



Intentional killing of birds by man



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The Eurasian African Bird Migration Atlas

Mapping EURING ringing data and Movebank tracking data for 300 species

-- Choose species --

The European Union for Bird Ringing

CMS

Spina, F.¹, Baillie, S.R.¹, Bairlein, F.¹, Fiedler, W. and Thorup, K. (Eds) 2022. The Eurasian African Bird Migration Atlas. <https://migrationatlas.org>

¹ Joint lead editors.

Home

Home

About

Map Help

Research Modules

Contributors

References

Contact us

<https://www.migrationatlas.org>

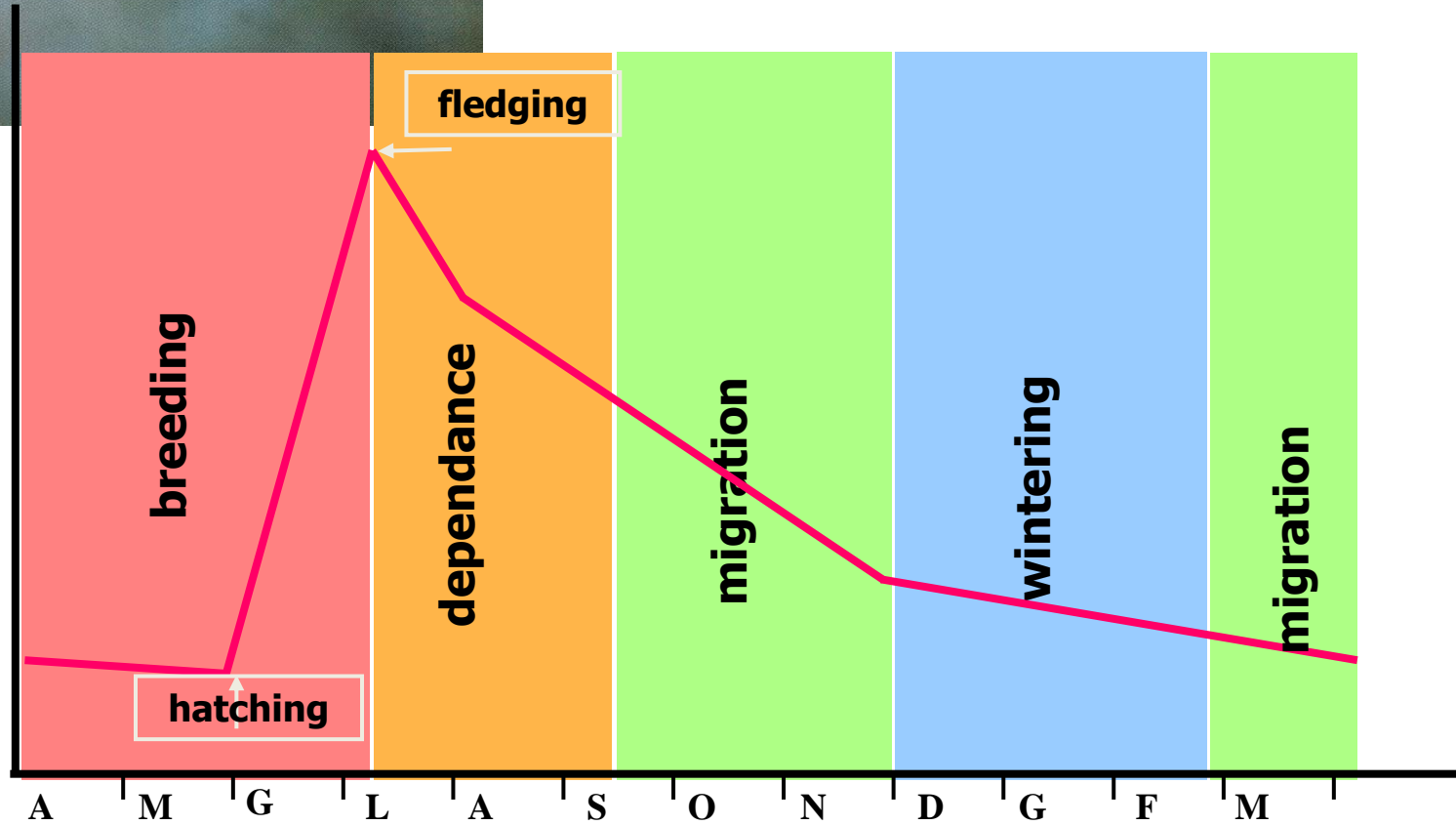
***May 26, 2022
Atlas launch event
Migration Museum
Island of Ventotene
Ventotene Manifesto
CMS, EURING,
Movebank, ISPRA,
Milano University,
Nat Reserve,
It. Ministry Culture***



<https://www.youtube.com/playlist?list=PL2aW8FrGna-IlcCI4wphMOdIqaIgGpdy6>



**Killing of birds by man
with particular reference to
illegal killing IKB**



Relevance of when mortality takes place for demography and status of bird populations



Mortality of human origin





***Mortality of human origin
1. not intentional***

Mortality of human origin

2. intentional



Mortality of human origin

2. Intentional

- legal (e.g. through legal hunting, species, means, bag limits, periods)



Mortality of human origin

2. Intentional

***- illegal (e.g. protected species,
exceeded bag limits, protected periods***



Kiling module

dataset composed by the following cases of ring recoveries:

- 1,553,872 individuals
- 391 species
- 73 Families
- 23 Orders
- 147 countries
- 119 years (from 1900 to 2019)



***Potential biases in reporting of
intentionally killed birds***



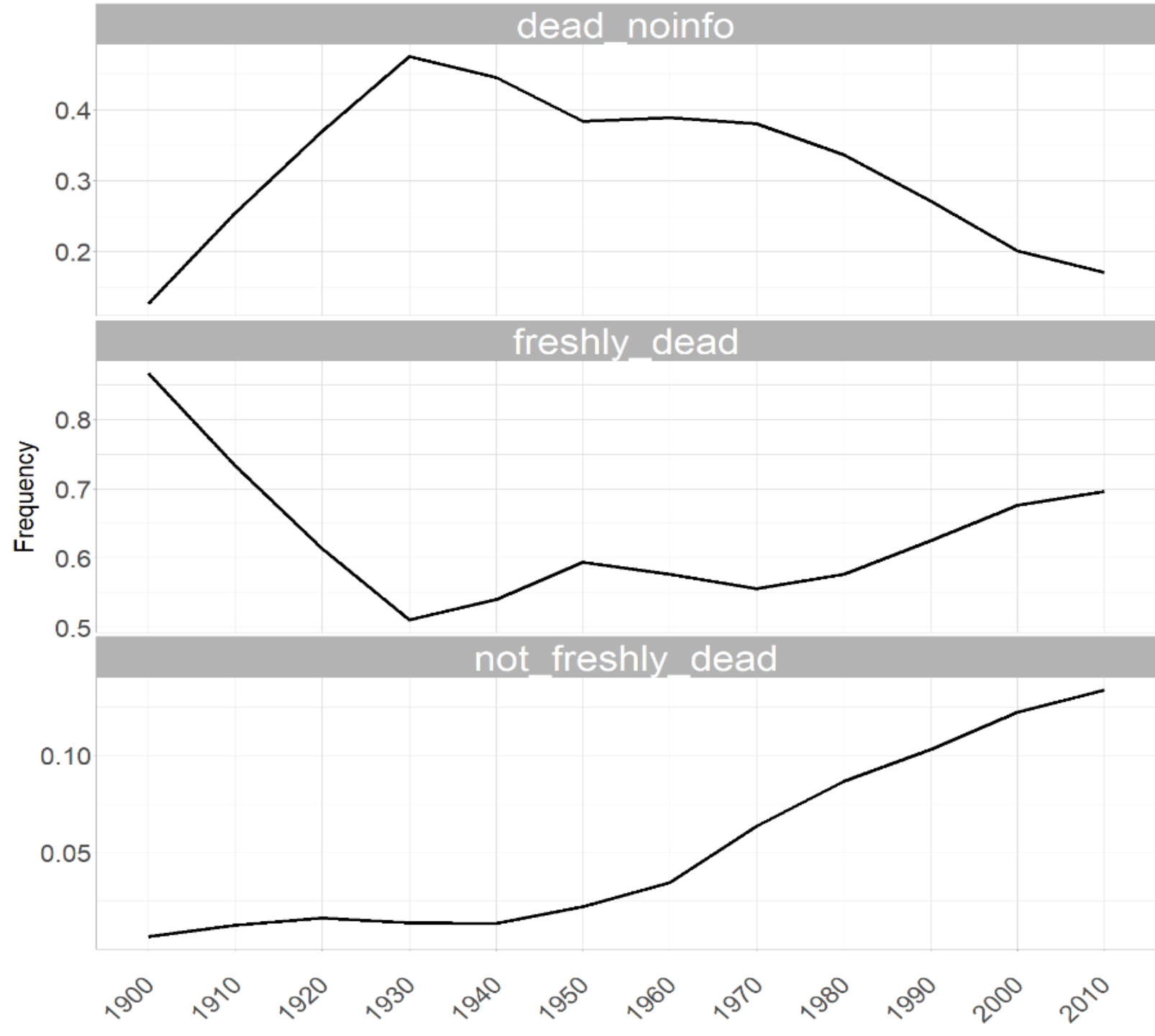


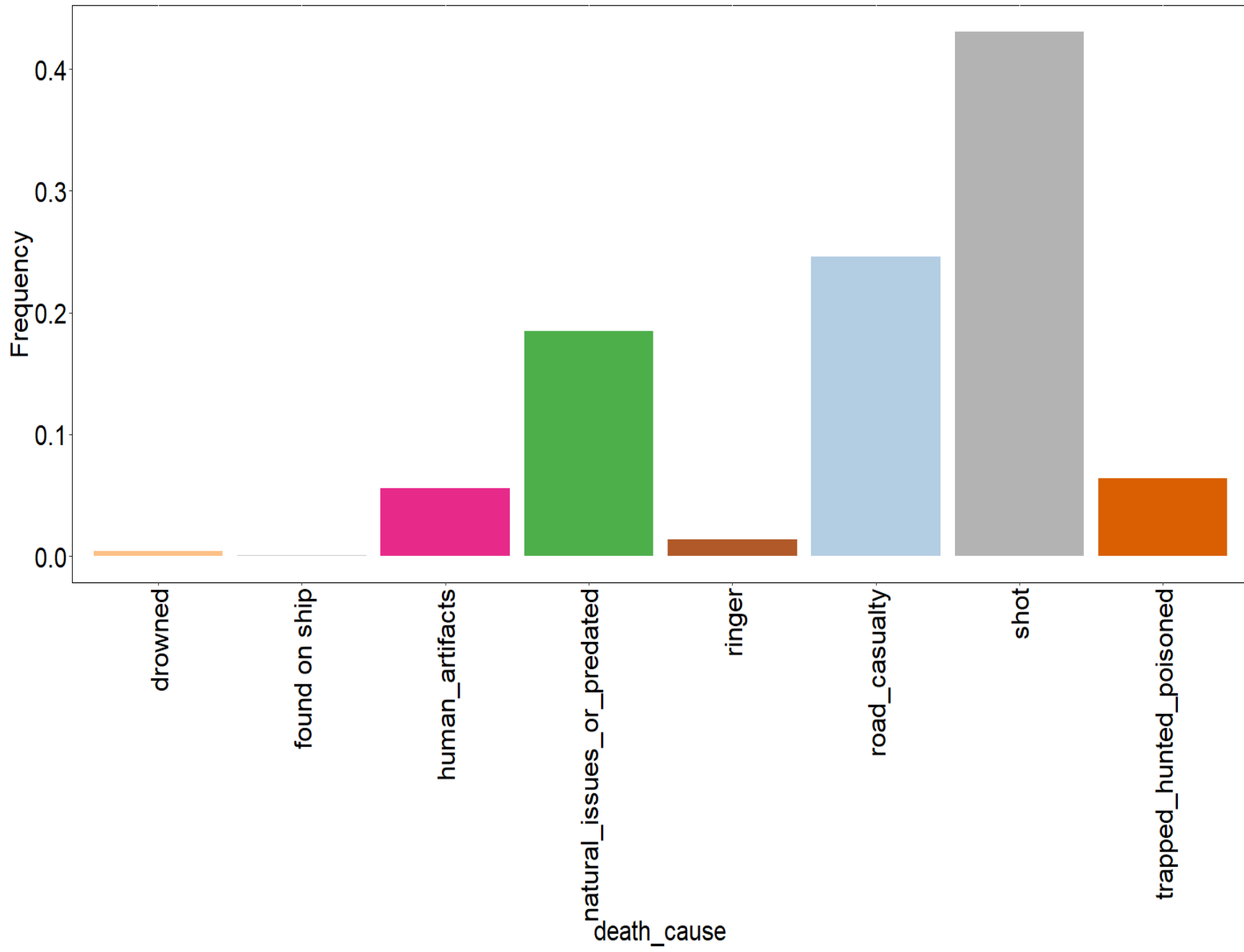
***need for
computerized first
captures and effort***

