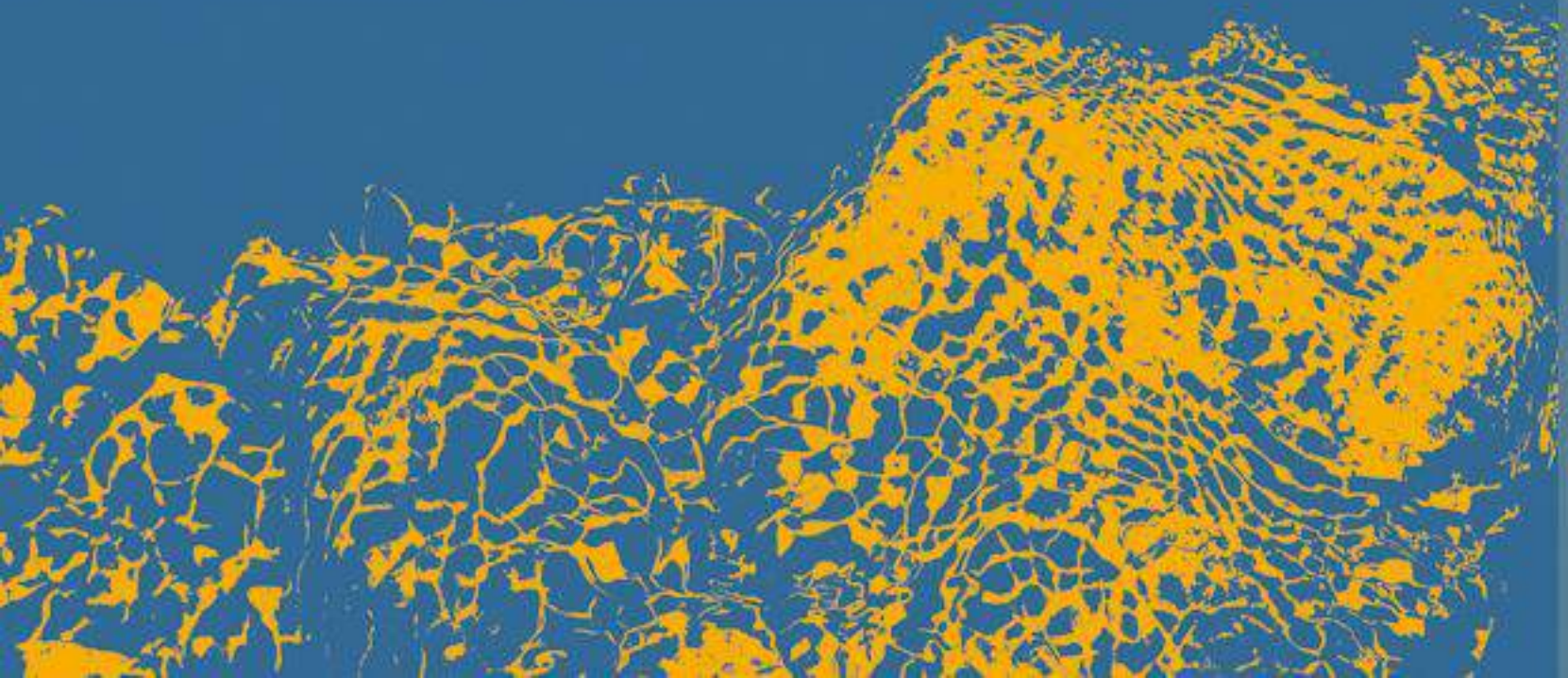
Bavarian Environment Agency

Monitoring Concepts for Birds in the Bavarian Alps

Stefan Kluth & Julia Schwandner



Monitoring system for birds in Germany
Proposed by Federal Agency for Nature Conservation (BfN)

BfN
Bundesamt für Naturschutz

Common Breeding Birds	Rare Breeding Birds	Waterbird Survey	Special protected areas (EU-Birds Directive)
			

