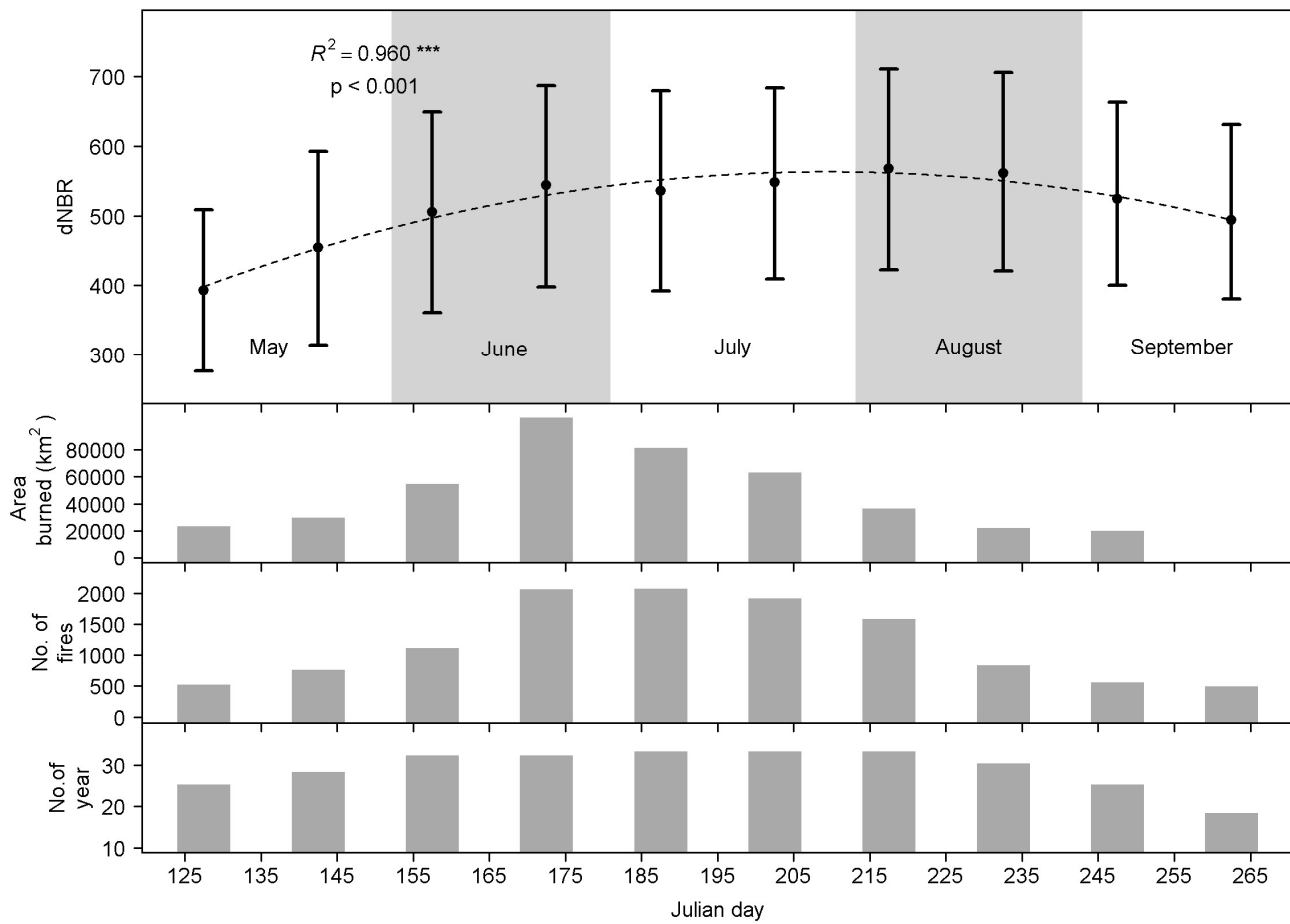


Figure S7.1. Quartiles of bi-weekly ignition dates of $dNBR_{\text{pixel}}$ of all fire events $>1\text{ha}$ from May to September for the coniferous subset. Only periods with more than 5 events totalling at least 1000 pixels were included. Histograms of annual area burned, number of fire events and number of years are presented as an indication of event representation in each period. R^2 and p are reported for the regression on the median values.

