



# Status and trends of butterfly species in national Article 17 reports and in the EU Red Lists of butterflies

Benefits of integrating butterflies into EU Member States' Pledges

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# Why Butterflies?

Integrating butterflies into EU Member States' Pledges will help to achieve EU Biodiversity Strategy 2030 targets



- ▶ Indicators of the health of the environment
- ▶ Respond quickly to environmental change
- ▶ Beautiful and charismatic
- ▶ Resonate with the public
- ▶ Relatively easy to monitor
- ▶ Data on conservation status and trends available
- ▶ Proxy for the state of wild insect pollinators and their habitats
- ▶ Wider benefits from focus on butterflies



# Butterflies depend on nectar and larval food plants for feeding and reproduction



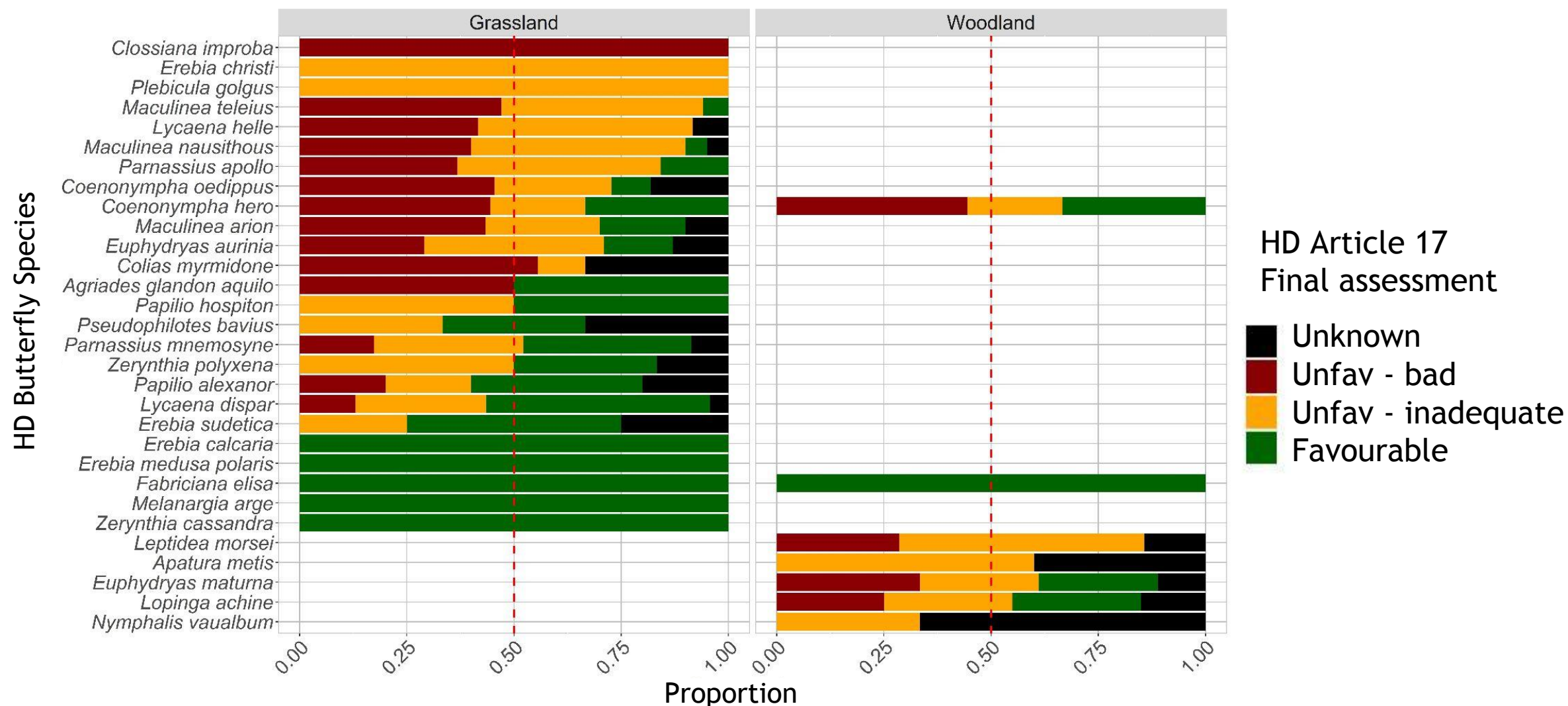
Butterfly life cycle has 4 stages - so larval foodplant abundance is critical, as well as nectar for adults and vegetation structure to provide egg laying niches

