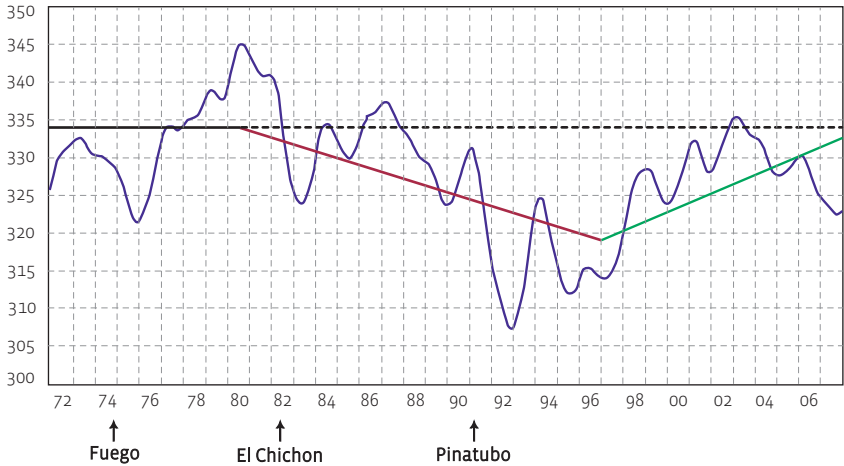




thickness of the ozone layer (DU)



Source: KMI

## Uncertainty about the future changes in the thickness of the ozone layer

The figure shows the changes in the thickness of the ozone layer above Ukkel. The trend can be divided into two periods. Between 1980 and 1996 the thickness of the ozone layer decreased by 0.29 % per year (red line). In the period 1997-2007 we can observe an increase of 0.40 % per year (green line). In recent years (since 2003) a negative trend seems to occur. Given the major uncertainties and large fluctuations that can appear from year to year it is still too soon to draw negative or positive conclusions concerning a possible recovery of the ozone layer.

New scientific research shows that there are interactions with the various aspects of climate change. A temperature increase in the troposphere is accompanied by a temperature drop in the stratosphere, which would increase the efficiency of the ozone-depleting substances. As a result, the recovery of the ozone layer (even with decreasing chlorine and bromine concentrations) could slow down further. Furthermore, there are other additional disturbances, such as volcanic eruptions, which (temporarily) affect the ozone layer. In addition, big differences can occur from one year to the next due to the dynamic activity of the atmosphere (air circulation). A definite answer as to whether the ozone layer is recovering or not can therefore only be given after a few decades.