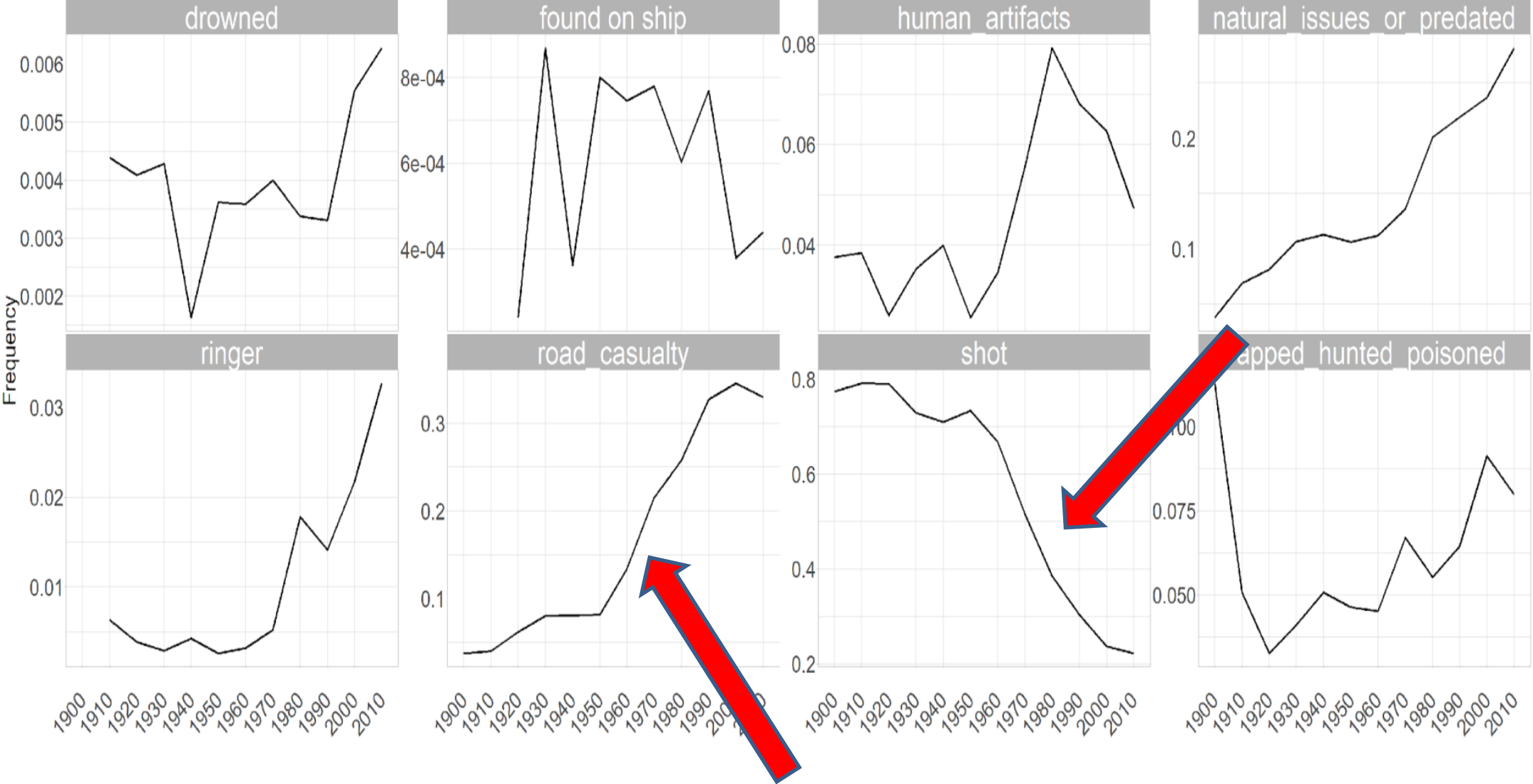
***Potential biases in reporting of
intentionally killed birds***