# EU MSs Pledges and Butterflies: Species targets

- ▶ **Status Improvement Target Pledges** for progress in all MSs by 2030
  - Non - deterioration
  - Improvement through measures for 30% of species
- ▶ Butterflies and their habitats are almost all in **Unfavourable status** at EU and MS levels, often with a declining trend
- ▶ Several butterflies, including those endemic to specific countries are also threatened with extinction and included on Red Lists
- ▶ So specific Pledges to improve butterfly species through appropriate measures can make a big difference.
- ▶ Such Pledges will also contribute to the EUBDS target to reverse the decline in wild pollinators



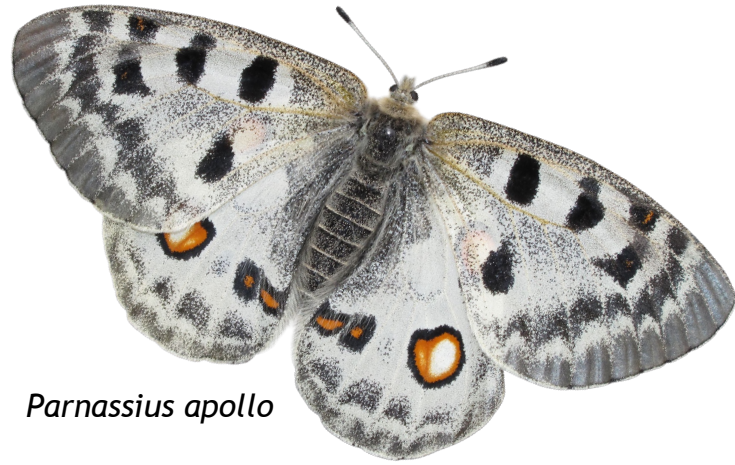
# Conservation Status of Habitats Directive butterflies



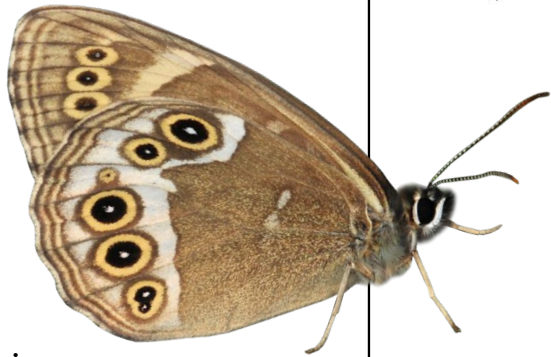
See detailed tables for Conservation Status and Trends in MSs - annexed to Background Document on Event website



