# Results

We are already beginning to get some important new results from the data gathered by the eBMS. A new Grassland Indicator shows a 39% decline of grassland butterflies since 1990, suggesting a serious decline of grassland habitats. We also have some fascinating examples of species trends across Europe. We are now working on a new suite of indicators that will help us understand the changing fortunes of butterflies across Europe and provide data to improve European policies for protecting the environment.

### *The new Grassland Indicator*

The EU Grassland Butterfly Indicator is one of the indicators of the status of biodiversity in the European Union. It is an abundance indicator based on data recording the population trends of seventeen butterfly species in 16 EU countries. This report presents the seventh version of this indicator now covering 28 years

As part of the ABLE project we have updated the EU Grassland Indicator using data up to 2017. The Indicator is based on trends of 17 grassland species: widespread (7) and specialist species (10). The results show that there has been a **39% decline** of these butterflies since 1990, indicating a serious deterioration of grassland habitats.

In the next year the ABLE project will develop new indicators, including one for woodland, wetland and climate change, and improve on existing methods. You can download the Technical Report of the EU Grassland Butterfly Indicator for more explanations.
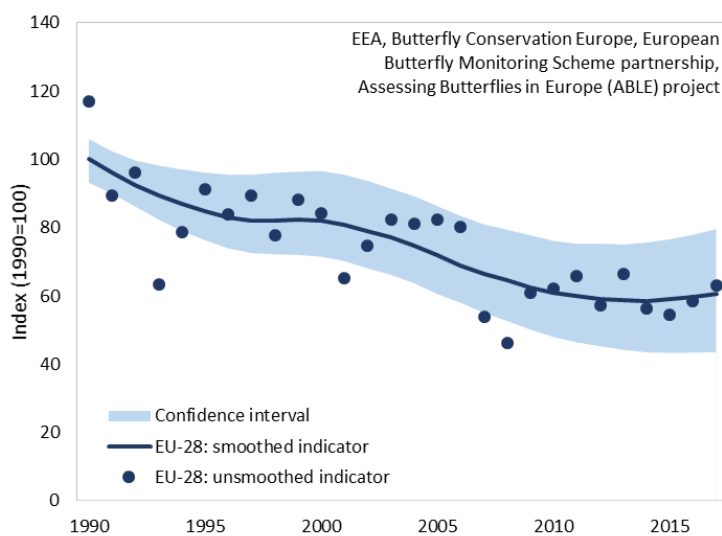
*The Grassland Butterfly Indicator for the EU. The shaded areas represent the 95% confidence limits surrounding the smoothed trend.*

*Cupido minimus butterflies*

## *How are species doing across Europe?*

The eBMS is beginning to provide some fascinating information about species trends. The plots below show a few provisional European trends for some common and widespread species. Note that the plots are on a log scale so some of the trends are quite large given they are over a 17-year period.
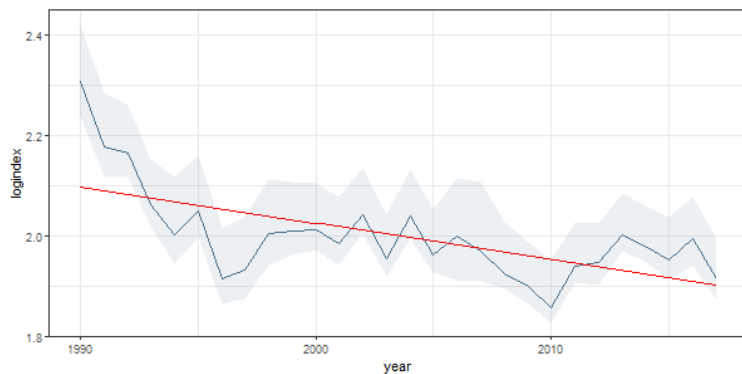
### *Species' trend decreasing*

### *Aglais urticae- Small tortoiseshell*

*Aglais urticae* is declining overall (by 48%) and in every country with long running schemes. The cause is not known but may be related to climate change.
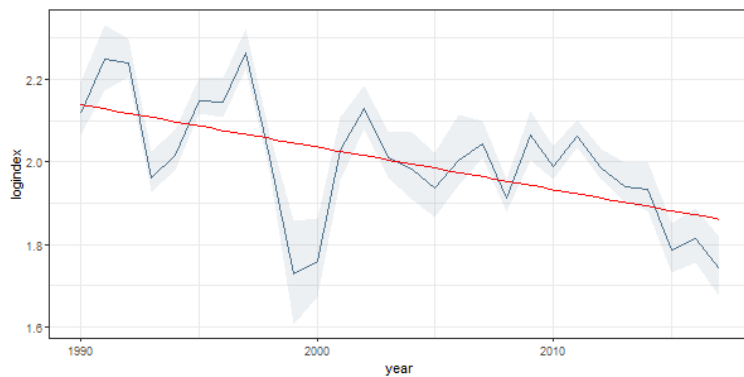


### *Lasiommata megera – Wall Brown*

*Lasiommata megera* is also declining rapidly (by 37%). Recent research into its decline in the Netherlands suggests that this may be due to nitrogen deposition, which cools the microclimate where larvae breed. The results suggest that this problem may be widespread across Europe.

## *Species' trend increasing*

### *Silver-washed and Dark green fritillary*

The results show that many species are increasing in abundance, often combined with an expansion in their range northwards. Two examples are *Argynnis paphia* (left) and *Argynnis aglaja (right),* which are both increasing significantly (by 65% and 33% respectively).
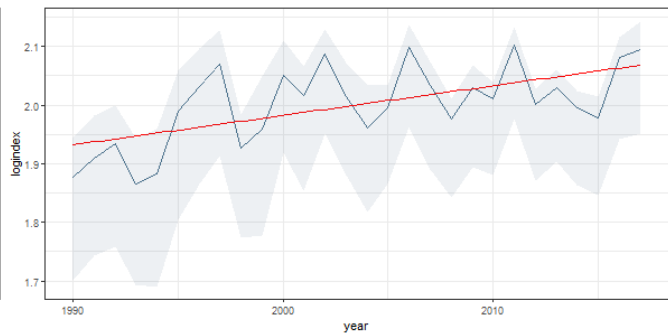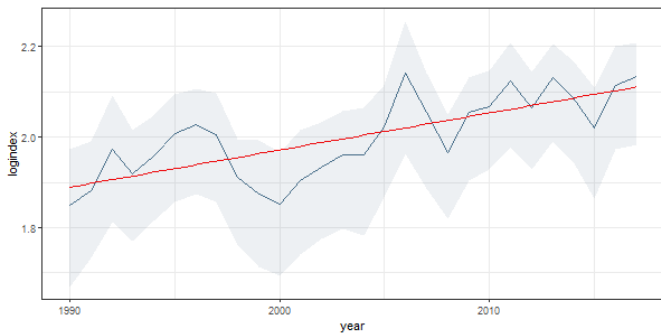




The results of these and other analyses will be published in due course once the data has been fully checked.