***few countries
time series***

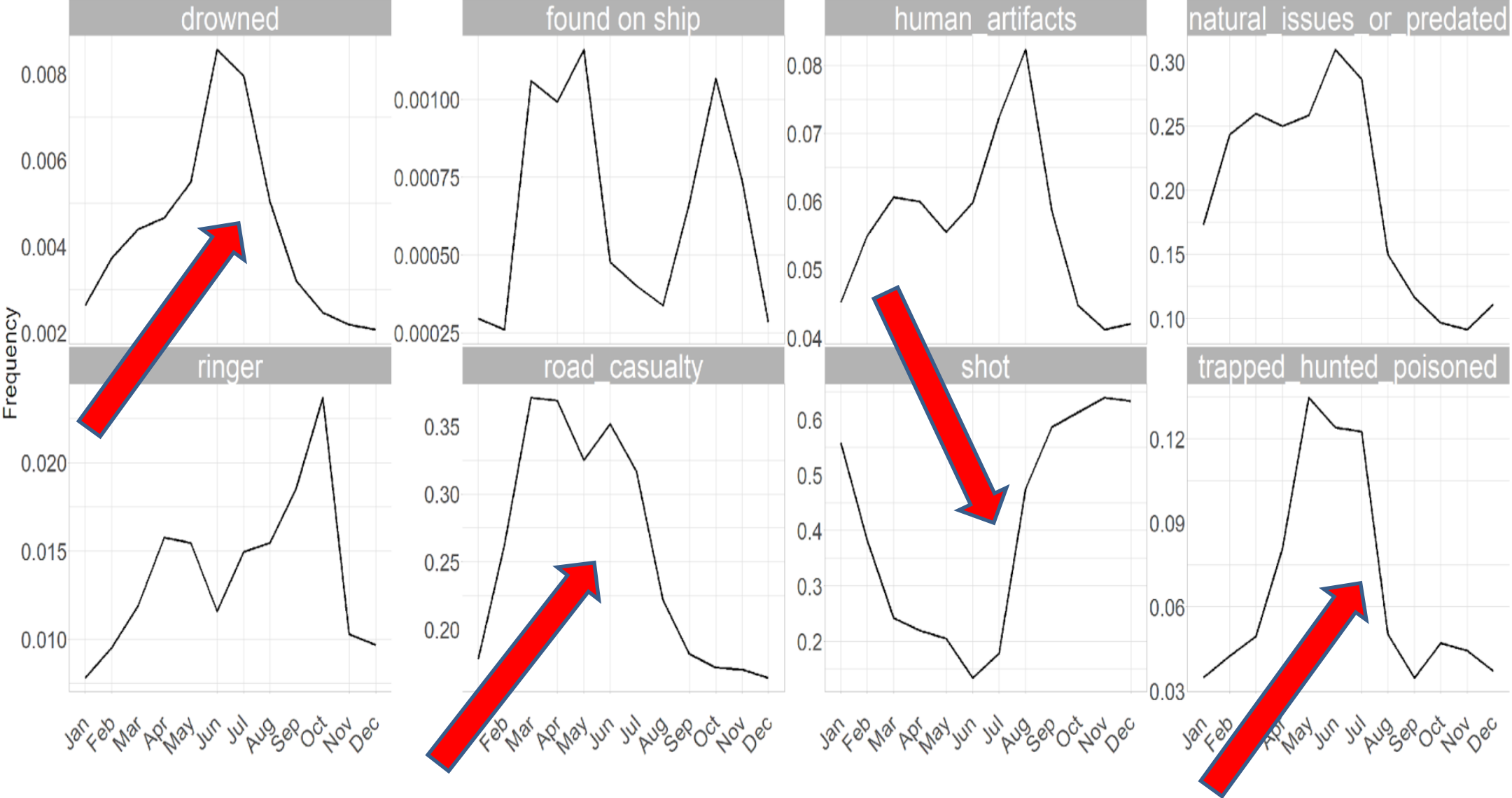






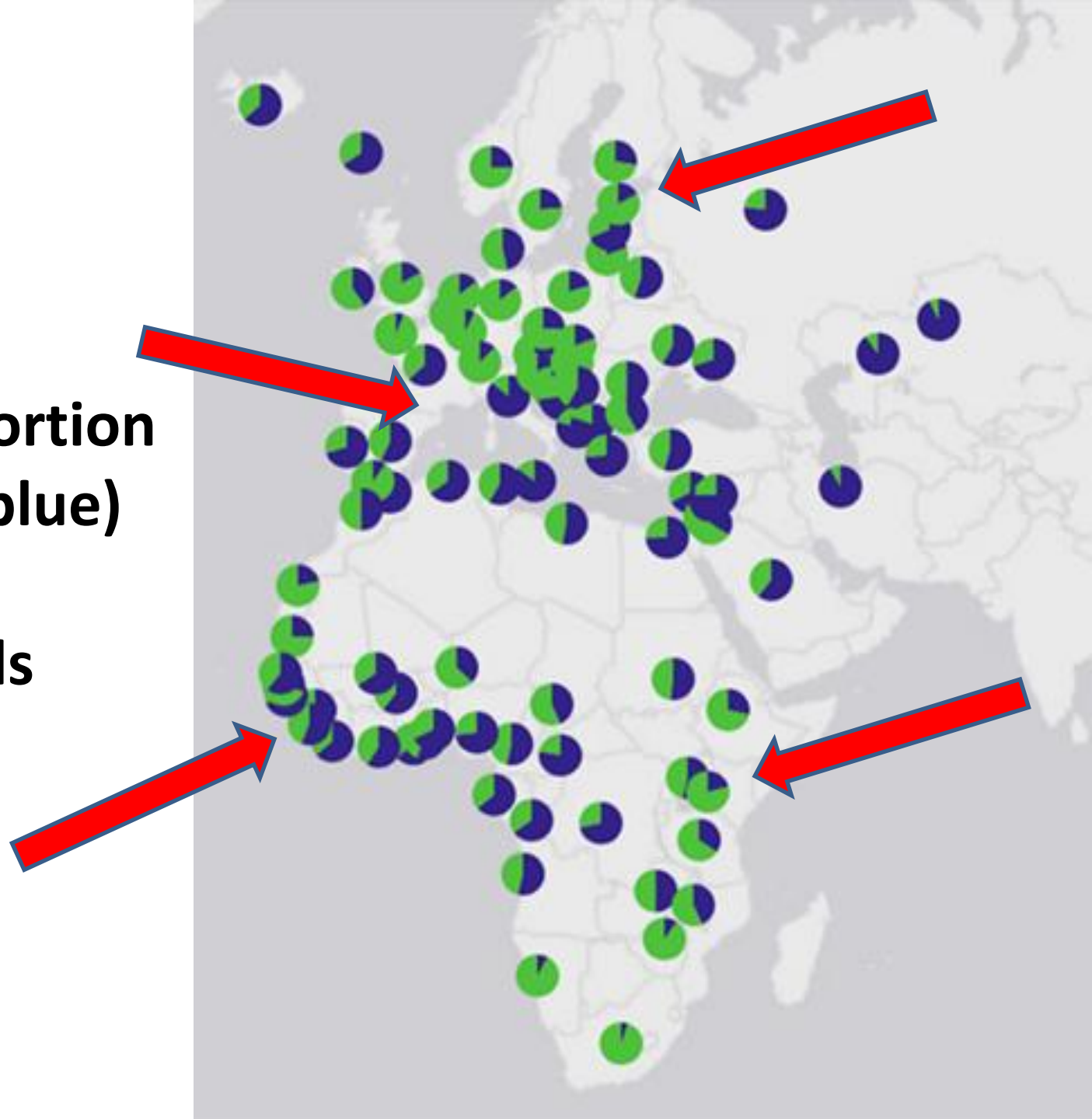


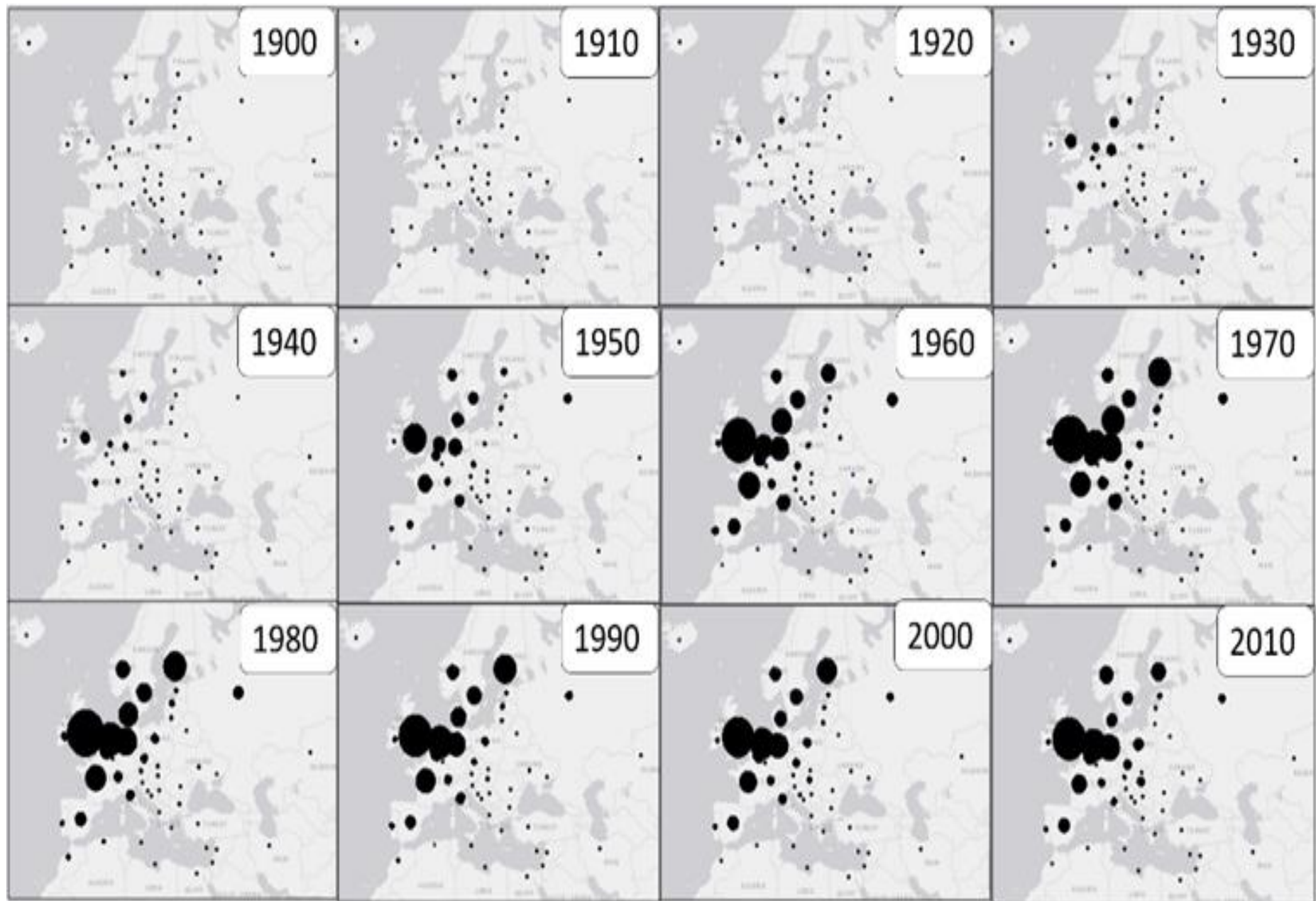
Very different historical trends



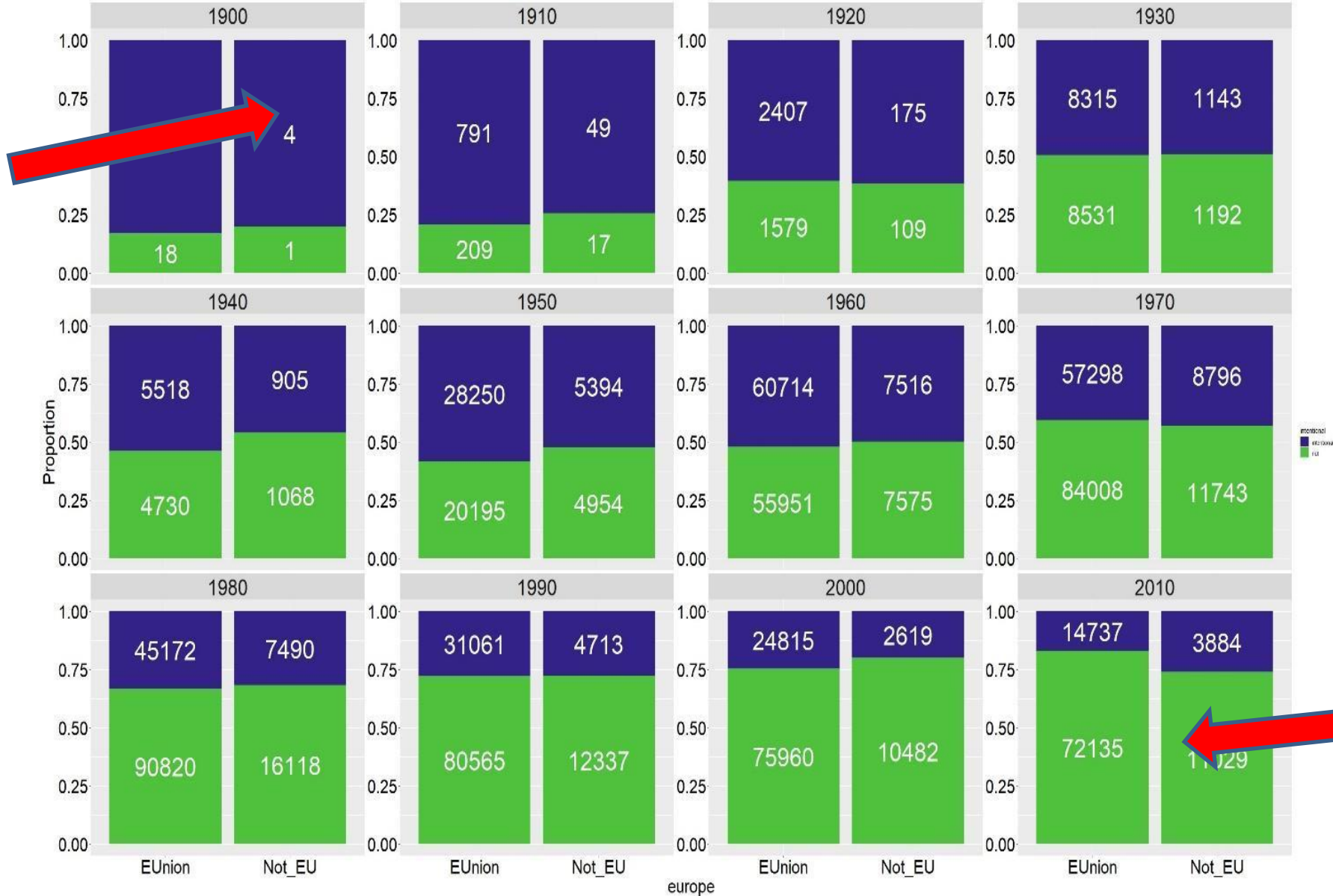
Very different seasonal trends

**Pie charts with proportion
of intentional (dark blue)
and not intentional
(green) killing of birds**

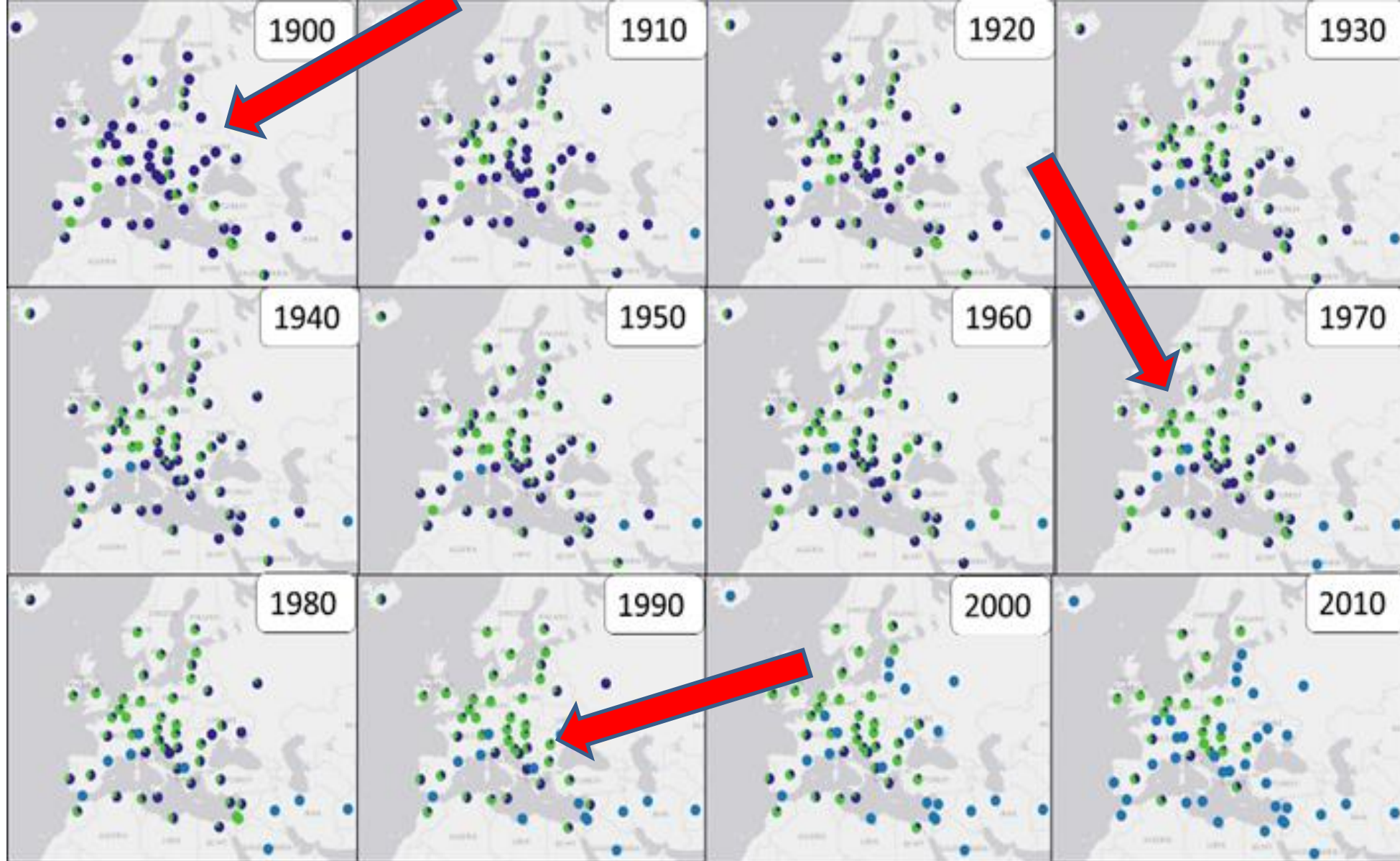




Map series of the European region with symbol size per decade proportional to sample size of birds reported as dead (regardless of circumstances).