# Habitats Directive Butterfly species Conservation Status

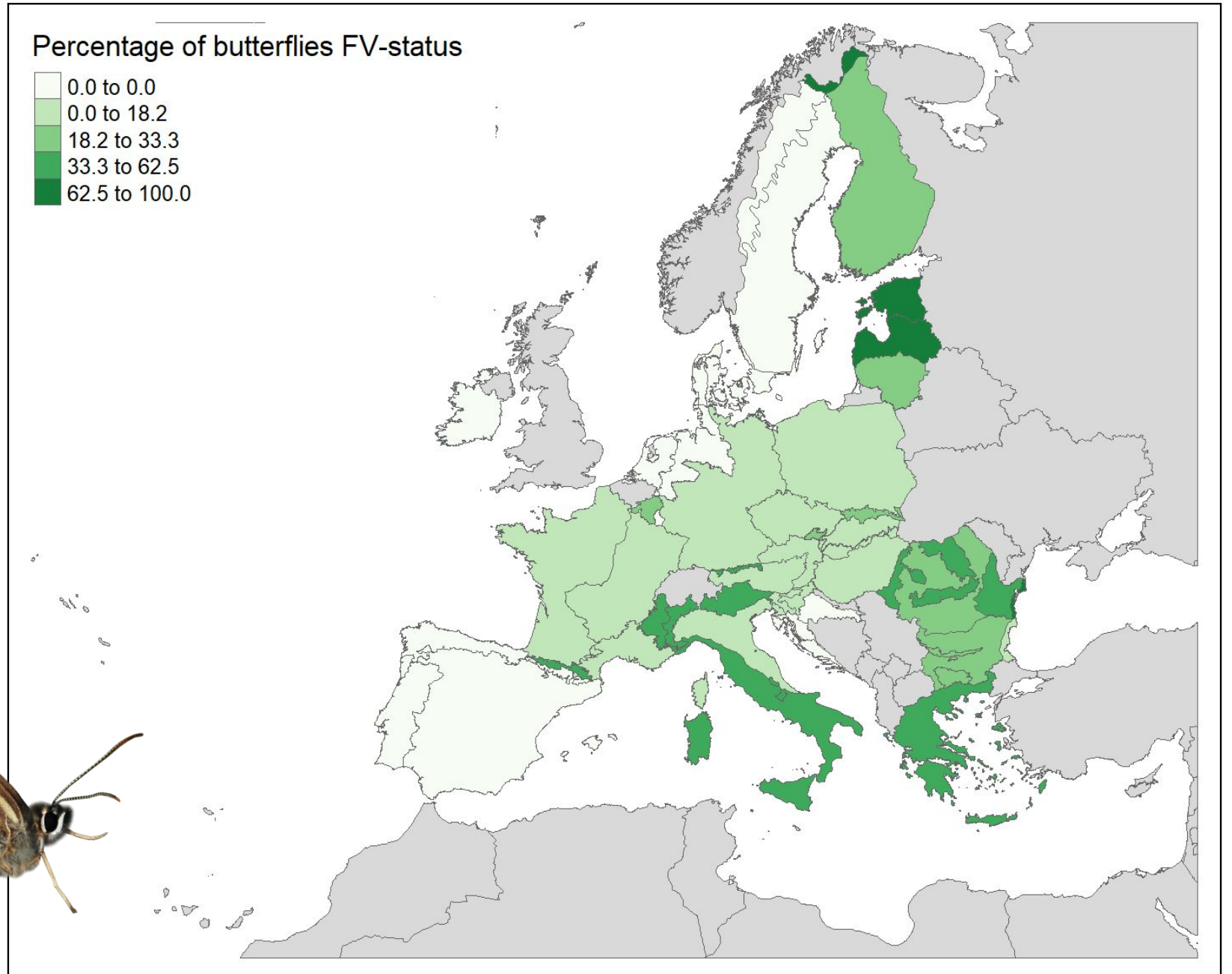
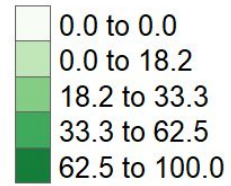


