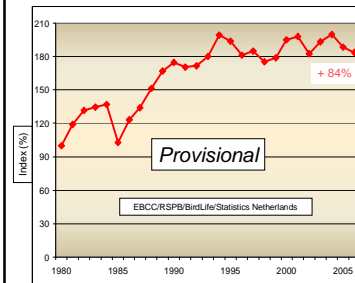


## Pilot indicator of inland wetlands

Jana Škorpilová, Petr Voříšek

## First very preliminary inland wetland indicator presented at the last workshop 2009



### 11 species included:

*Acrocephalus arundinaceus*  
*Acrocephalus*  
*schoenobaenus*  
*Acrocephalus scirpaceus*  
*Actitis hypoleucos*  
*Anas platyrhynchos*  
*Ardea cinerea*  
*Cettia cetti*  
*Circus aeruginosus*  
*Cisticola juncidis*  
*Emberiza schoeniclus*  
*Motacilla cinerea*

## Updated version of Inland Wetland Indicator (IWI)

### What we consider as inland wetland species?

- definition from Tucker & Evans (1997) used
- northern mires and similar habitats not included
- distinction between rivers, lakes and marshes → 3 main sub-types of inland wetland habitat

### Potential weaknesses to be discussed and resolved

Classification of some habitat types connected with rivers and lakes – e.g. littoral habitats or reedbeds

Additional sources to be used for classification – Birds of the Western Palaearctic

## Sub-types of inland wetland species

### Overall category

#### Inland wetlands

All species classified as characteristic for inland wetlands in Tucker and Evans (1997) but each species is checked and could be excluded in case of serious doubts.

### 3 sub-types

#### Waterways

Species classified as characteristic for river habitats in Tucker and Evans (1997), but marshland like species are not included in this category.

#### Open waters

Species classified as characteristic for lakes in Tucker and Evans (1997), but marshland like species are not included.

#### Marshes

Species classified as characteristic for marshes in Tucker and Evans (1997), but can also include species which are classified as characteristic for lakes or rivers but depend on marshland like vegetation.

## Purpose of inland wetlands indicators

### Preliminary types of indicators suggested for discussion (not ultimate list)

Overall indicator of state of bird communities characteristic for inland wetlands

Indicators of state of bird communities characteristic for three main sub-types of inland wetland habitats

Indicator of threats/responses

Policy driven indicators

## Source data and method

Species classification by Tucker and Evans (1997)

Species indices currently available in the PECBMS data set (published species only)

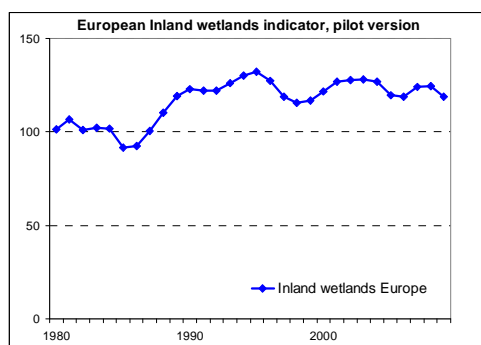
Indicator has been calculated using geometric mean of indices

No weighting used

TrendSpotter used to compute smoothed version of the indicator and to test a difference of the indicator value in comparison with the last year of time series

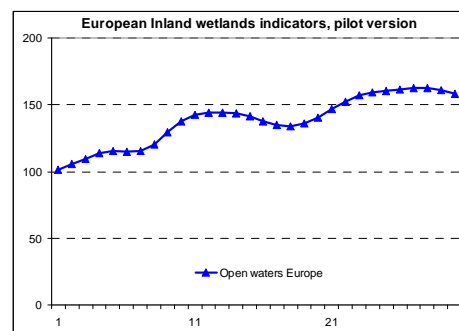
## European Inland wetlands indicator

Smoothed version, 17 species.



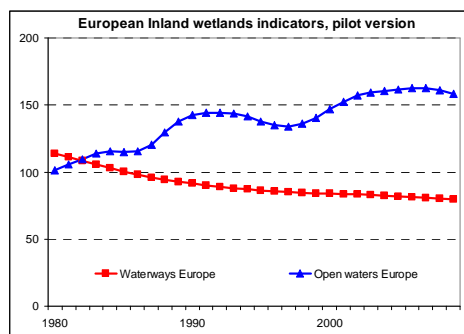
## European inland wetlands indicator - 3 main habitat sub-types

Smoothed version, open waters (5 sp), waterways (2 sp), marshes (9 sp)



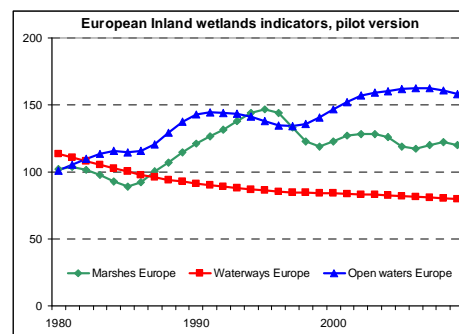
## European inland wetlands indicator - 3 main habitat sub-types

Smoothed version, open waters (5 sp), waterways (2 sp), marshes (9 sp)



## European inland wetlands indicator - 3 main habitat sub-types

Smoothed version, open waters (5 sp), waterways (2 sp), marshes (9 sp)



## 17 species included in the first inland wetland indicator

| Species scientific name    | Inland wetlands habitat sub-type |
|----------------------------|----------------------------------|
| Ardea cinerea              | Open waters                      |
| Cygnus olor                | Open waters                      |
| Anas platyrhynchos         | Open waters                      |
| Gallinula chloropus        | Open waters                      |
| Fulica atra                | Open waters                      |
| Actitis hypoleucos         | Waterways                        |
| Motacilla cinerea          | Waterways                        |
| Circus aeruginosus         | Marshes                          |
| Gallinago gallinago        | Marshes                          |
| Tringa totanus             | Marshes                          |
| Cettia cetti               | Marshes                          |
| Cisticola juncidis         | Marshes                          |
| Acrocephalus schoenobaenus | Marshes                          |
| Acrocephalus scirpaceus    | Marshes                          |
| Acrocephalus arundinaceus  | Marshes                          |
| Emberiza schoeniclus       | Marshes                          |
| Tringa ochropus            | Not classified                   |

## Questions to be discussed at the workshop

What kind of inland wetland bird indicator we need to develop further, for which policy purpose?

Which approaches need to be explored further?

Potential problems in acquiring good data for IWI?

Should we focus on developing Indicator of threats/responses and/or Policy driven indicators as well?