



# Databases as tools for conservation of herpetofauna and odonatofauna: the case of the Basque Country

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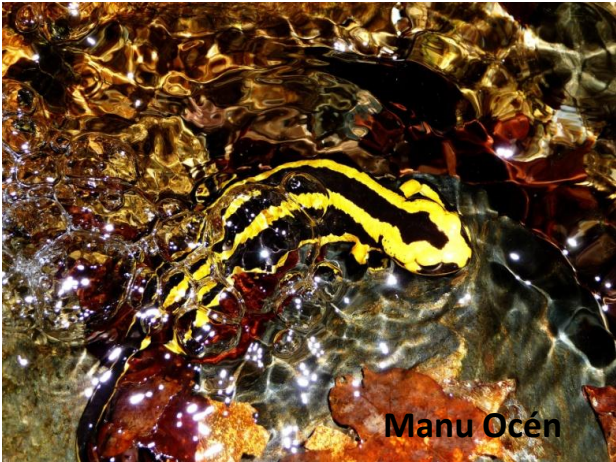


# **INTRODUCTION: background**

The ultimate goal:  
**preserve biodiversity and ecosystem services**

The main question:  
**How much does the current available  
information contribute to this goal?**

# INTRODUCTION: first databases of herpetofauna and odonafauna of the Basque Country



Manu Océn



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# INTRODUCTION: databases as tools to...

... contribute to the ultimate goal:

**Preserve herpetofauna and odonatofauna and ecosystem services**



...answer the main question:

**How much does the current available information on herpetofauna and odonatofauna contribute to this goal?**

**Assumed by their  
indicator, umbrella,  
etc. condition**

# **METHODS**

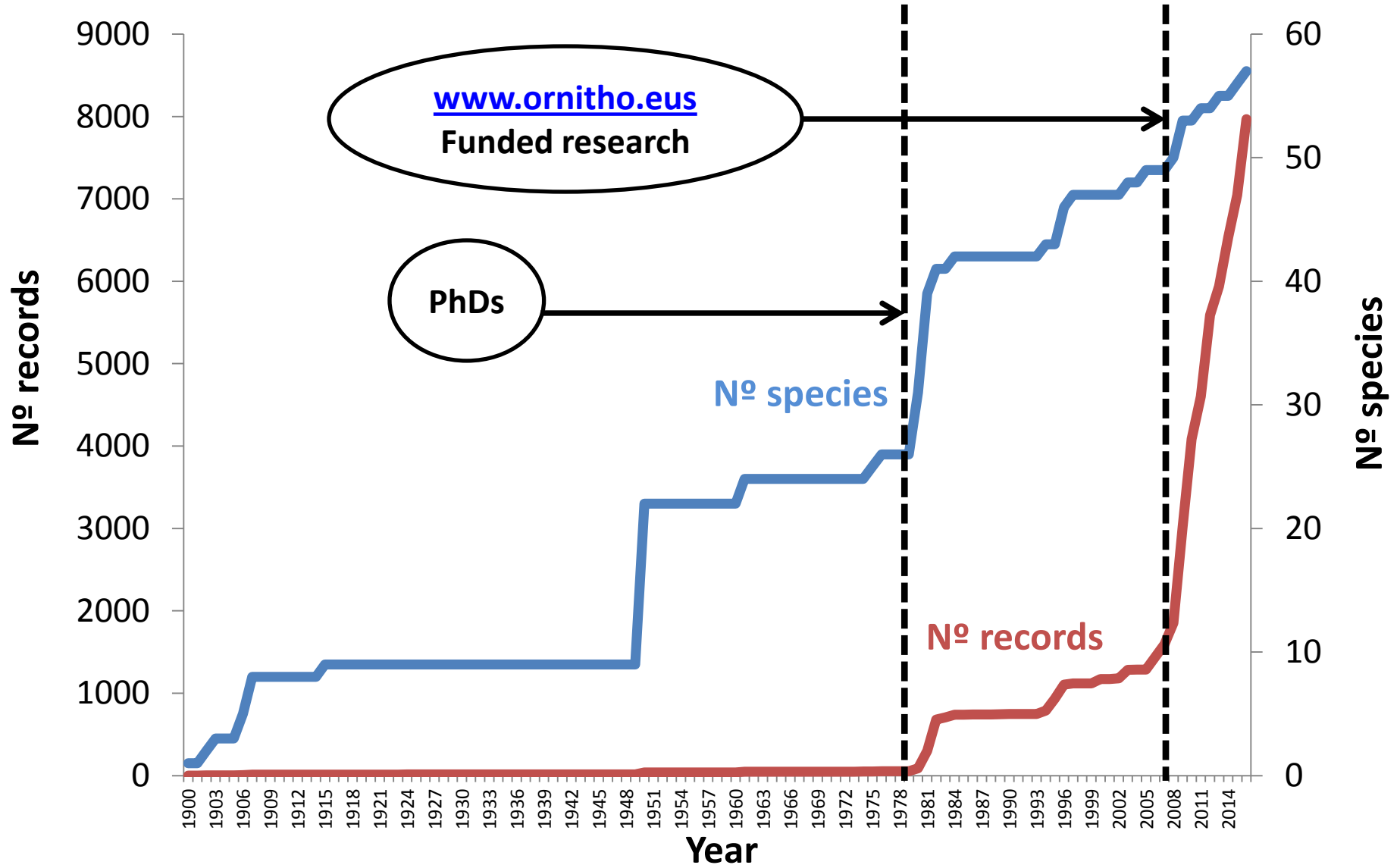
Review of available data

Analysis of quality of data