*Parnassius apollo*



*Lopinga achine*

Percentage of butterflies FV-status



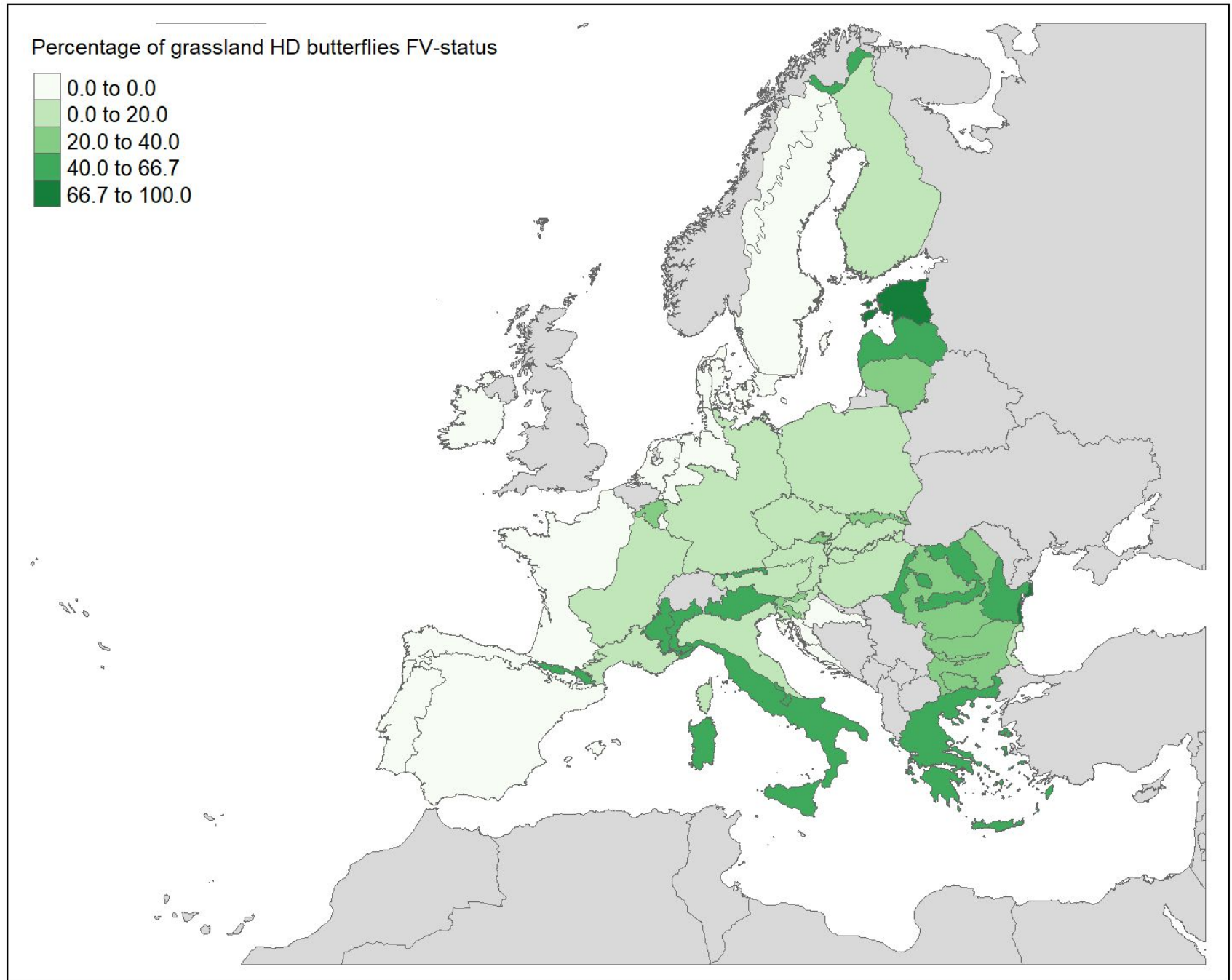
# Grassland Butterfly Species: Habitats Directive Conservation Status



*Lycaena helle*



*Phengaris teleius*





# Density of Red Listed butterfly species

# Integrating national Red Lists for prioritising conservation actions for European butterflies.

Maes, D., Verovnik, R., Wiemers, M. et al.  
J Insect Conserv **23**, 301-330 (2019).

