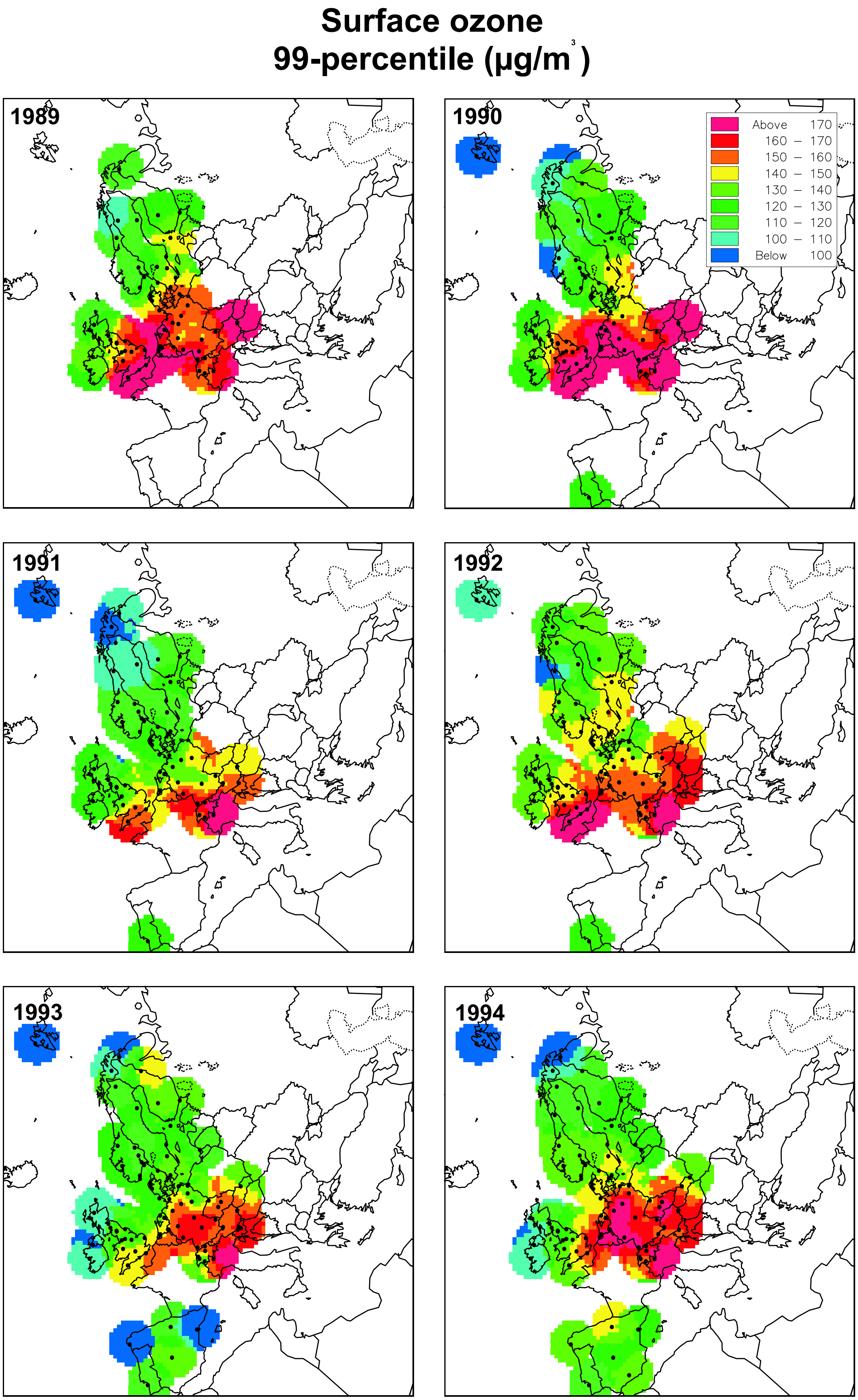

Figure 5.1: Maps of 99th percentiles of hourly ozone values, April-September months, 1989-1994