Identification of driving forces

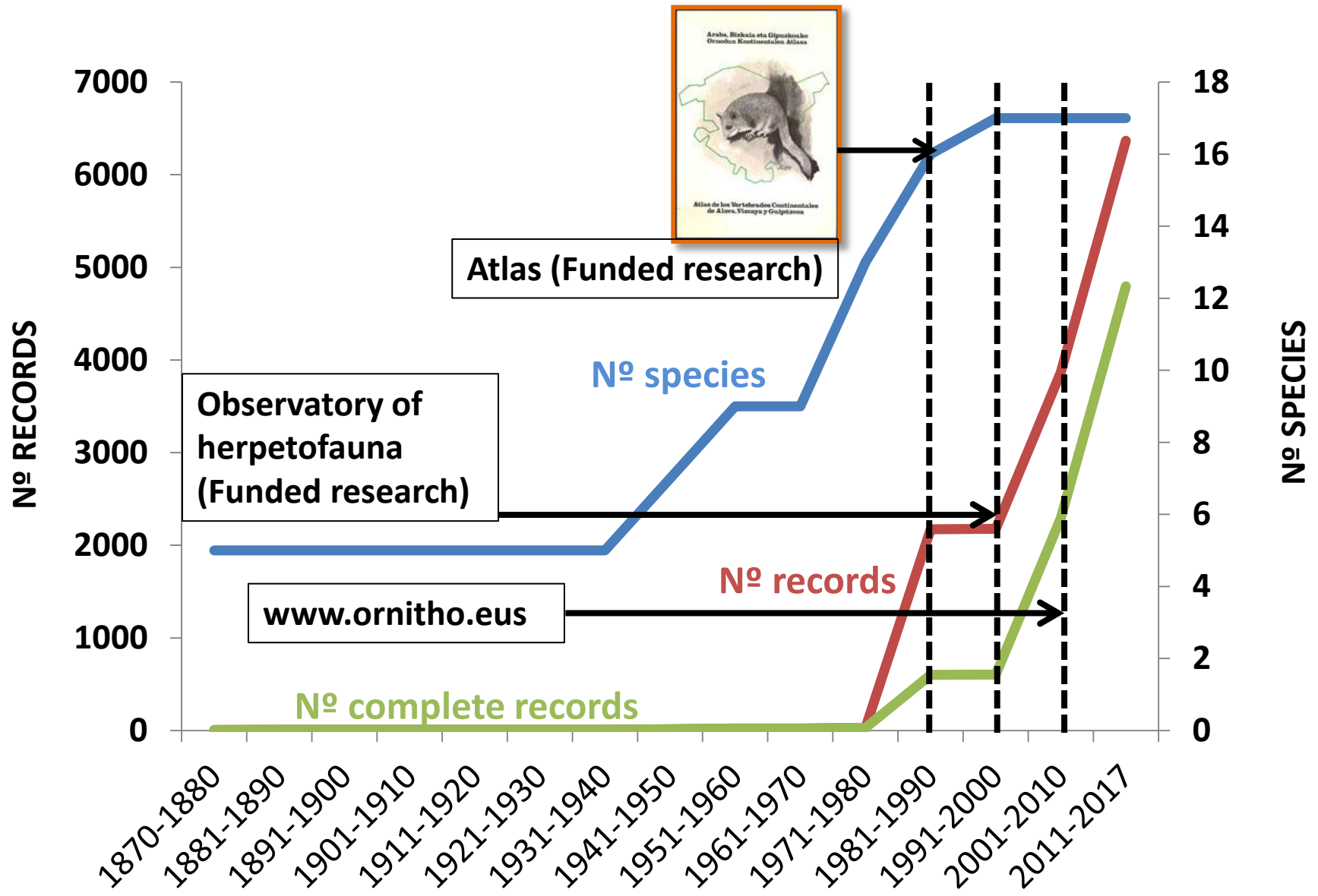
# QUALITY OF DATA

# RESULTS: inventory completeness (Odonatofauna)



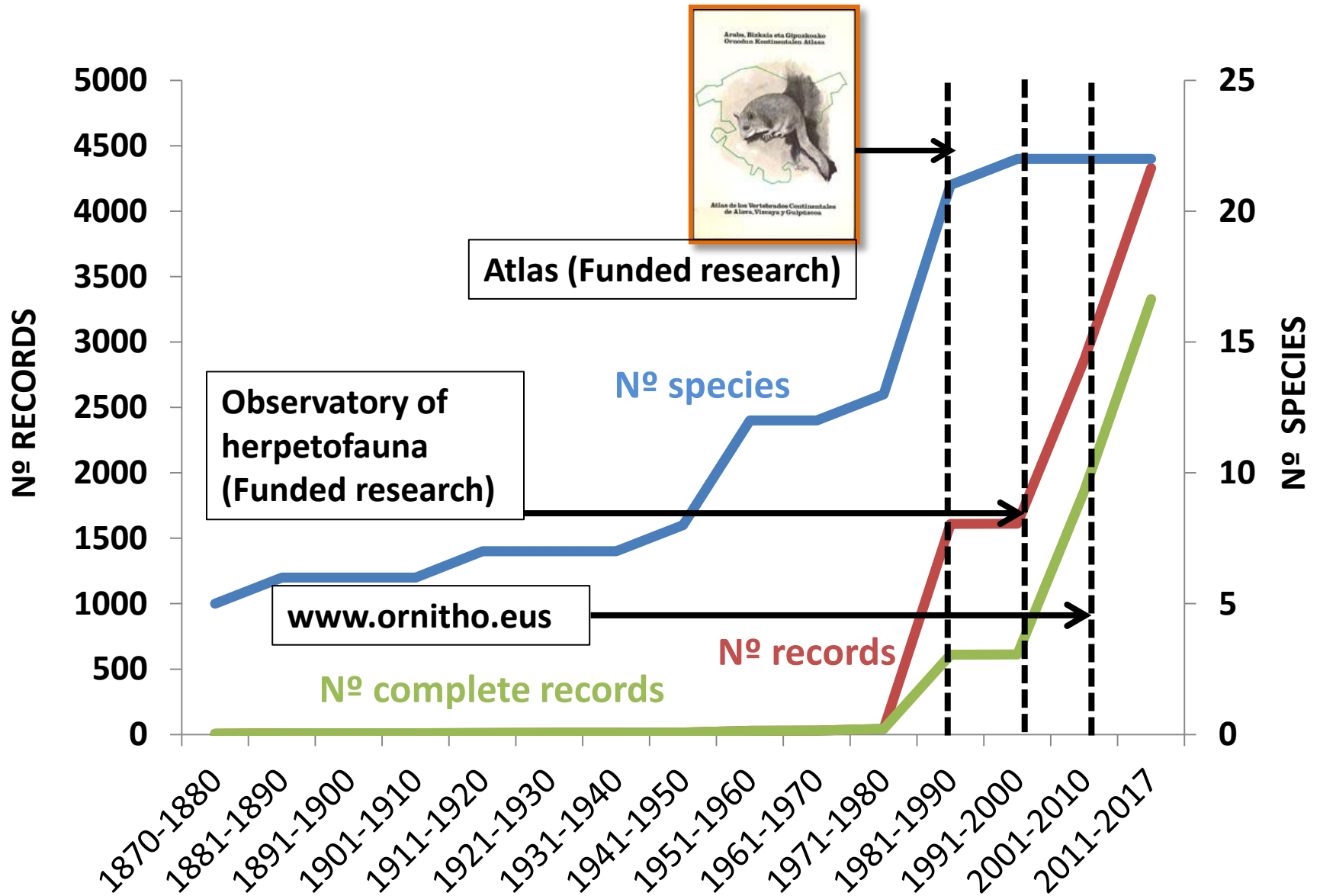
One record: one or more individuals of the same species in the same coordinates on the same date.