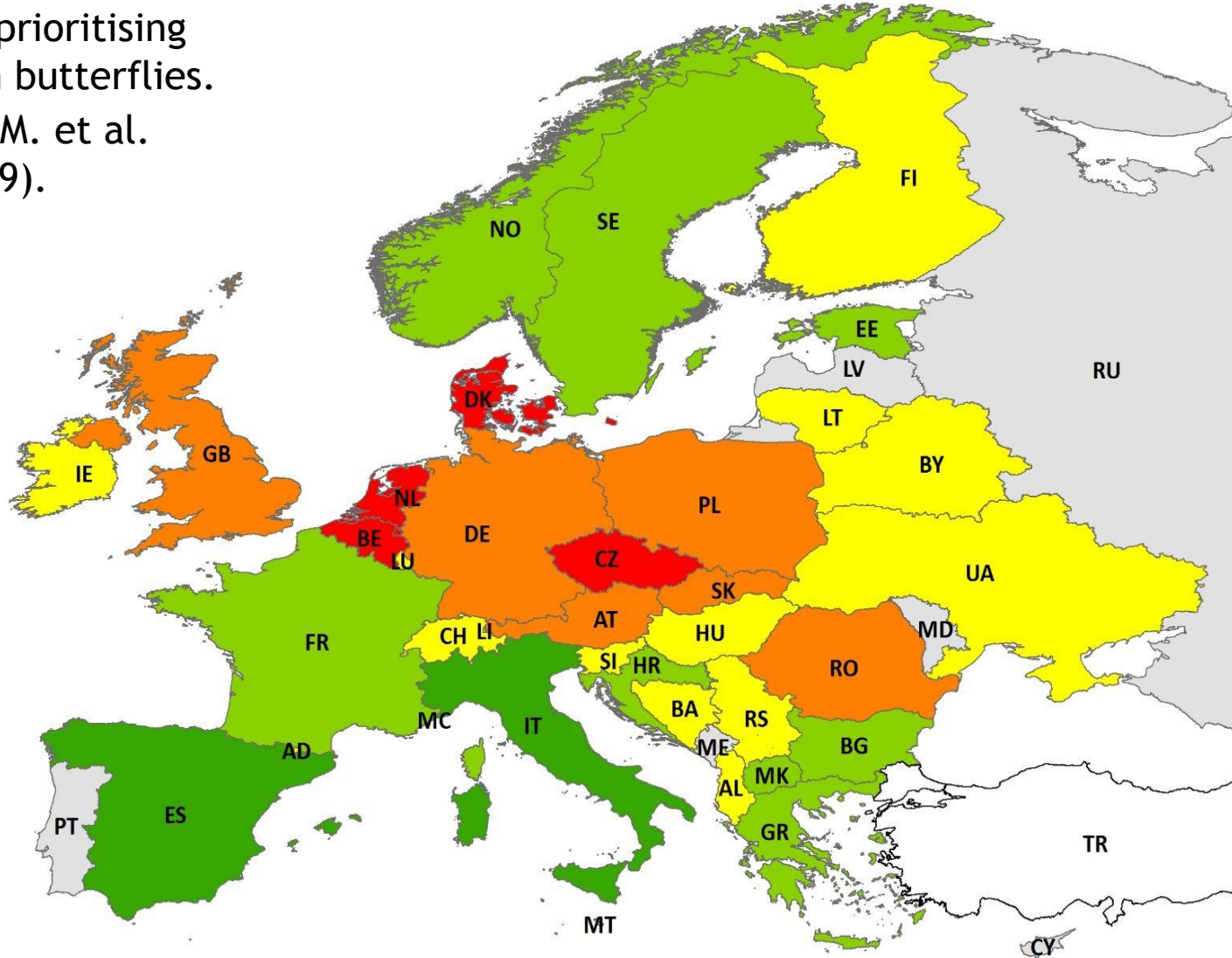