© DDA

Monitoring of common birds: Statistical concept

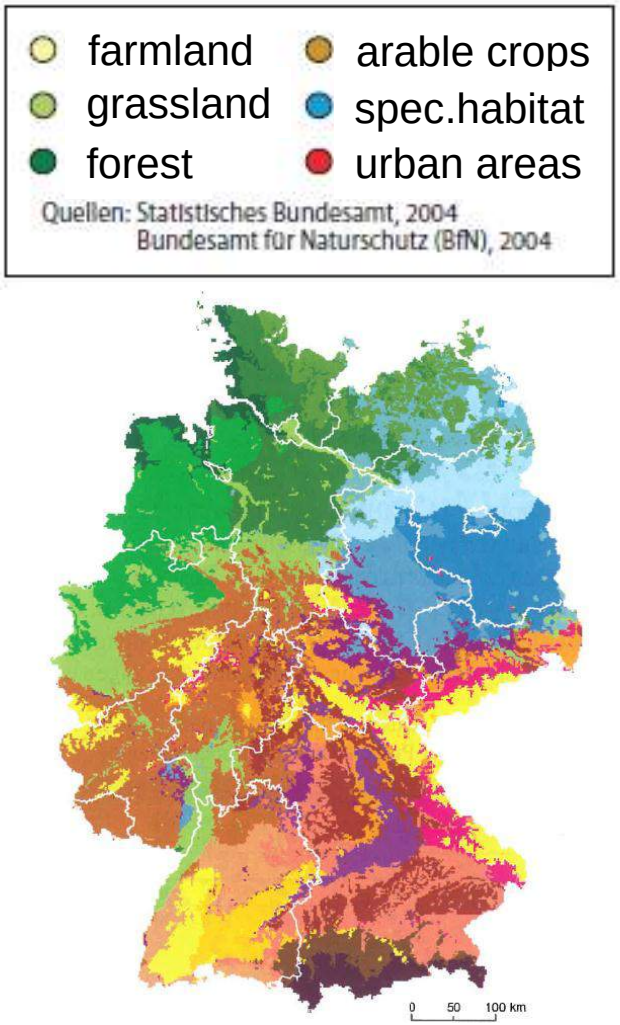
Samples stratified by

- 6 habitat types

&

- 21 types of landscape

- Done by Federal Statistical Office (Wiesbaden)



Common breeding bird survey in Germany

Representative number of habitat samples throughout of Germany

Survey of common breeding birds in Germany: How is it done?

Methodological Standards for Monitoring Breeding-Birds in Germany

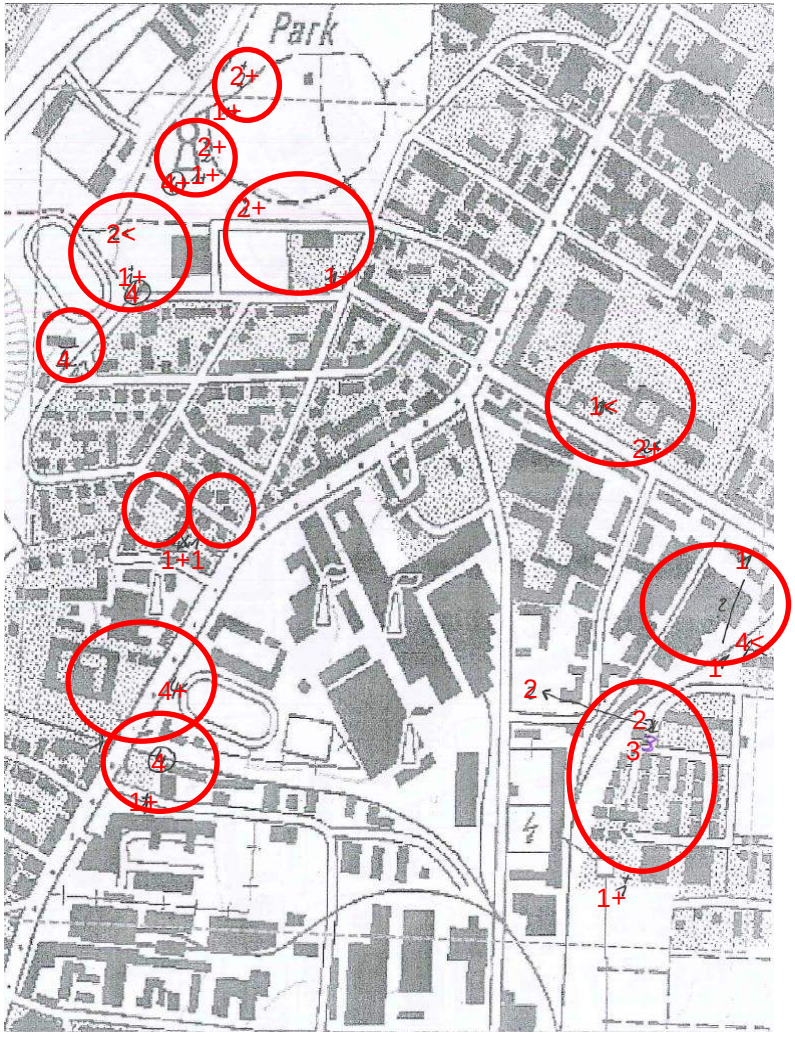
Survey of common breeding birds in Germany: How is it done?

- 1 km² survey area
- Line transect about 3 km
- simplified territory record of birds
- 4 surveys in breeding period
- March 10th to June 20th
- Effort including analysis: 40 h