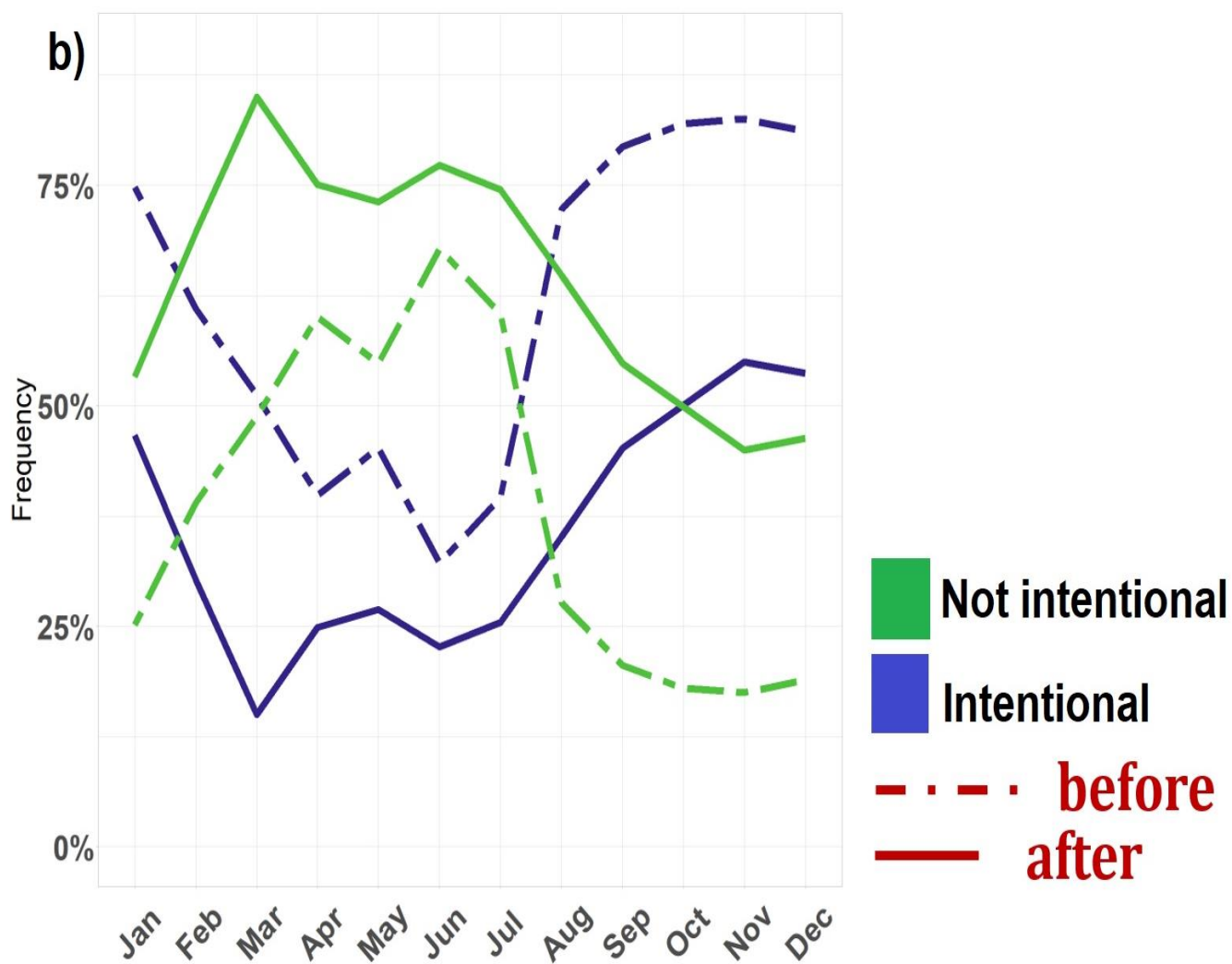
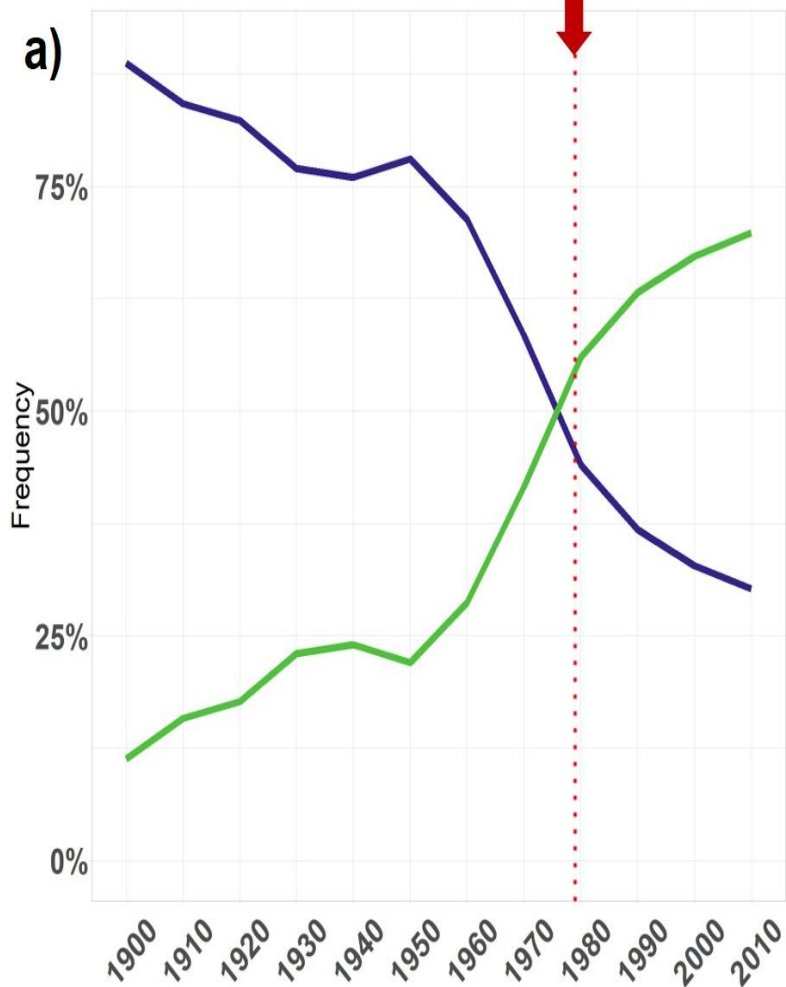
Bar plots per decade, comparing the proportion of intentional (dark blue) and not intentional (green) killing of birds in the European area (“EUUnion”, 28 countries including the UK) and Not European area (“Not_EU”, 119 countries). White numbers = sample size per each category



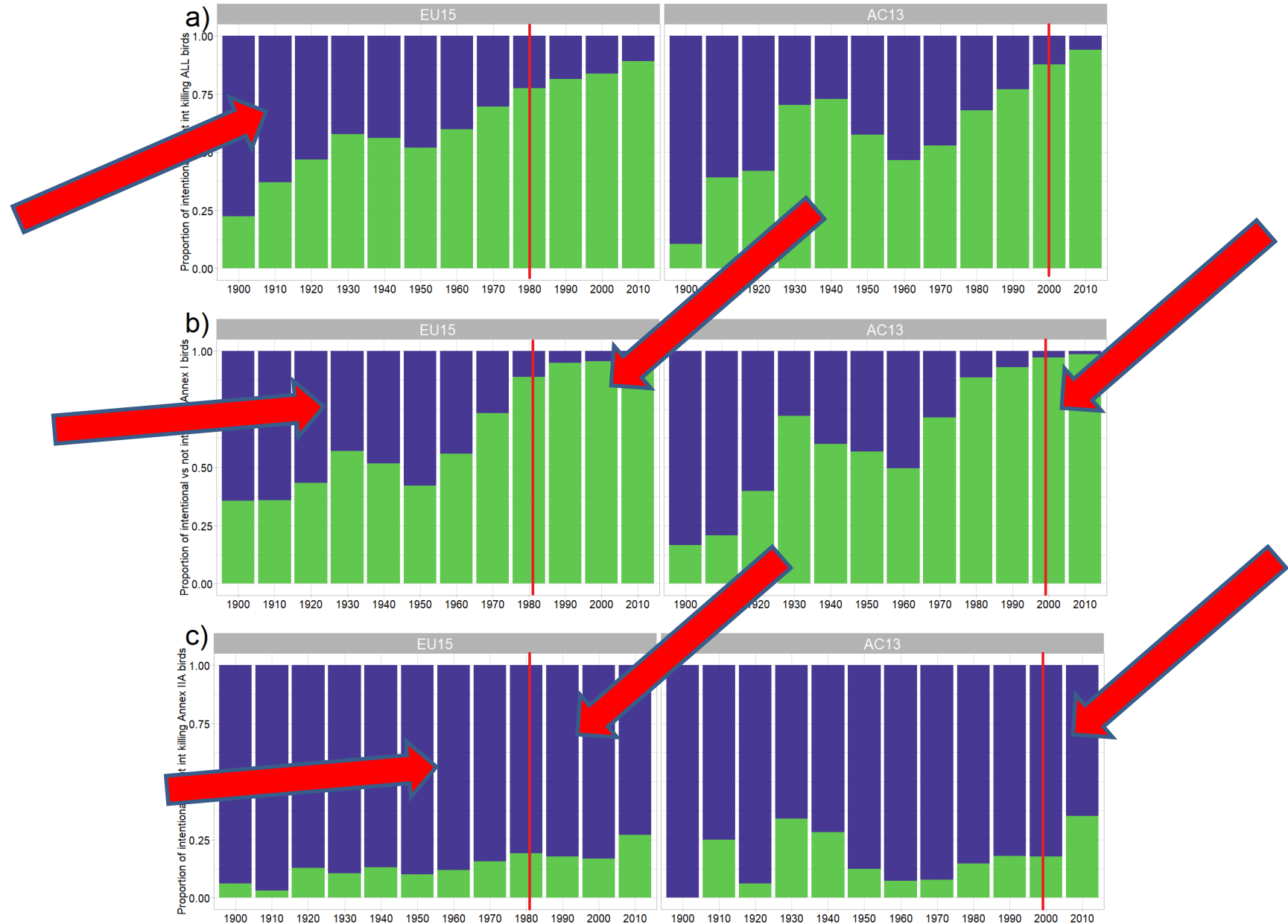
Map series of European area showing per each decade the proportion of intentional killing. Pie chart represents the proportion per decade per each country (of recapture) of the intentional (dark blue) and not intentional (green) killing of birds. Light blue= no data