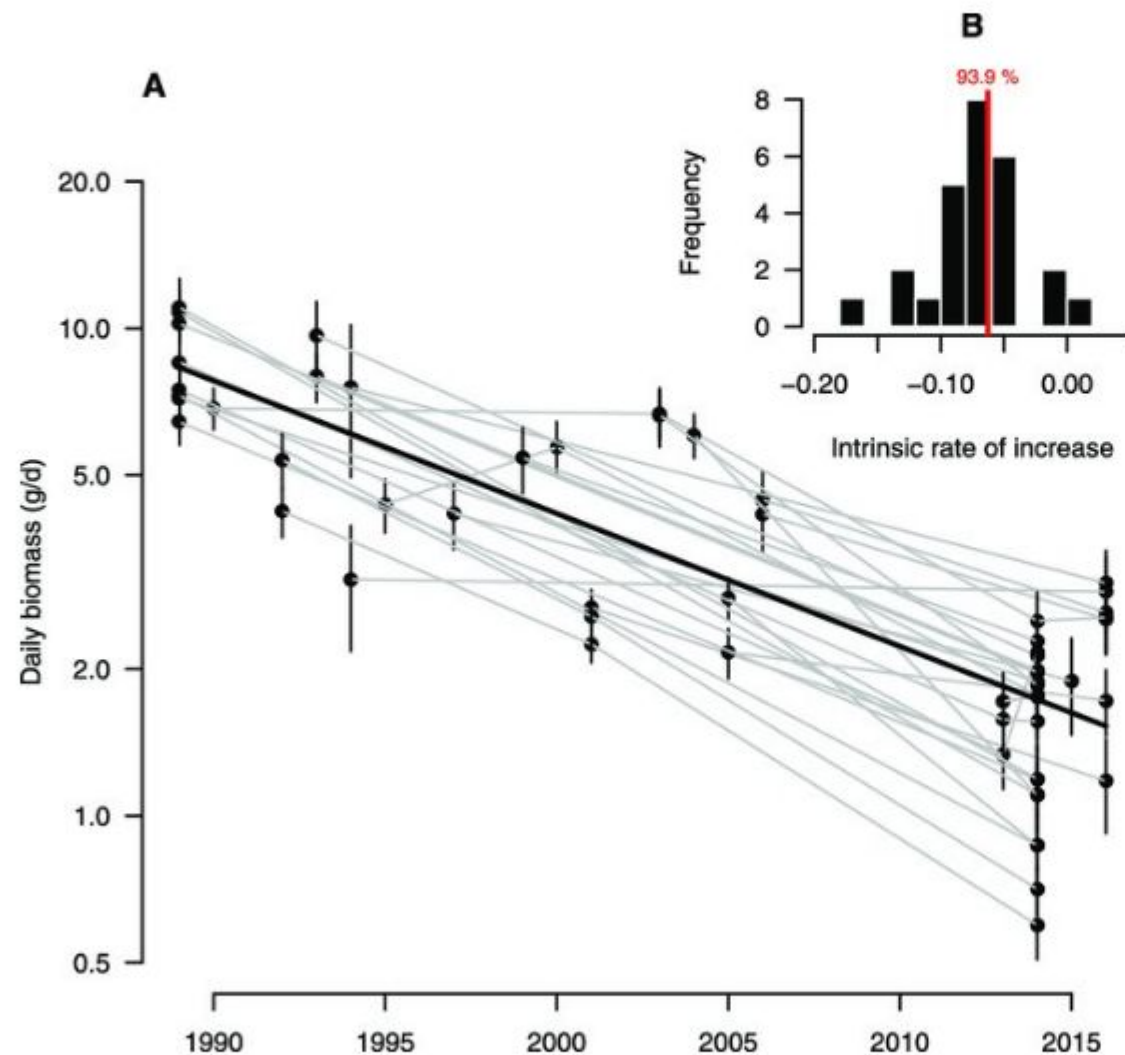