# RESULTS: inventory completeness (Amphibians)

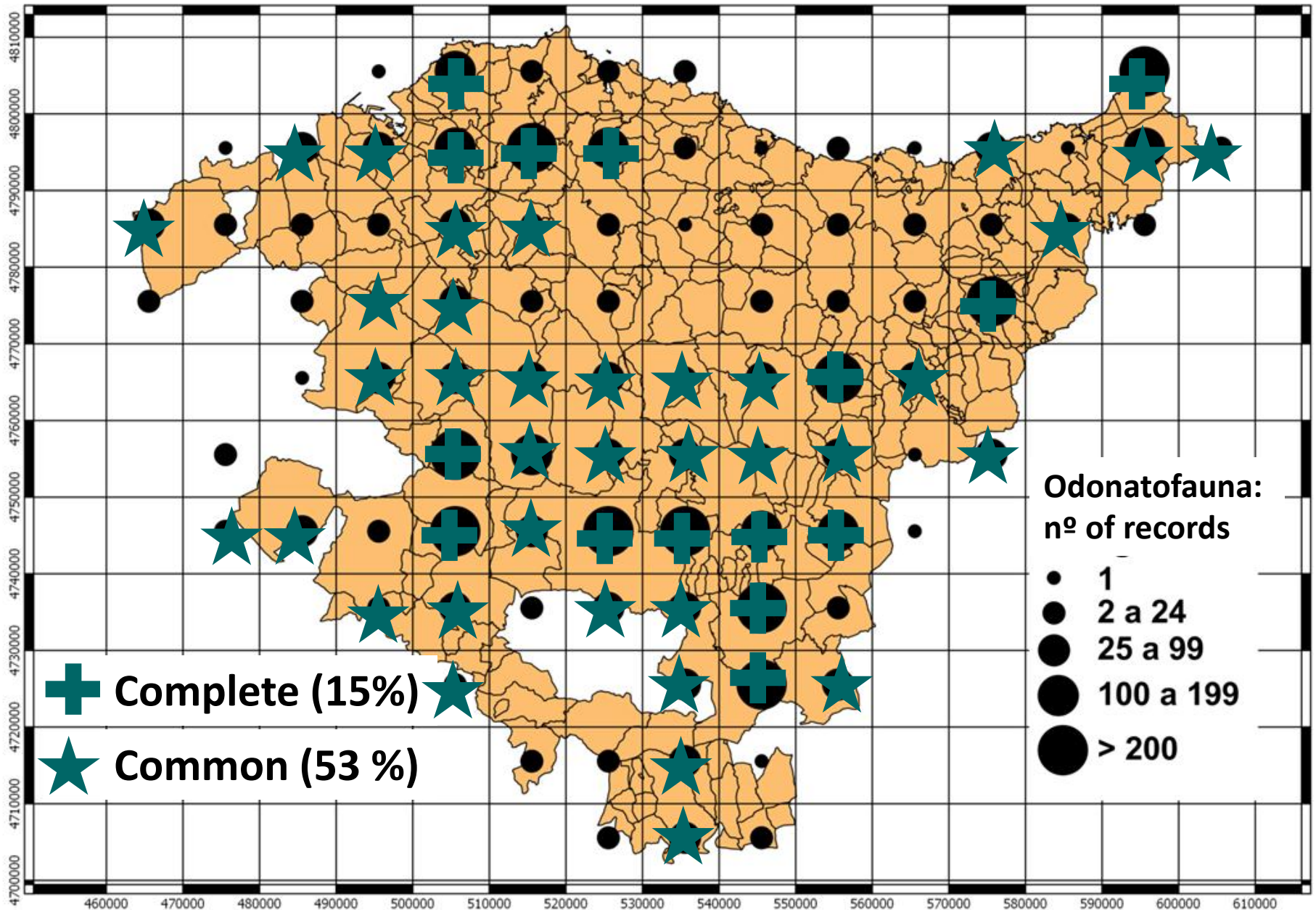




# RESULTS: inventory completeness (Reptiles)

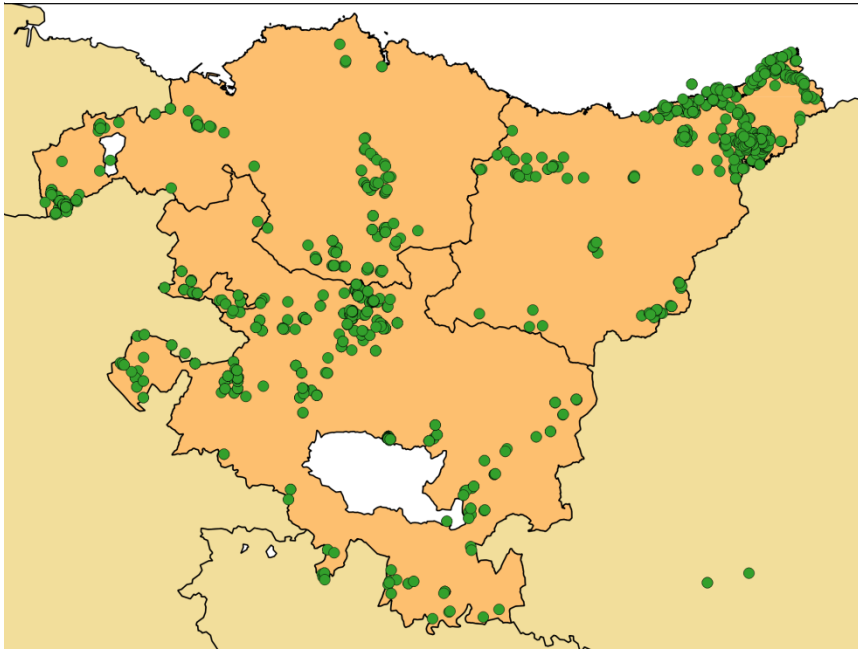