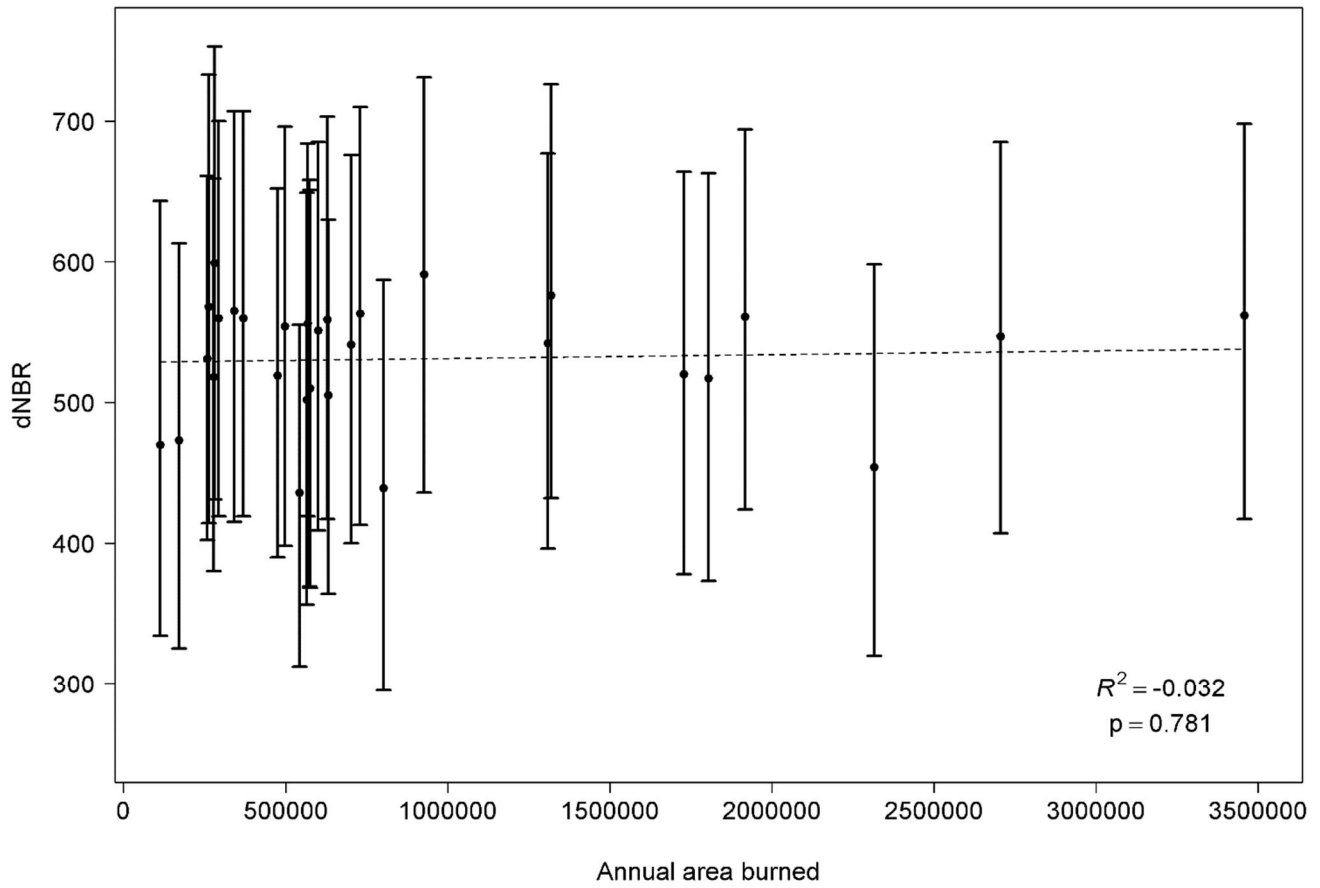


Figure S7.2. Quartiles of annual $dNBR_{\text{pixel}}$ as a function of annual area burned between 1985 and 2015 for the subset. R^2 and p are reported for the regression of the median $dNBR_{\text{pixel}}$ values against annual area burned. Note that a negative R^2 indicates that the model fit is worse than a horizontal line (i.e. using the mean).

