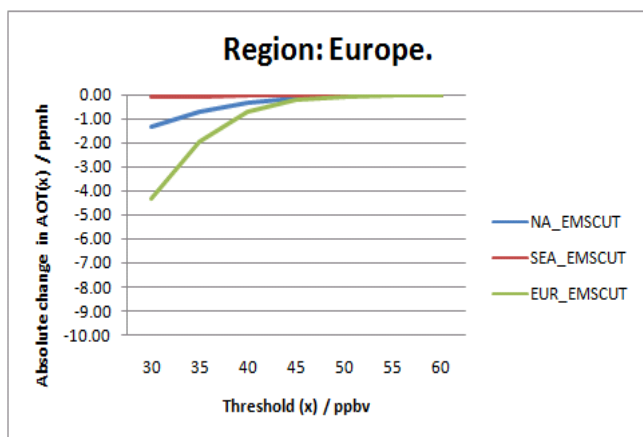
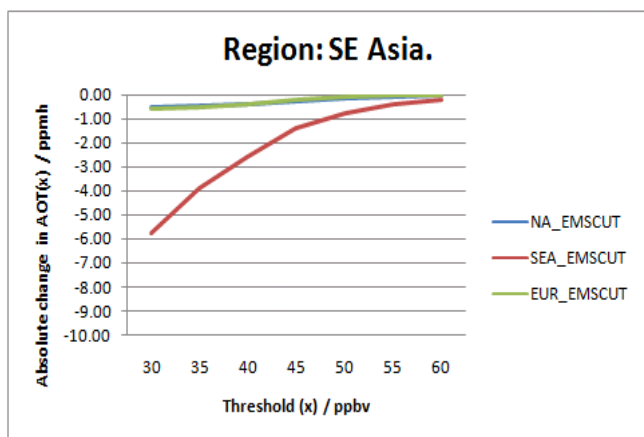
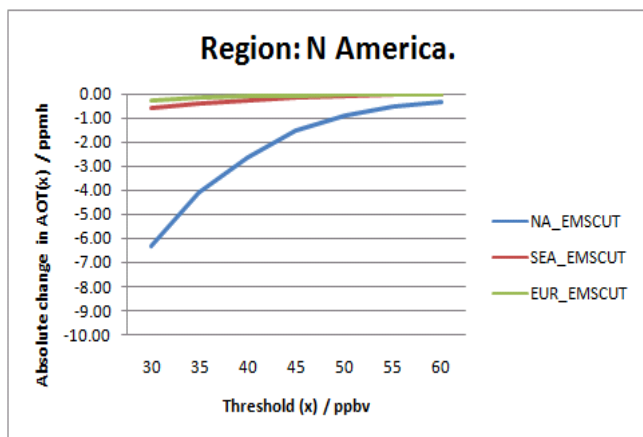
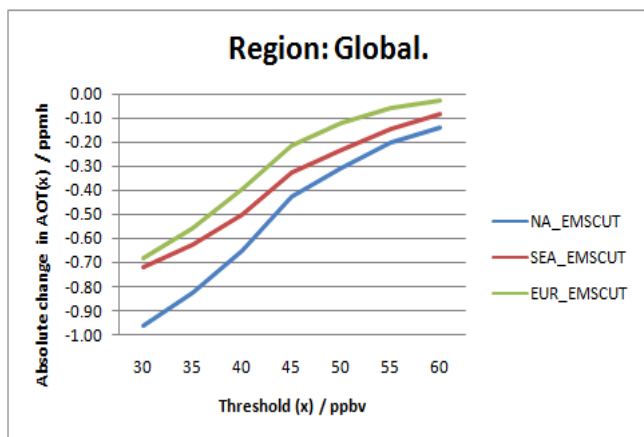


## Supplementary Information 1: Variation of change in AOTx under each emissions scenario with varying threshold (x).



The relative contributions of  $\text{NO}_x$  emissions from each of the receptor regions is also evident when the 40 ppbv threshold is varied. It is demonstrated that the modelled transboundary effects in this study remains the same when the 40ppbv threshold of AOT40 is varied from 30 ppbv to 60ppbv. As shown in the figures above, the transboundary effects observed when the threshold x changes is maintained with N American  $\text{NO}_x$  emissions still producing the largest transboundary impact on AOTx over Europe. At lower threshold values of x it is shown that local emission reductions tend to produce the largest drop in AOTx however as you increase the threshold the relative impact of each emissions cut scenario is less evident. This is because at higher threshold values of x, fewer regions in the globe have hourly ozone concentrations that peak over the higher threshold, hence the magnitude of changes under the emissions cuts is much less pronounced, however the transboundary impacts are still the same as at lower threshold values of x.

# Supplementary Information 2: Crop yield data for the six crops in tons per hectare(ha).