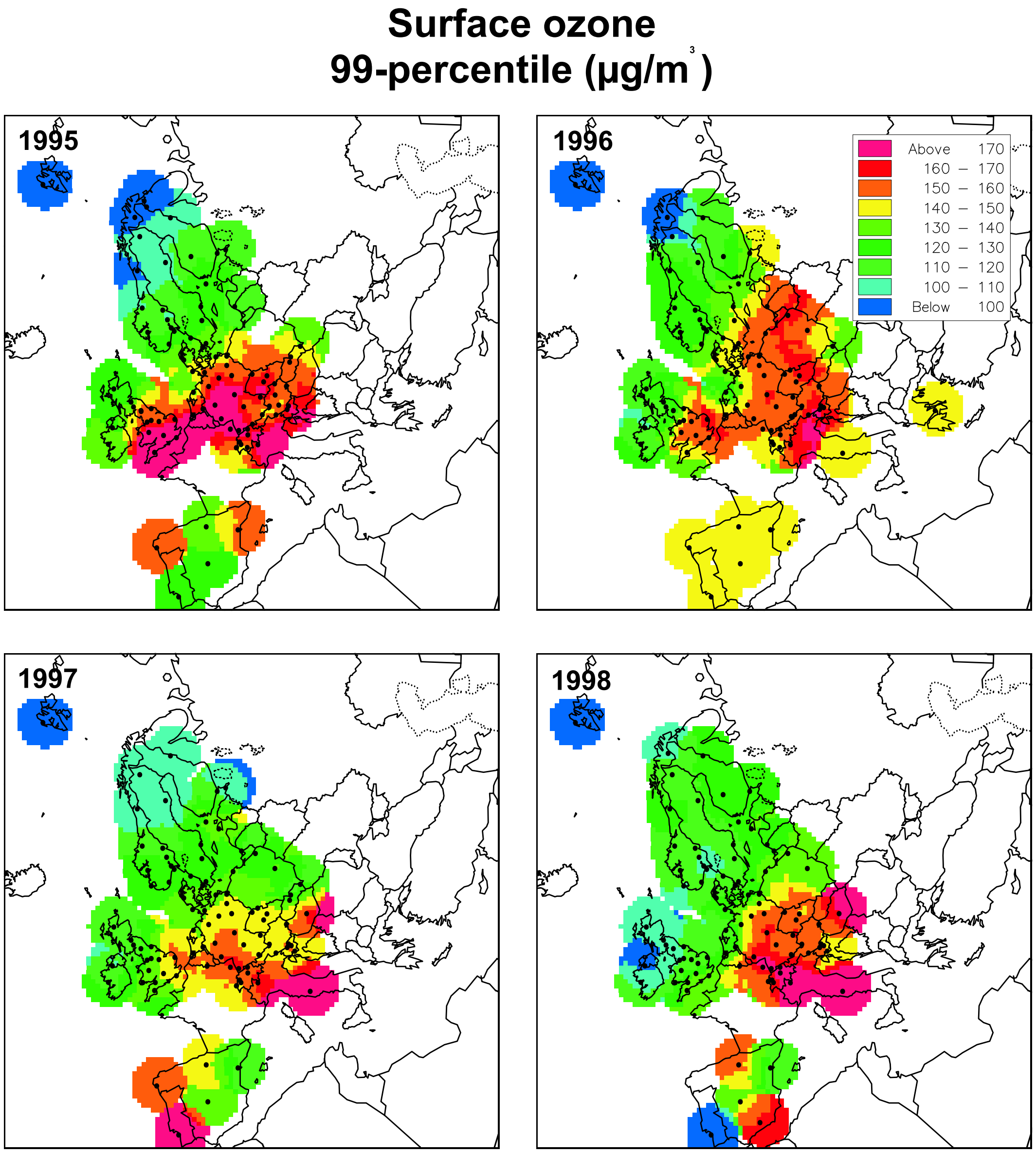

Figure 5.2: Maps of 99th percentiles of hourly ozone values, April-September months, 1995-1998

monitoring procedures reveals that the technical performance is well taken care of, whereas the level of local NOx emissions varies considerably among the monitoring sites.

As already indicated by model calculations, these results show that trend estimates of surface ozone is complicated both by variations induced by the changing meteorological conditions from year to year as well as by local effects at the monitoring sites. It is quite clear that an evaluation of model results and monitoring data in close combination is needed to make a fruitful trend study of ozone. The models could e.g. be used to identify regions where the influence of European emission reductions is the largest compared with the natural (meteorological) variability, and trends evaluations of measurement data could be focused at monitoring sites in these areas. Furthermore, the models could also be used to determine the ozone parameters best suited for detecting trends due to changes in emissions, such as either AOT40, AOT60, 99-percentiles etc.