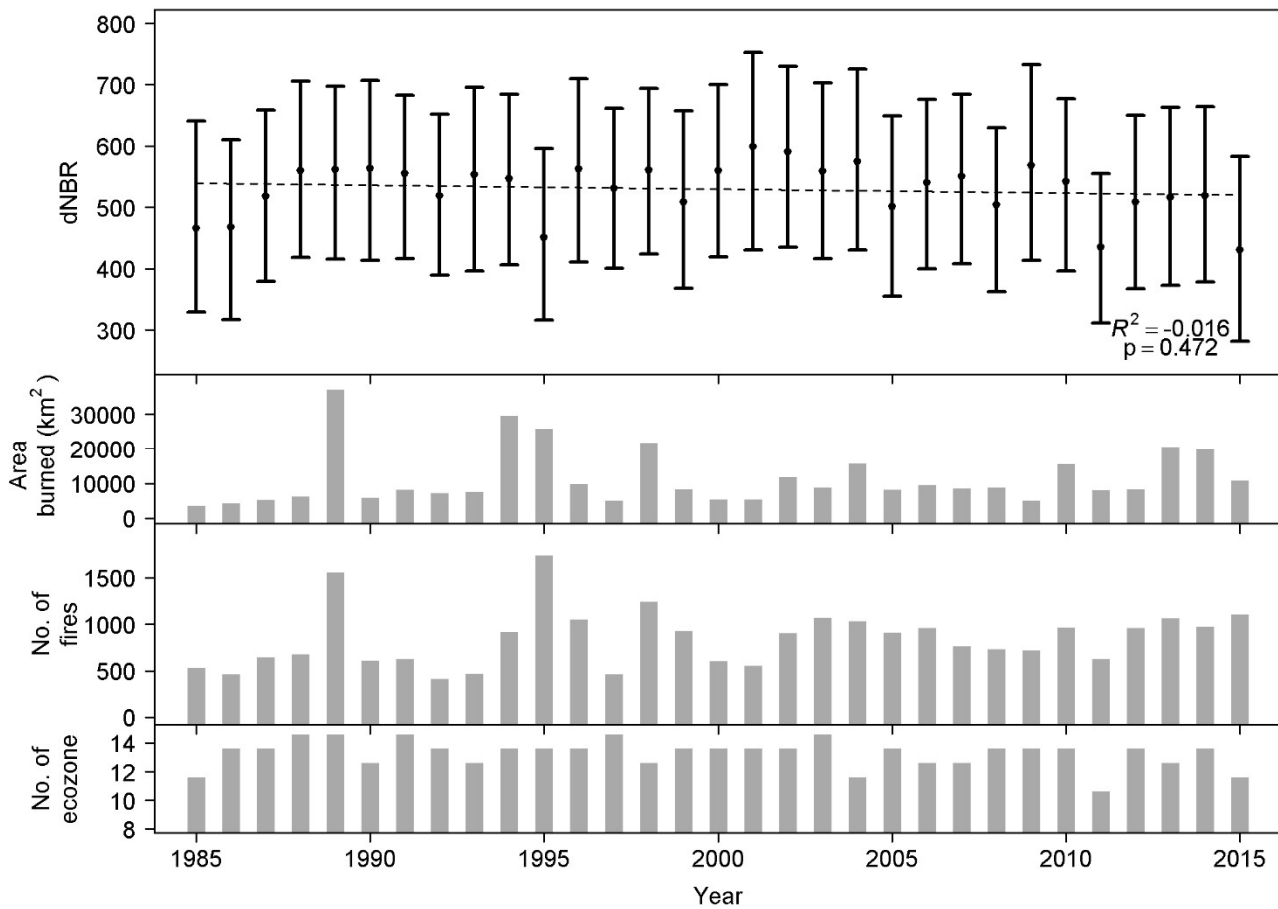


Figure S7.3. Quartiles of annual $dNBR_{\text{pixel}}$ between 1985 and 2015 (fire events > 1 ha) for the coniferous data set. Histograms of annual area burned, number of fire events and number of ecozones are presented as an indication of event representation in each year. R^2 and p are for the regression of the median $dNBR_{\text{pixel}}$ values against time. Note that a negative R^2 indicates that the model fit is worse than a horizontal line (i.e. using the mean).