Survey of common breeding birds in Germany: Result

Great spotted woodpecker

- 4 Surveys
- Every sight counts for this species
- Territorries: 12

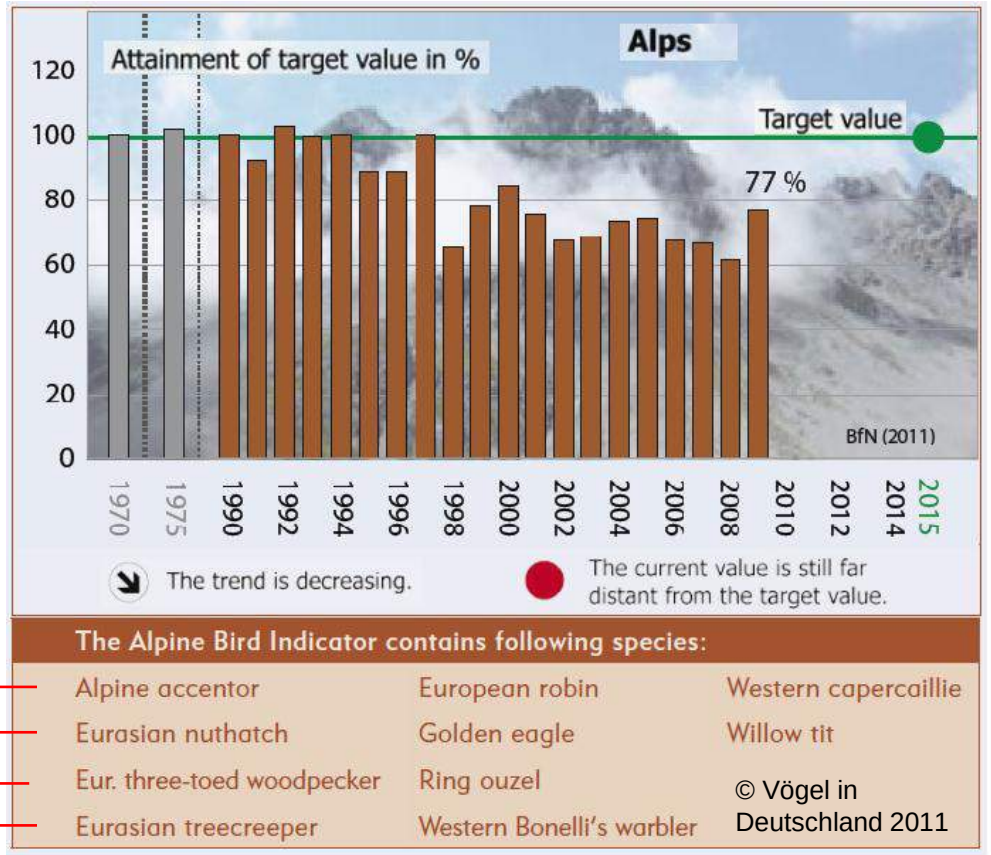


What we can get: Results for Germany

- Trends for indicators

- according to the Convention on Biological Diversity (CBD)

  In Germany:
  National Biodiversity Strategy (NBS)



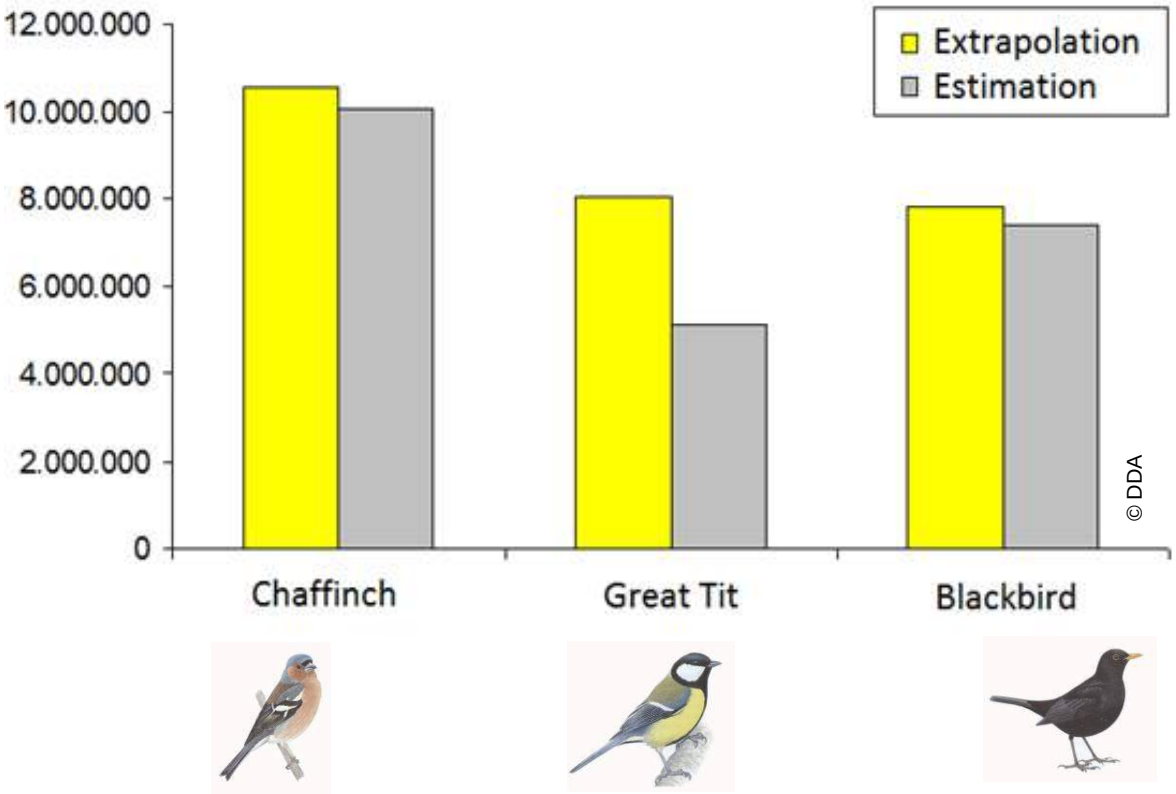
What we can get: Results for Germany

- Trends for indicators
- Population size

  by TRIM (TRends and Indices for Monitoring Data)