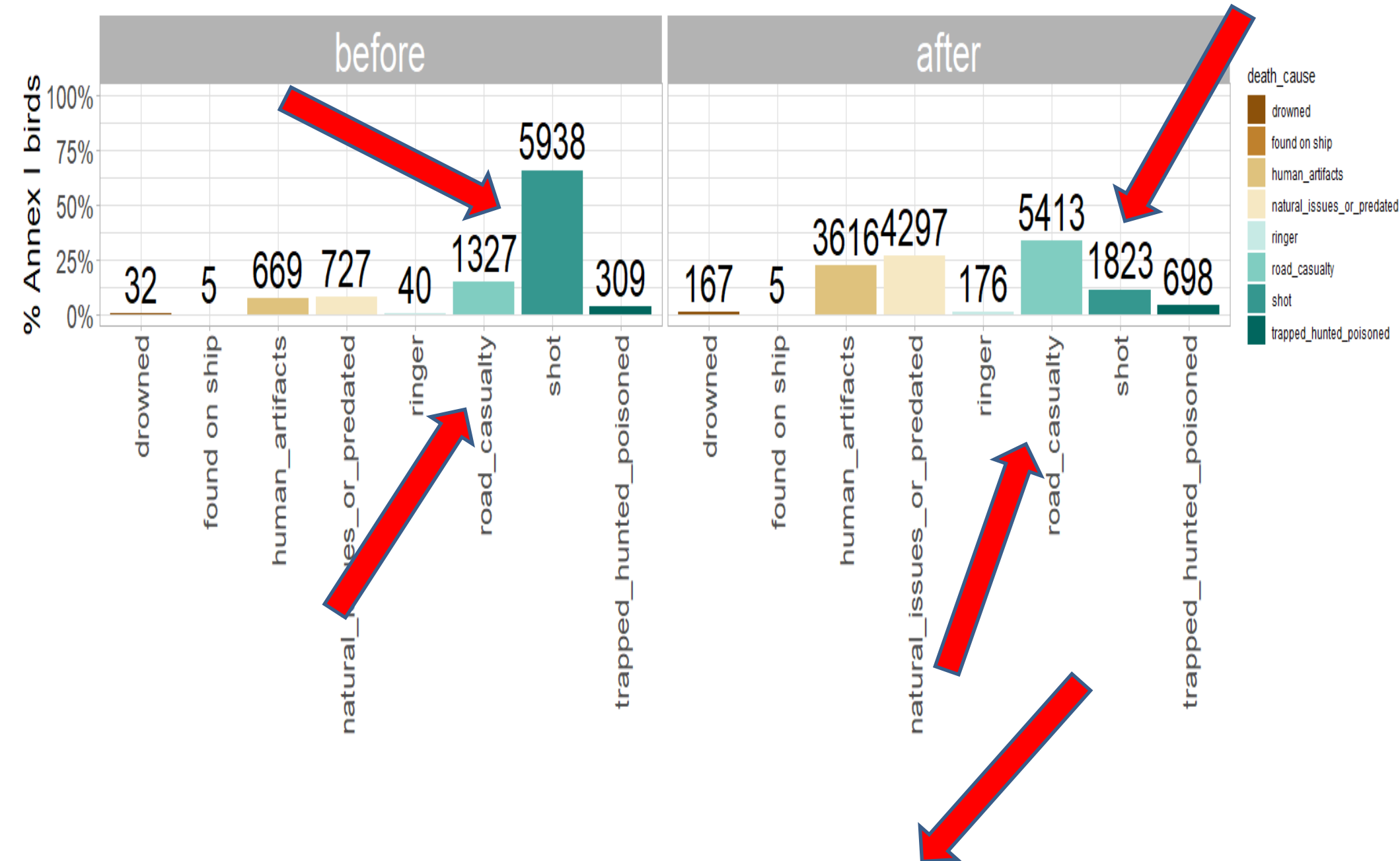
Intentional killing and legislation



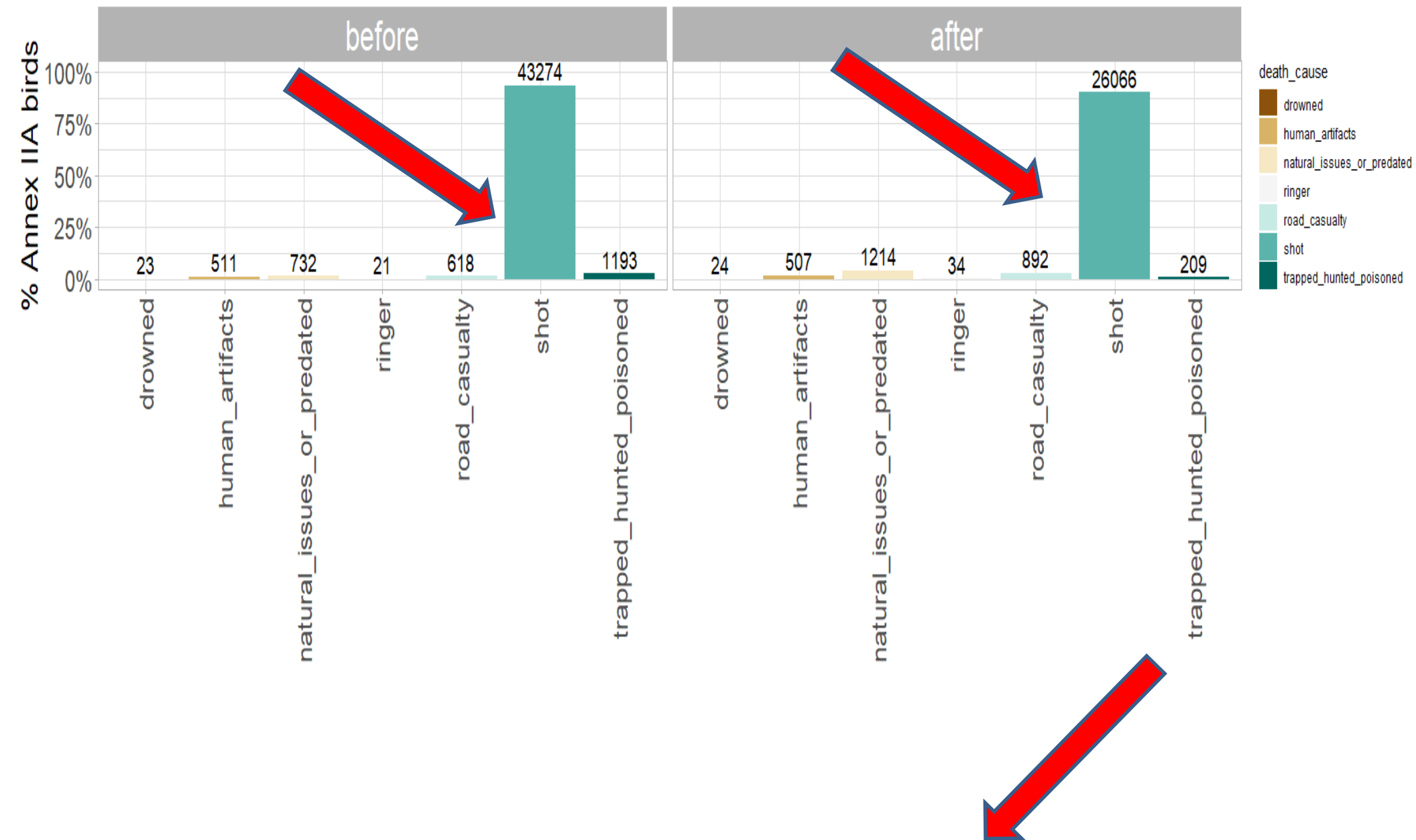
Overview of the historical (a) and seasonal (b) distribution of the intentional (blue) and not intentional killing (green) as percentage per decade (a) and per month (b). (a) The red dotted line and arrow highlight the entry into force of the EU Directive. (b) The period before the EU Directive is in dotted line, after 1981 in solid line. Data relative to the EU countries all together.



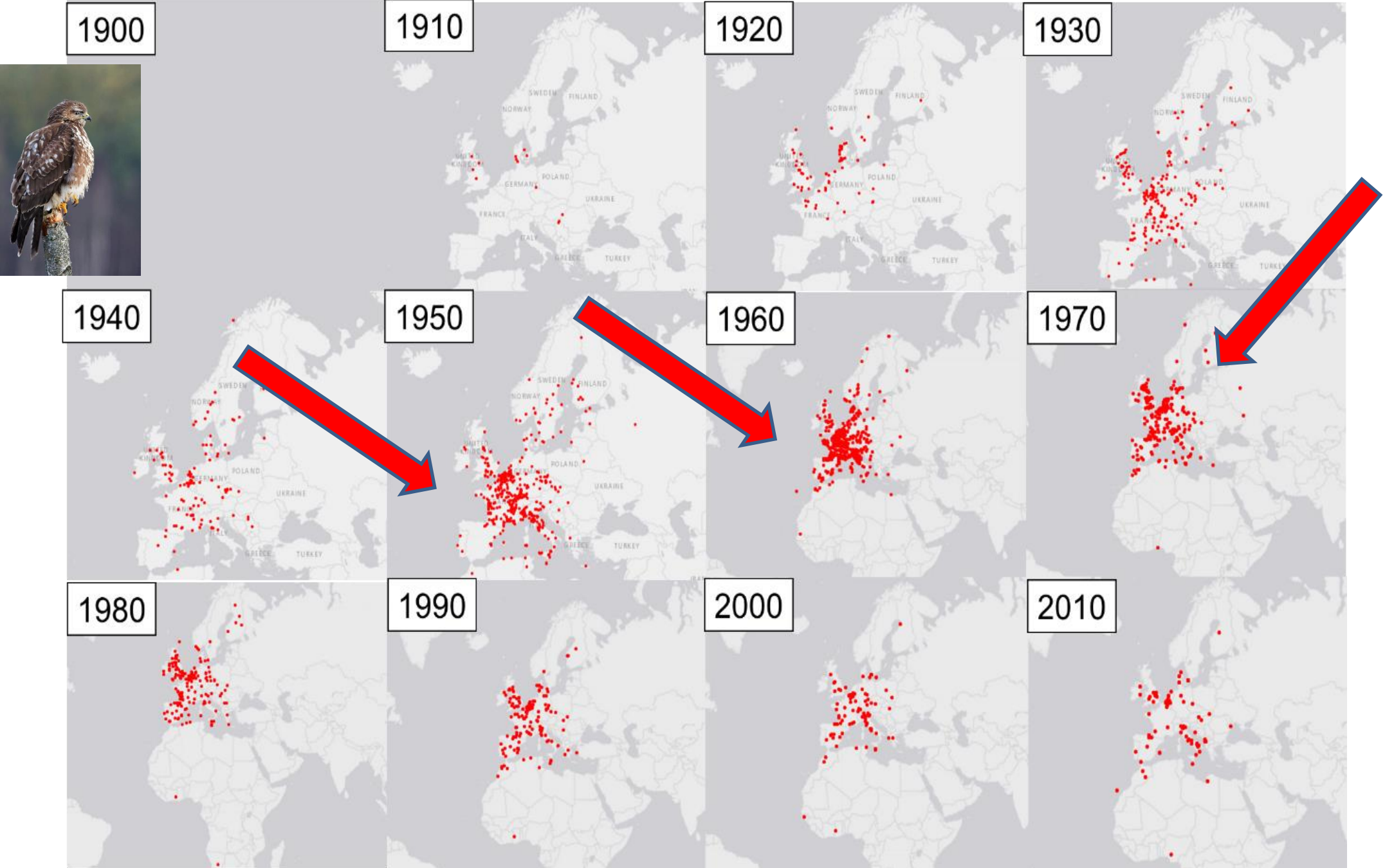
Proportion of intentional (blue) vs not intentional (green) killing of birds reported as dead per decade for EU15 and AC13 separately, considering all birds in EDB (a), the ones listed in Annex I (b), the ones in Annex IIA (c).



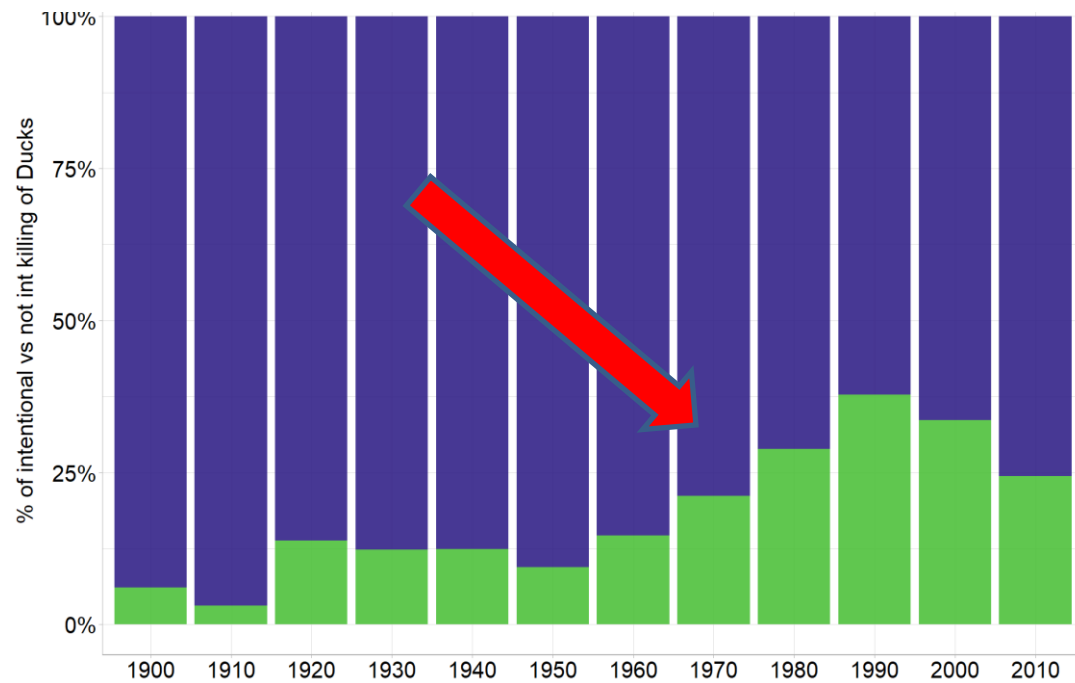
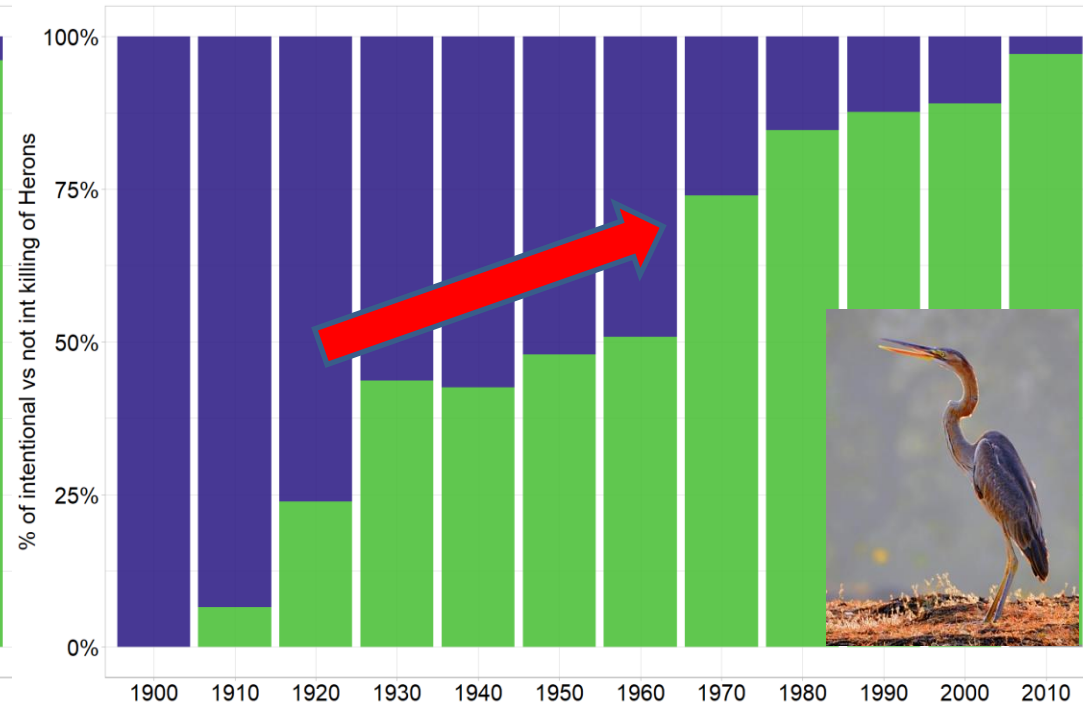
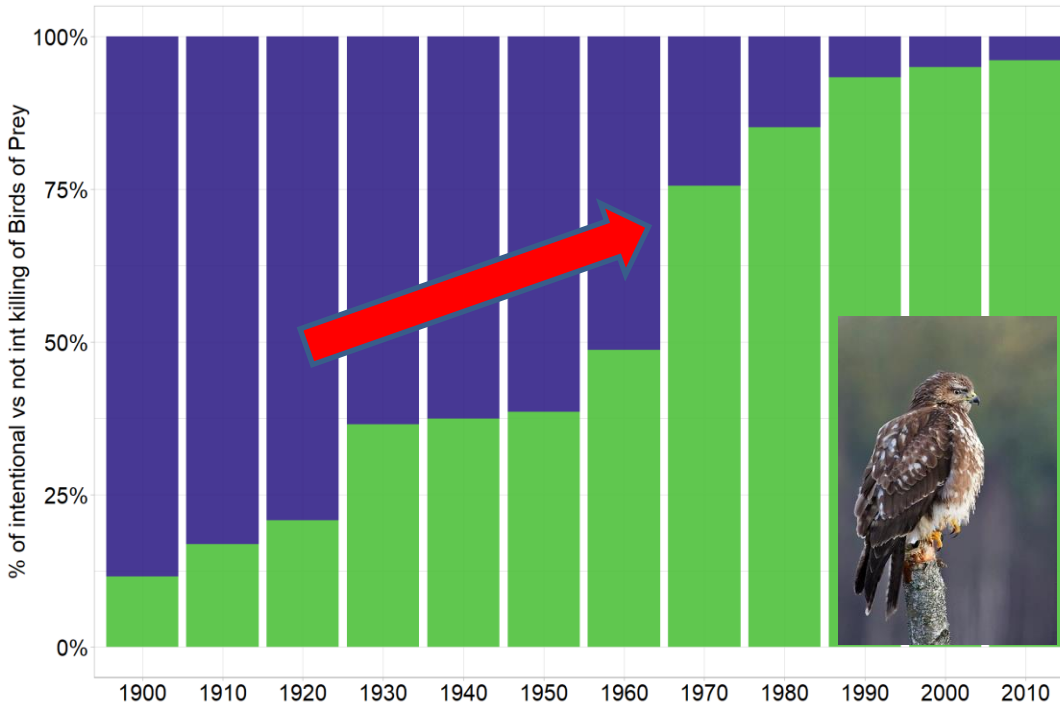
Annex I: Percentage of death causes of species reported in Annex I, before and after the EU Directive. Numbers over each bar are real values