Fig. 1 Mean Red List value (cRLV) per European country.

Red = cRLV  $\geq 30$ ,  
Orange = cRLV 20-30,  
Yellow = cRLV 10-20,  
Light green = cRLV 5-10,  
Dark green = cRLV  $\leq 5$ ,  
Grey = no Red List available.



# Decline of pollinators



**75% decline** in insect biomass on reserves in western Germany over 27 years

Hallman *et al.* (2017)



SPRING Project  
Strengthening Pollinator Recovery  
Through INDicators and Monitoring



# EU Pledges and Butterflies: Protected Areas Targets



**Protected Area Pledges** to contribute to EU level Targets for

- Well managed and monitored Protected Areas across 30% of EU land
- Strictly Protected Areas across 10% of EU land -
  - including semi-natural grasslands needing management to meet ecological needs of their species

Better Management and Monitoring of PAs and filling data gaps are all needed

**Butterflies are present on thousands of Natura 2000 sites, in nationally Protected Areas and in the wider landscape across Europe:**

- so the poor status of these species, demonstrated in Art 17 Reports and from eBMS abundance data
  - highlight the importance of improving management of existing PAS
  - and in some cases expanding or
  - adding to the network to improve connectivity
  - and complementing it with measures in CAP Strategic Plans
- **Incorporating butterflies in PA Pledges will make a real difference**



*Zerynthia polyxena*

# Habitats Directive Grassland Habitats important for butterflies Conservation Status (FV, U1, U2) and trends (+ = -) at EU level: (Art 17 Reports 2013 - 2018)

Grassland type Habitat Code	Calcareous 6170		Nardus 6230		Steppe 6240		Molinia 6410		Lowland hay meadows 6510		Upland hay meadows 6520		Wood pasture 6530	
Alpine	U2	=	U2	-	U2	-	U2	-	U2	-	U2	-		
Atlantic	U1	-	U1	-	U1	-	U2	-	U2	-	U2	-		
Boreal									U1	=	U2	-	U2	-
Black Sea			U2	Ukn	U1	Ukn	FV	=	U2	Ukn				
Continental	U1	+	U2	-	U2	-	U2	-	U2	-	U2	-	U2	-
Mediterranean	Ukn	Ukn	U2	Ukn			U1	-	U2	-	U2	-		
Pannonian			U2	=	U2	-	U2	-	U2	-	U1	-		
Steppic							FV	=	FV	=				



# Prevalence of threats to HD butterflies

Threats to conservation of butterflies	Prevalence
Abandonment of grassland management (e.g. cessation of grazing or mowing)	385
Mowing or cutting of grasslands	254
Intensive grazing or overgrazing by livestock	240
Natural succession resulting in species composition change	148
Use of plant protection chemicals in agriculture	111
Conversion to forest from other land uses, or afforestation	110
Conversion from one type of agricultural land use to another	87
Conversion from other land uses to housing, settlement or recreational areas	78
Application of synthetic (mineral) fertilisers on agricultural land	76
Harvesting or collecting of other wild plants and animals	72
Conversion to other types of forests including monocultures	70

Ref: Article 17 database. Analysis of sum of threat entries by Member States related to HD butterflies by Chris van Swaay

Further details by country in background document on event website

[https://ec.europa.eu/environment/nature/natura2000/platform/events/workshop\\_on\\_butterflies.htm](https://ec.europa.eu/environment/nature/natura2000/platform/events/workshop_on_butterflies.htm)

# EU Pledges and Butterflies: Conclusions



Today and tomorrow are opportunities to help develop Pledges by

- exploring which butterfly species are most in need of further measures for their conservation
- discussing criteria for prioritisation
- considering measures to improve status
- strengthening Protected Areas and enhancing the network
- improving management of PAs
- supporting and enhancing monitoring to fill gaps and to support adaptive management
- sharing practical experience of the implementation of the French National Species Action Plan for Butterflies



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