  strong statistical package: interpolation of missing monitoring data

  www.cbs.nl



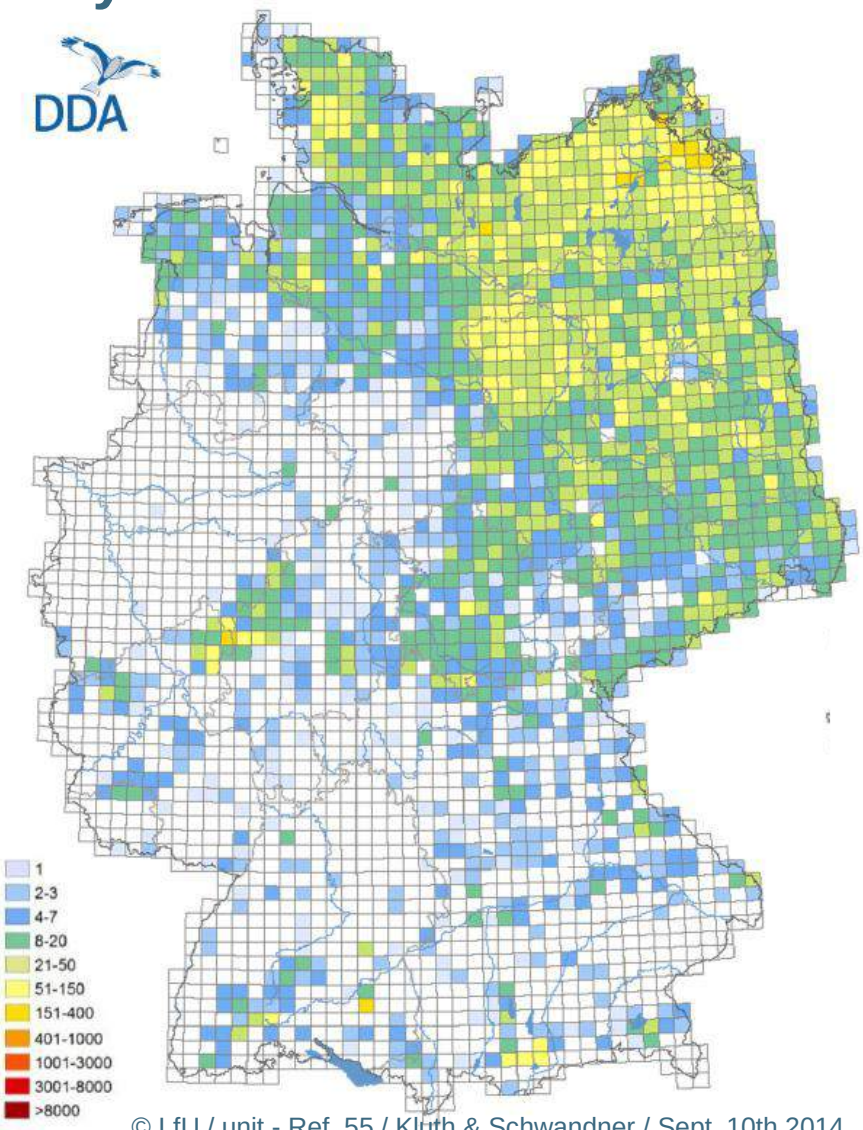
What we can get: Results for Germany

- Trends (indicators)
- Population sizes
- Distribution (modeling)