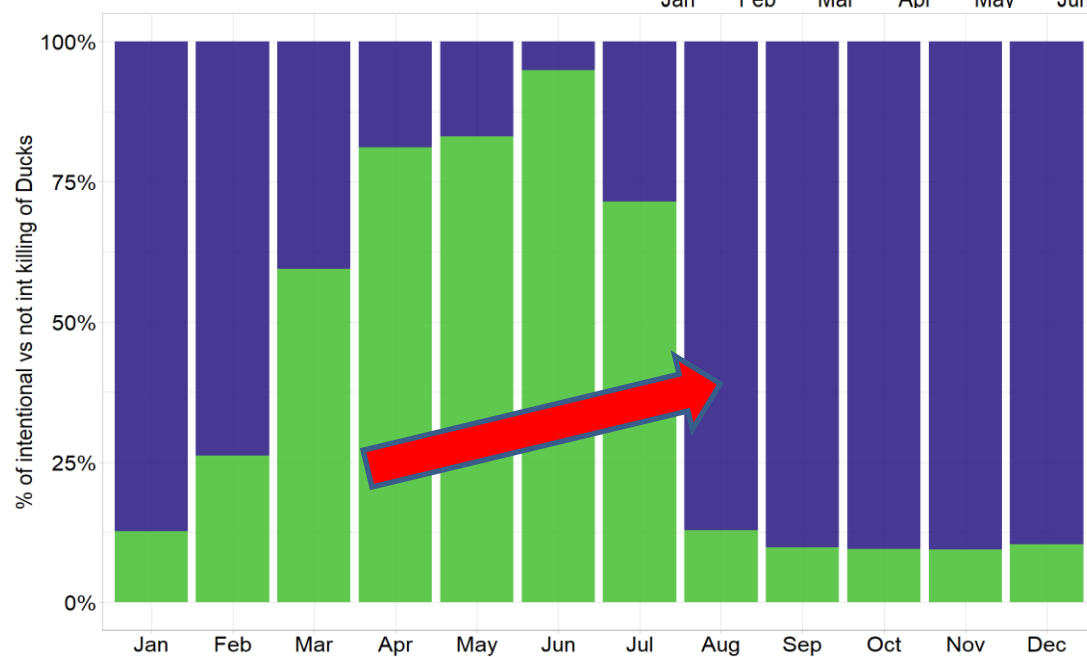
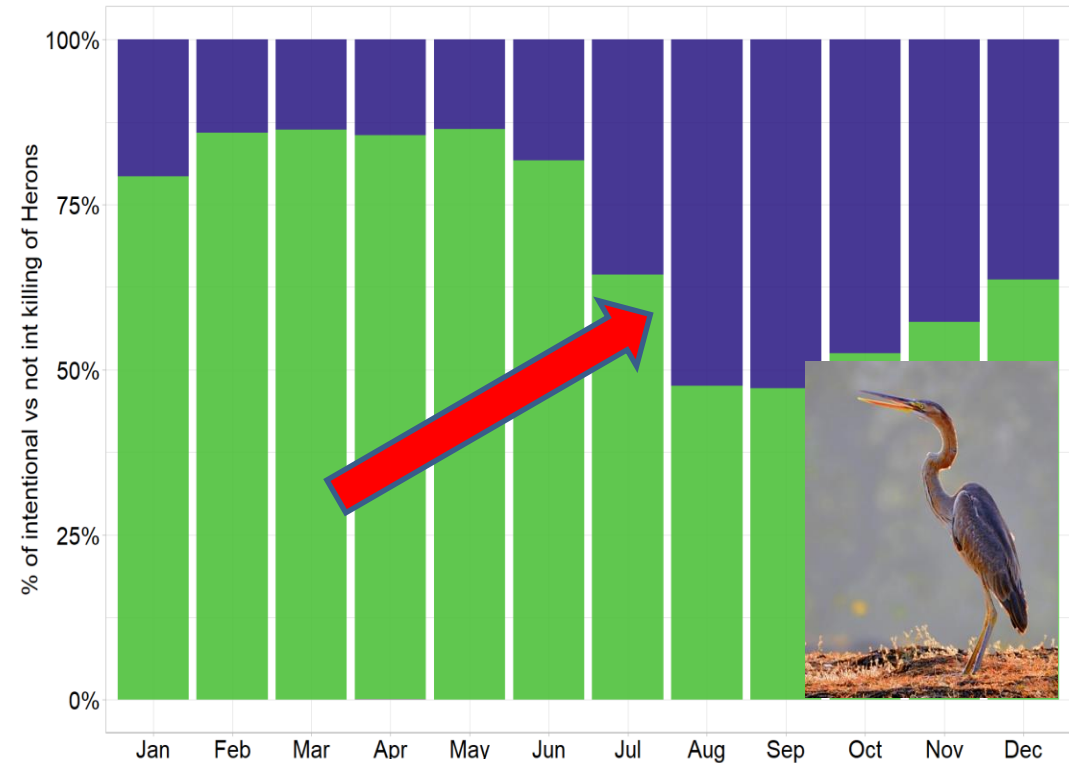
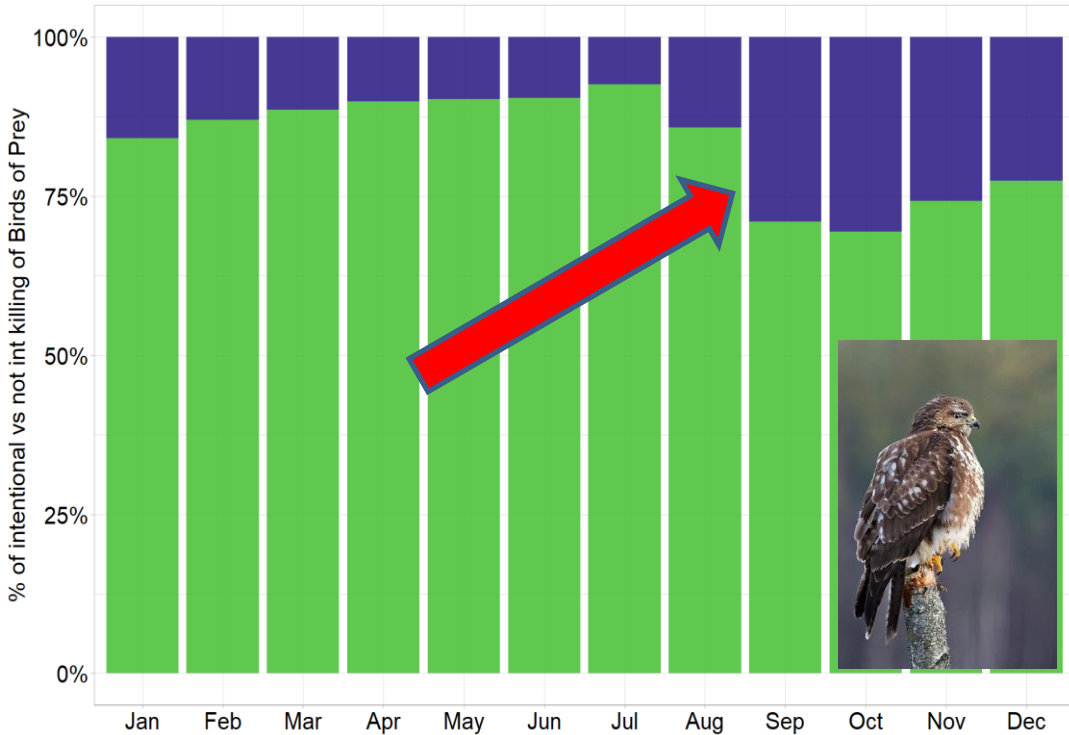


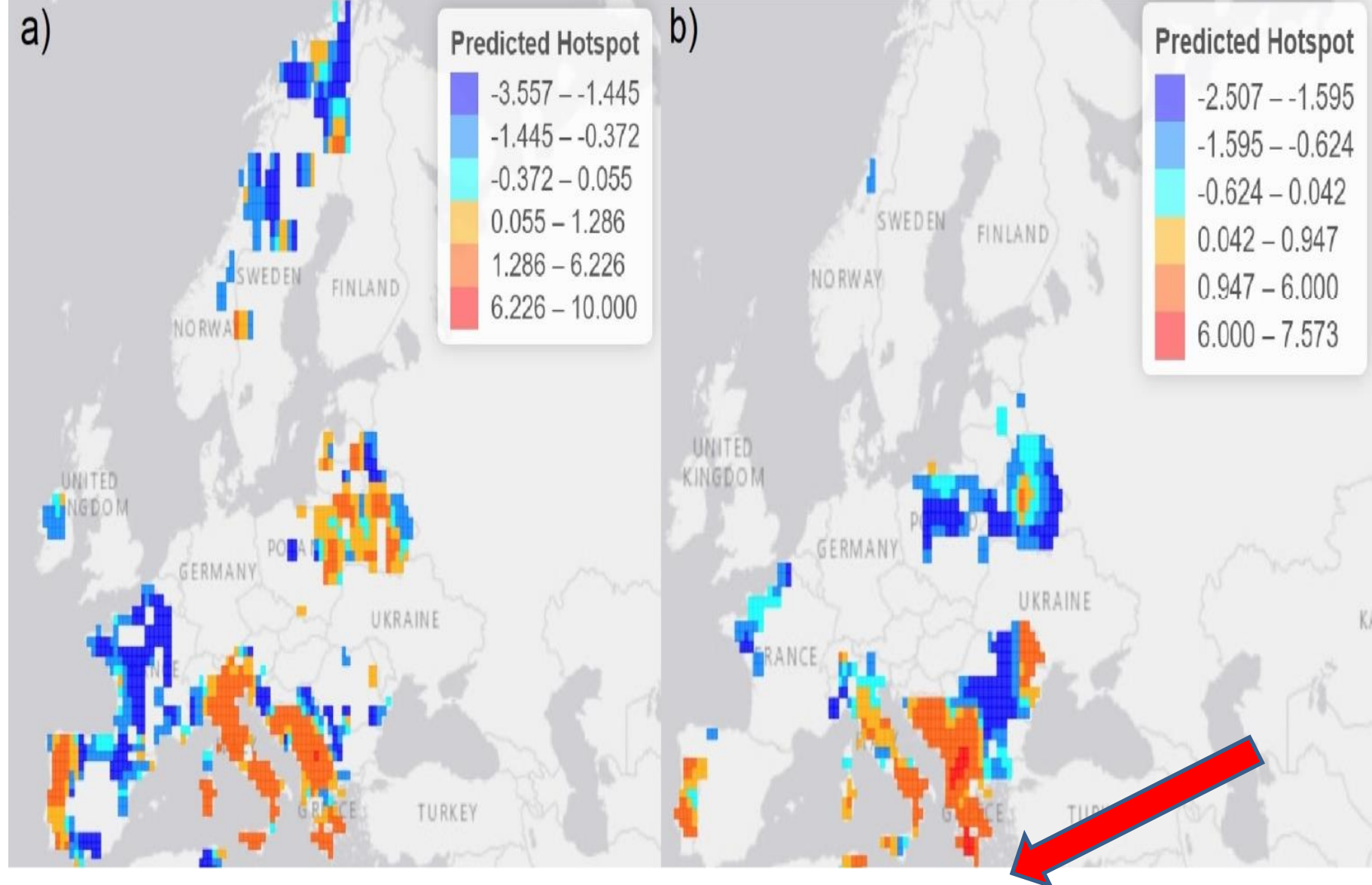
Annex IIA: Percentage of death causes of species reported in Annex IIA, before and after the EU Directive. Numbers over each bar are real values.