© ADEBAR: Atlas der Brutvogelarten Deutschlands, in press

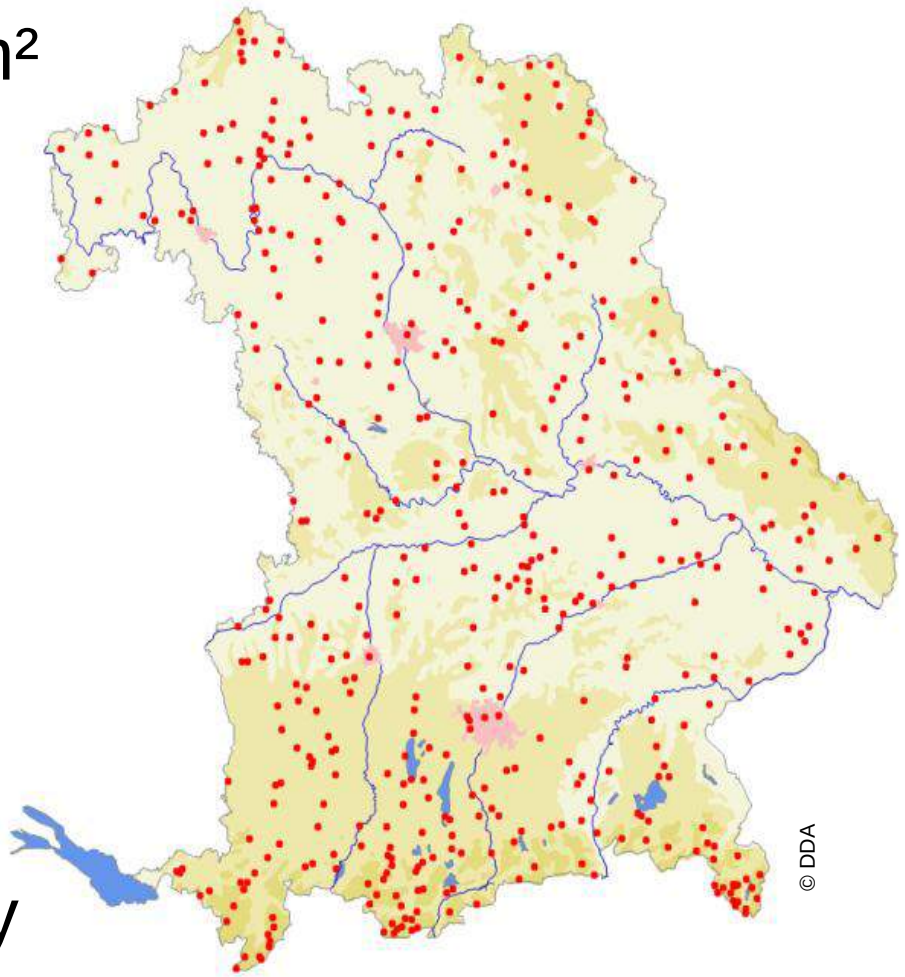
What we can get: Results for Germany

- Trends (indicators)
- Population sizes
- Distribution (modeling)
- Distribution (atlas survey)



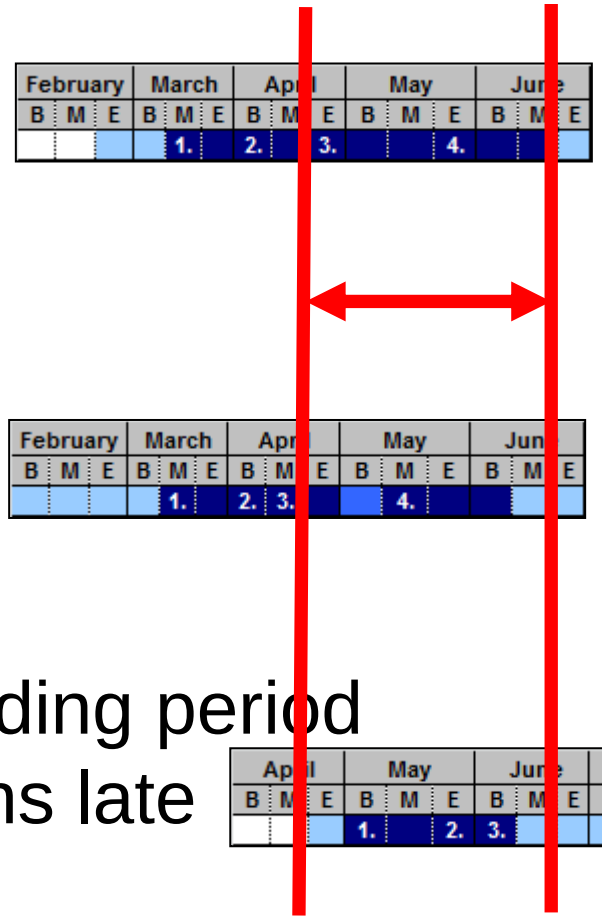
Monitoring of common breeding birds in Bavaria – including Alps

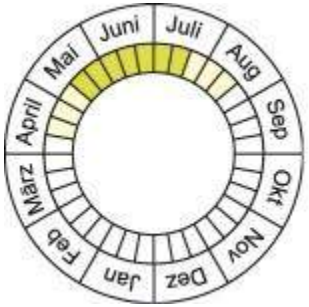
- 450 study plots of 1x1 km²
- 53 % currently in examination
- Representing all habitats and landscapes
- Performance by voluntary ornithologists

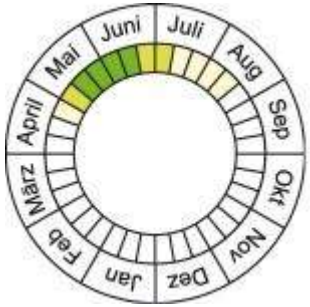


Why the concept did not fit in the Alps: biological reasons

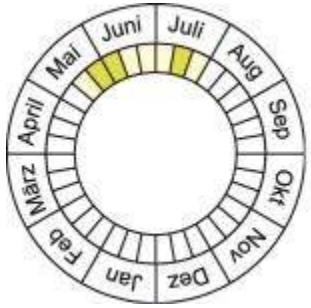
- Short time frame





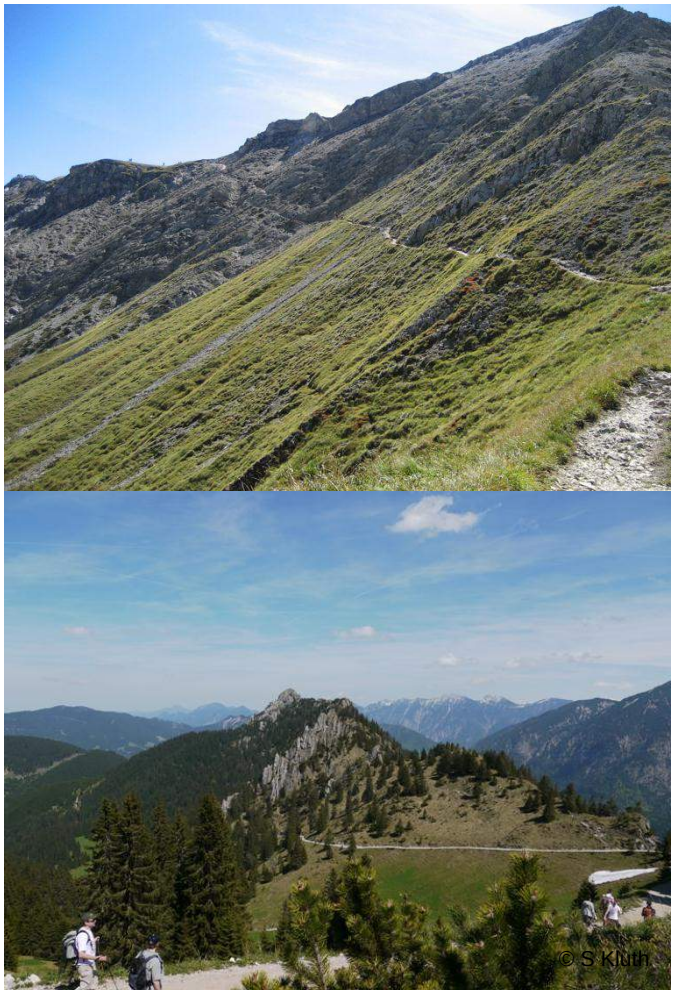


- Breeding period begins late



Why the concept did not fit in the Alps: practical reasons

- Short time frame
- short breeding period
- Walkability
- Reachabilty



Why the concept did not fit in the Alps: practical reasons

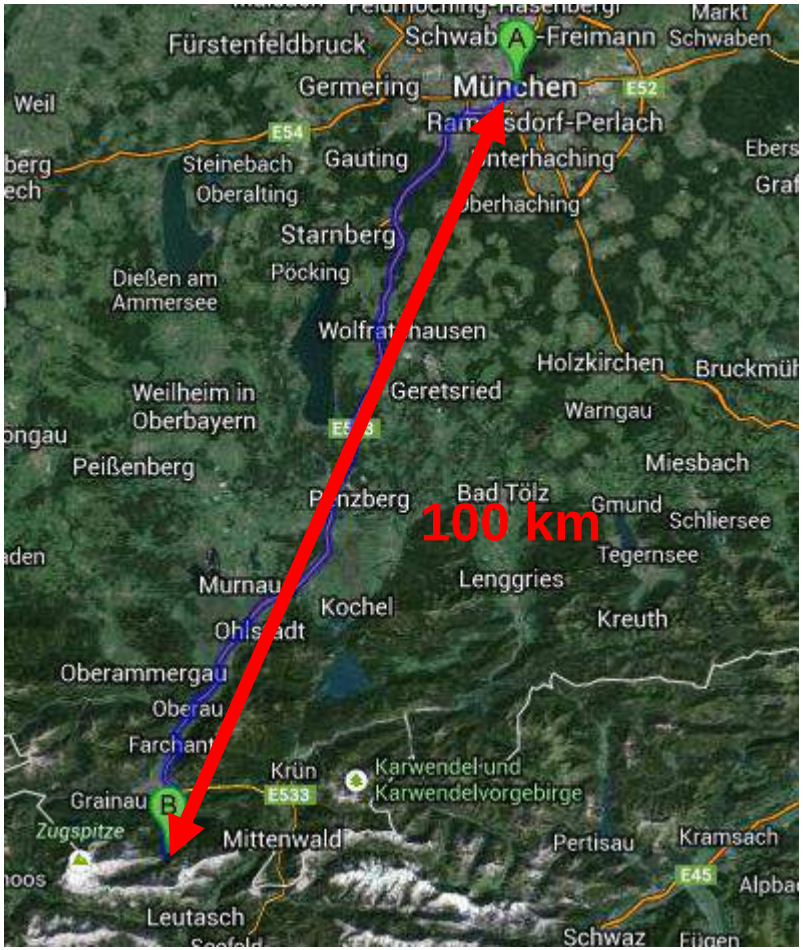
- Short time frame
- short breeding period
- Walkability
- Reachabilty

Why the concept did not fit in the Alps: practical reasons

- Short time frame
- short breeding period
- Walkable
- Reachable

- Long journey from towns

→Survey is not or difficult to achieve by volonteers



Why the concept did not fit in the Alps: climatic reasons

- Short time frame
- short breeding period
- Walkable
- Reachable
- Long journey from towns
- Weather conditions: late snowfall
- Avalanches in springtime