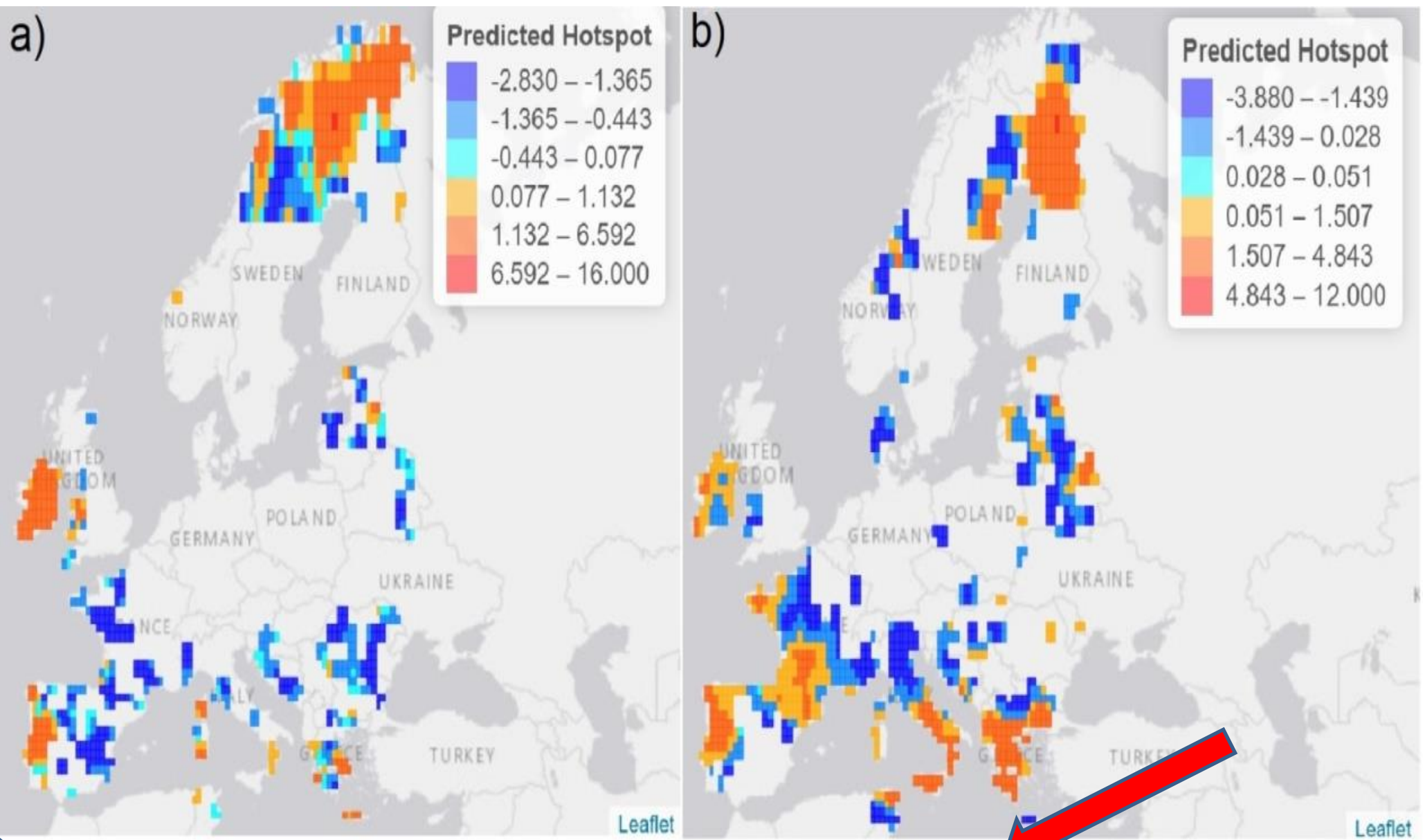
Map series per decade showing events of shot birds of Prey across the flyway



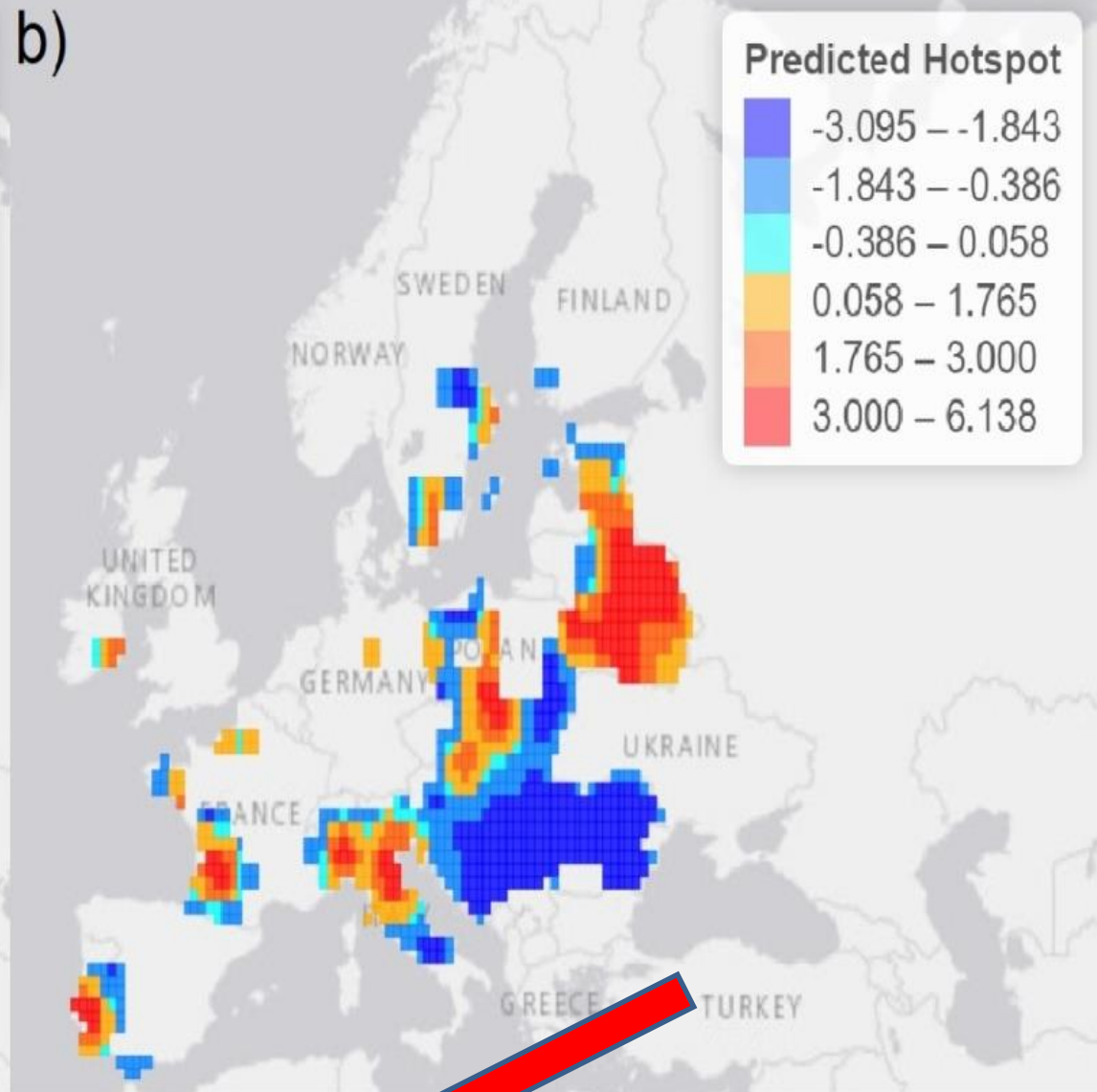
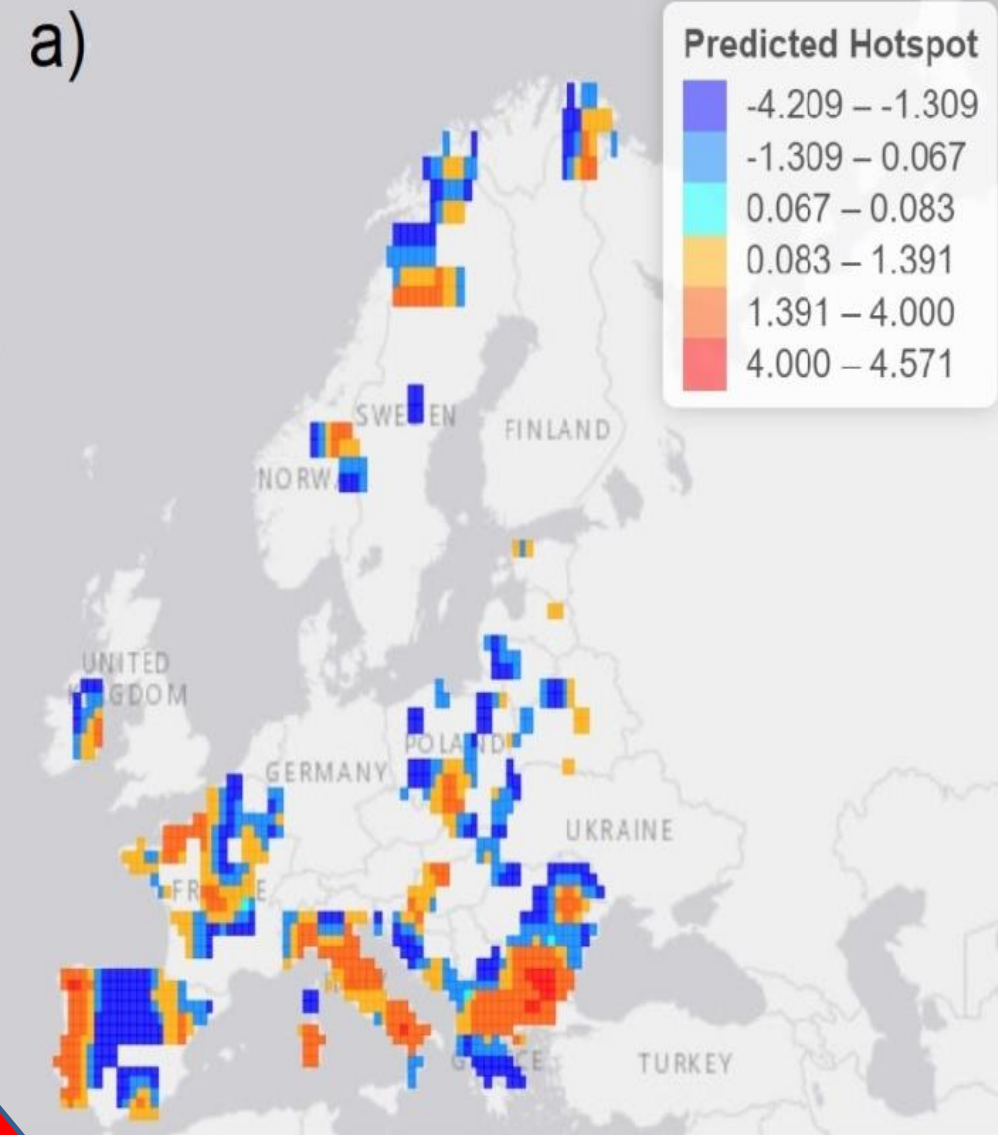




Local black-spot of deliberate killing of species listed in the Annex I, focusing on the European region. Only the worst locations (above the third interquartile of the average distribution of probability) are shown, visualizing them over a 0.5 x 0.5 pixel grid before (a) and after (b) the entry into force of the EU Bird Directive