→Sample plots are unattractive or impossible

Why the concept did not fit in the Alps: climatic reasons

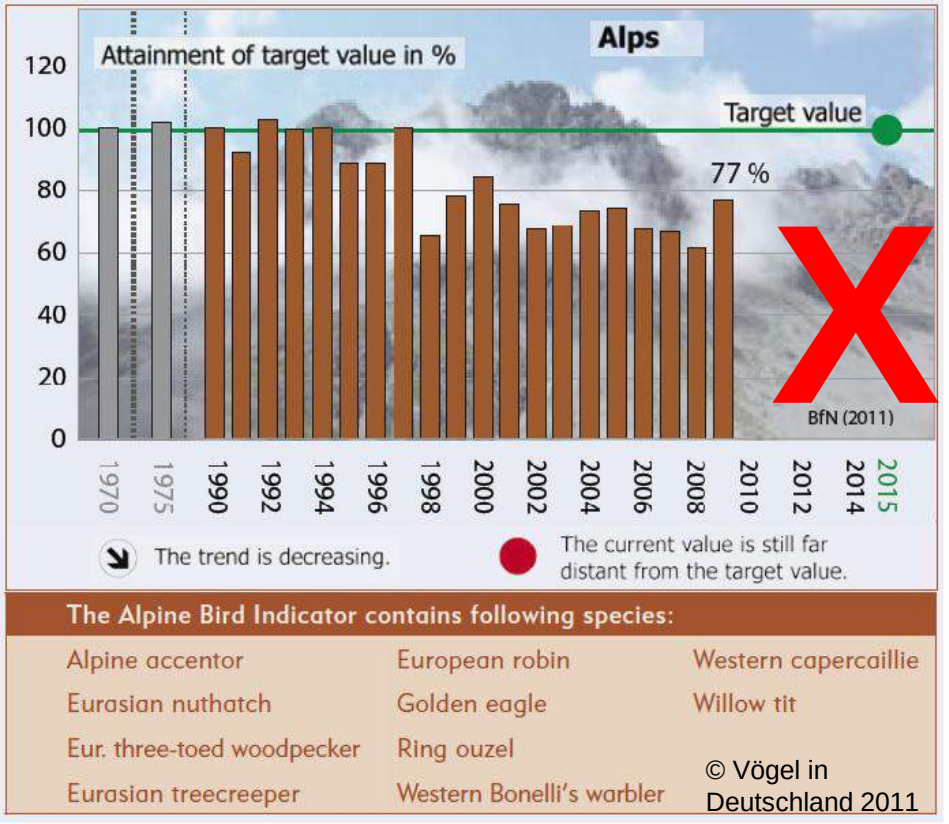
- Short time frame
- short breeding period
- Walkable
- Reachable
- Long journey from towns
- Weather conditions: late snowfall
- Avalanches in springtime

→Sample plots are unattractive or impossible

Why the concept did not fit in the Alps: consequences

- Insufficient study plots
- Insufficient data
- Trend calculation impossible
- Alpine indicator is not significant

→No report possible - the indicator was stopped 2010



Monitoring system of birds in Bavaria: what we have done

Common Breeding Birds

Rare Breeding Birds

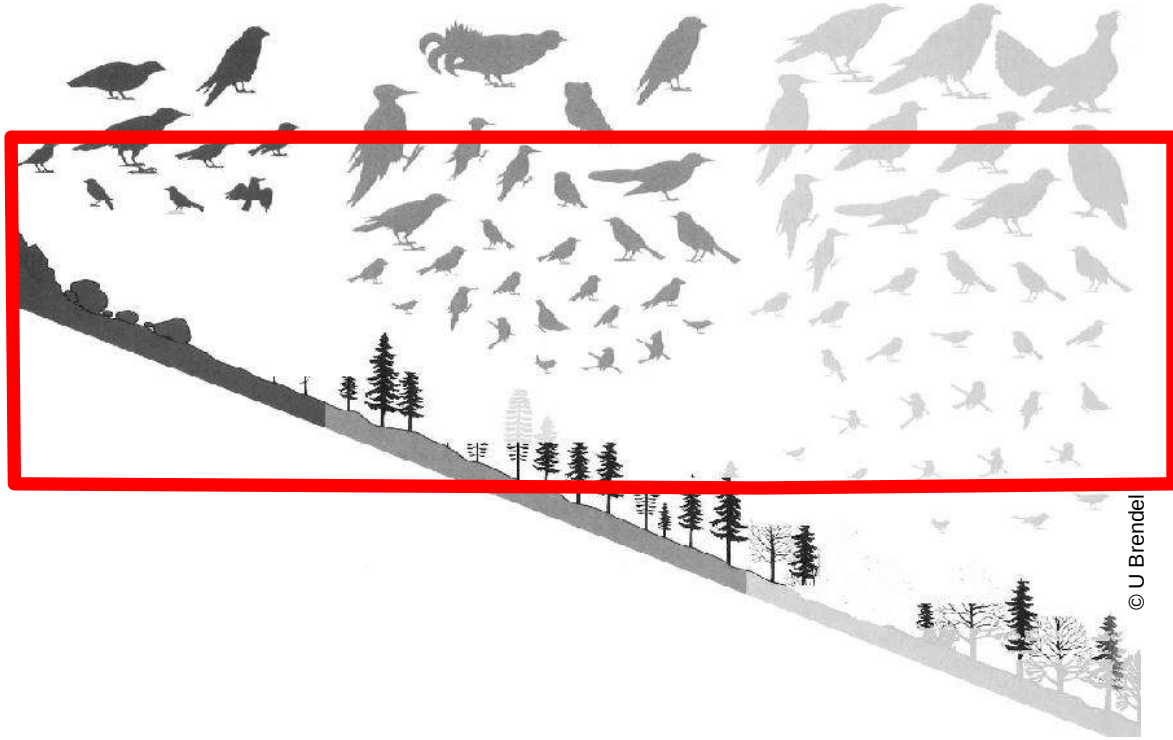
Alpine Breeding Birds

Waterbird Survey

© DDA

What fits better: an adjusted concept

- Preselection of study plots by coordinator
- Adjustments to weather & zoonosis



What fits better: an adjusted concept

- Preselection of study plots by coordinator
- Adjustments to climate & zoonosis
- „Hot spots“ for the alpine species set