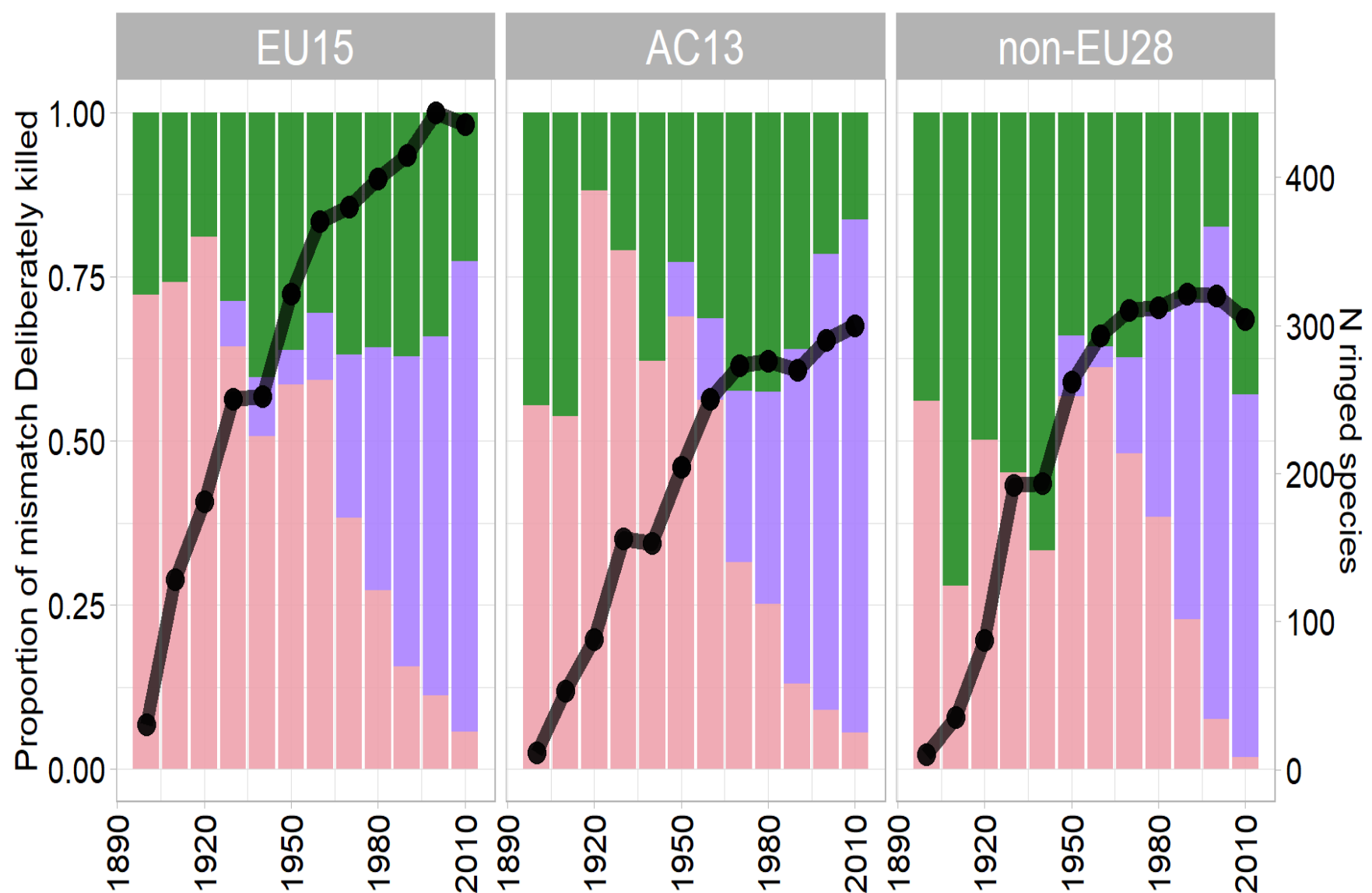
Look at black-spots of deliberate killing of species listed in the Annex IIA during the period (Sept-Mar), focusing on European region and considering only the worst locations, visualizing them over a 0.5 x 0.5 pixel grid before (a) and after (b) the entry into force of the EU Directive



Local black-spot of deliberate killing of species listed in the Annex IIA during the period (May-Aug), focusing on European region and considering only the worst locations visualizing them over a 0.5 x 0.5 pixel grid before (a) and after (b) the entry into force of the EU Directive



***"Look-alike"
problem***



Proportion of Correct (green), Unknown (pink) and Mismatch (light purple) categories over the intentionally killed birds reported per decade in EU15, AC13 and non-EU28 countries separately. The right y-axis and the black line show the number of ringed species (not individuals) recorded per decade

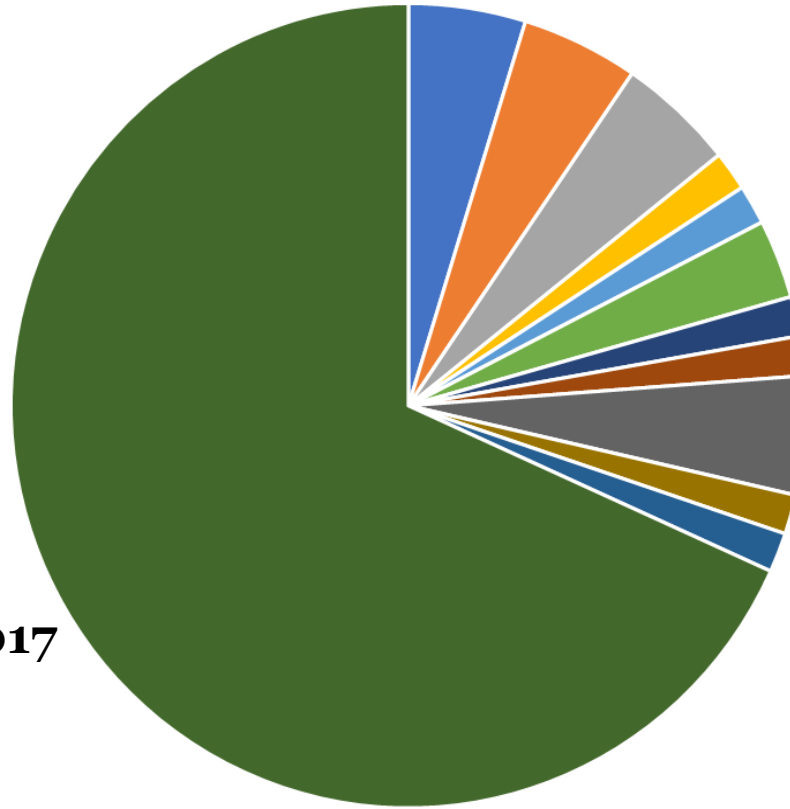
Anas platyrhynchos (listed in Annex IIA)



Total deliberate killed= 60017

Total mismatched= 136

N wrong species=12



- Anas strepera annex_IIA
- Anas acuta annex_IIA
- Anas penelope annex_IIA
- Anser fabalis annex_IIA
- Bucephala clangula annex_IIB
- Aythya ferina annex_IIA
- Phasianus colchicus annex_IIA
- Fulica atra annex_IIA
- Anas crecca annex_IIA
- Anser anser annex_IIA
- Somateria mollissima annex_IIB
- Anas sp. no

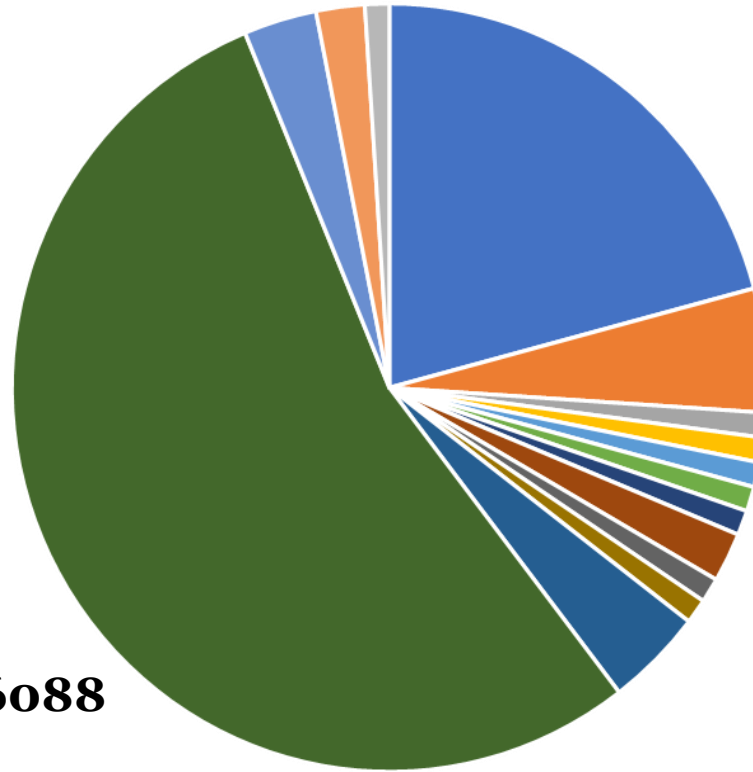
Anas crecca (listed in AnnexIIA)



Total deliberate killed= 26088

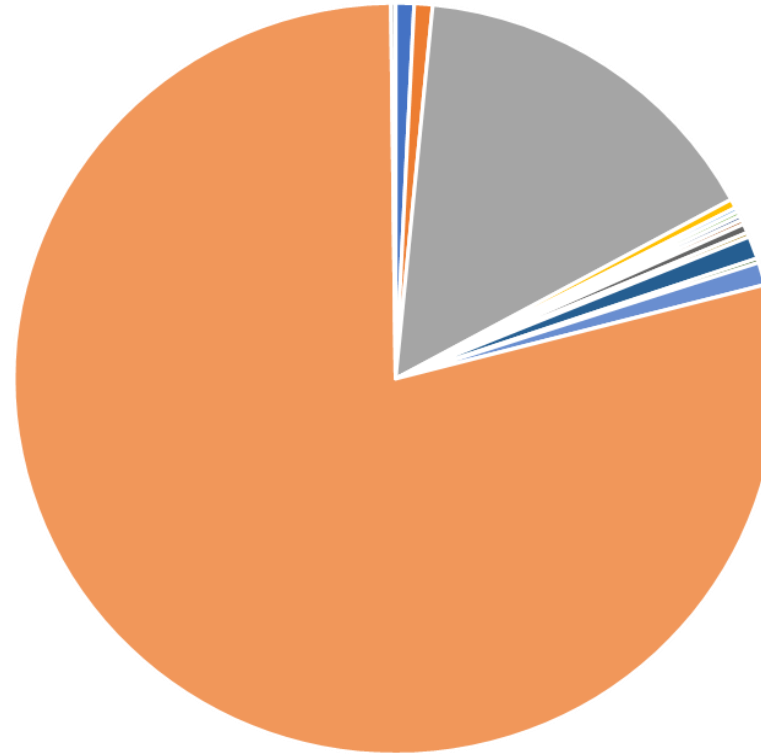
Total mismatched= 103

N wrong species=15



- Anas querquedula annex_IIA
- Anas acuta annex_IIA
- Bucephala clangula annex_IIB
- Anas clypeata annex_IIA
- Anas penelope annex_IIA
- Aythya ferina annex_IIA
- Scolopax rusticola annex_IIA
- Haematopus ostralegus annex_IIB
- Columba palumbus annex_IIA
- Vanellus vanellus annex_IIB
- Anas platyrhynchos annex_IIA
- Anas sp. no
- Anas crecca carolinensis no
- Anas crecca crecca no
- Anas cyanoptera no

Turdus philomelos (listed in AnnexIIB)



- Sturnus unicolor no
- Turdus torquatus no
- Turdus iliacus annex_IIB
- Turdus viscivorus annex_IIB
- Coccothraustes coccothraustes no
- Coturnix coturnix annex_IIB
- Alauda arvensis annex_IIB
- Fringilla montifringilla no
- Turdus pilaris annex_IIB
- Scolopax rusticola annex_IIA
- Sturnus vulgaris annex_IIB
- Vanellus vanellus annex_IIB
- Turdus merula annex_IIB
- Turdus sp. no
- Turdus philomelos philomelos no

- **Total deliberate killed= 14788**
- **Total mismatched= 532**
- **N wrong species=15**



***Intentional killing and legislation
closing comments***



***Intentional killing and legislation
different attitudes, positive trends.....***



***Potential biases in reporting of
intentionally killed birds
closing comments***

***potential for
analyses
FIN, NLA, IT***



***TEMPUS
FUGIT...***

Thanks!

photo Stefano Laurenti