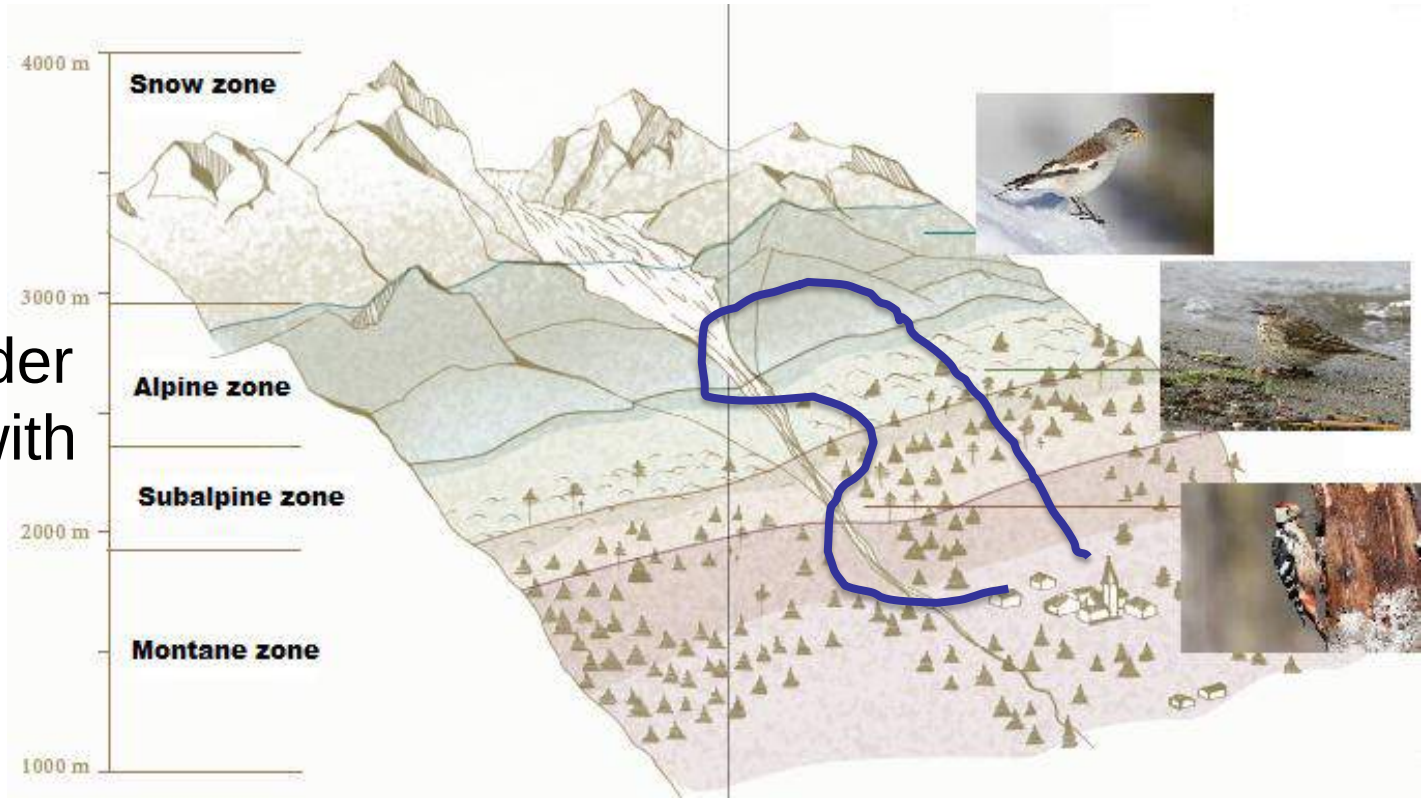
What fits better: an adjusted concept

- Preselection of study plots by coordinator
- Adjustments to climate & zoonosis
- „Hot spots“ for the alpine species set

Methodologic adaptations

- Reduce inspections to three

- Stop and go allowed:
  - voice recorder
  - searching with binoculares



Summary

From a disaster to best practice:

We hope that we can solve:

- The reactivation of the alpine indicator
- calculating trends for alpine Birds
- building distribution maps

One open question

How many study areas will be required?

- Optimum: if all species occur in a study area
- Probability small
- Otherwise: 20-30 areas are needed for each species

Bavarian Environment Agency

Thanks for your attention

Contact & information
Julia Schwandner +49 8821 9430113
Julia.Schwandner@luf.bayern.de
Stefan.Kluth@lfu.bayern.de