# RESULTS: 10 X 10 km inventory completeness

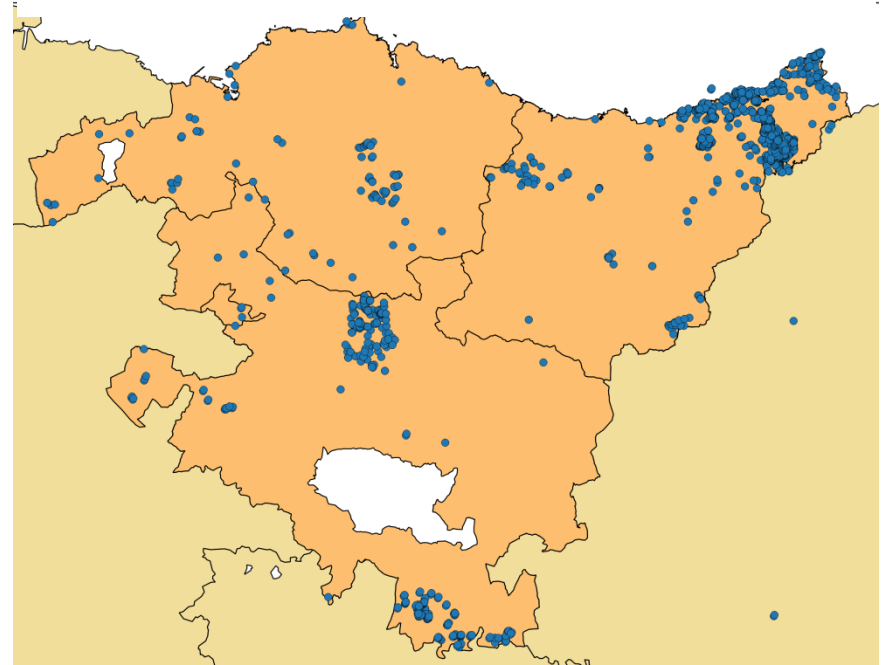


# RESULTS: 10 X 10 km inventory completeness was complete before 1985 but since then...

## AMPHIBIANS

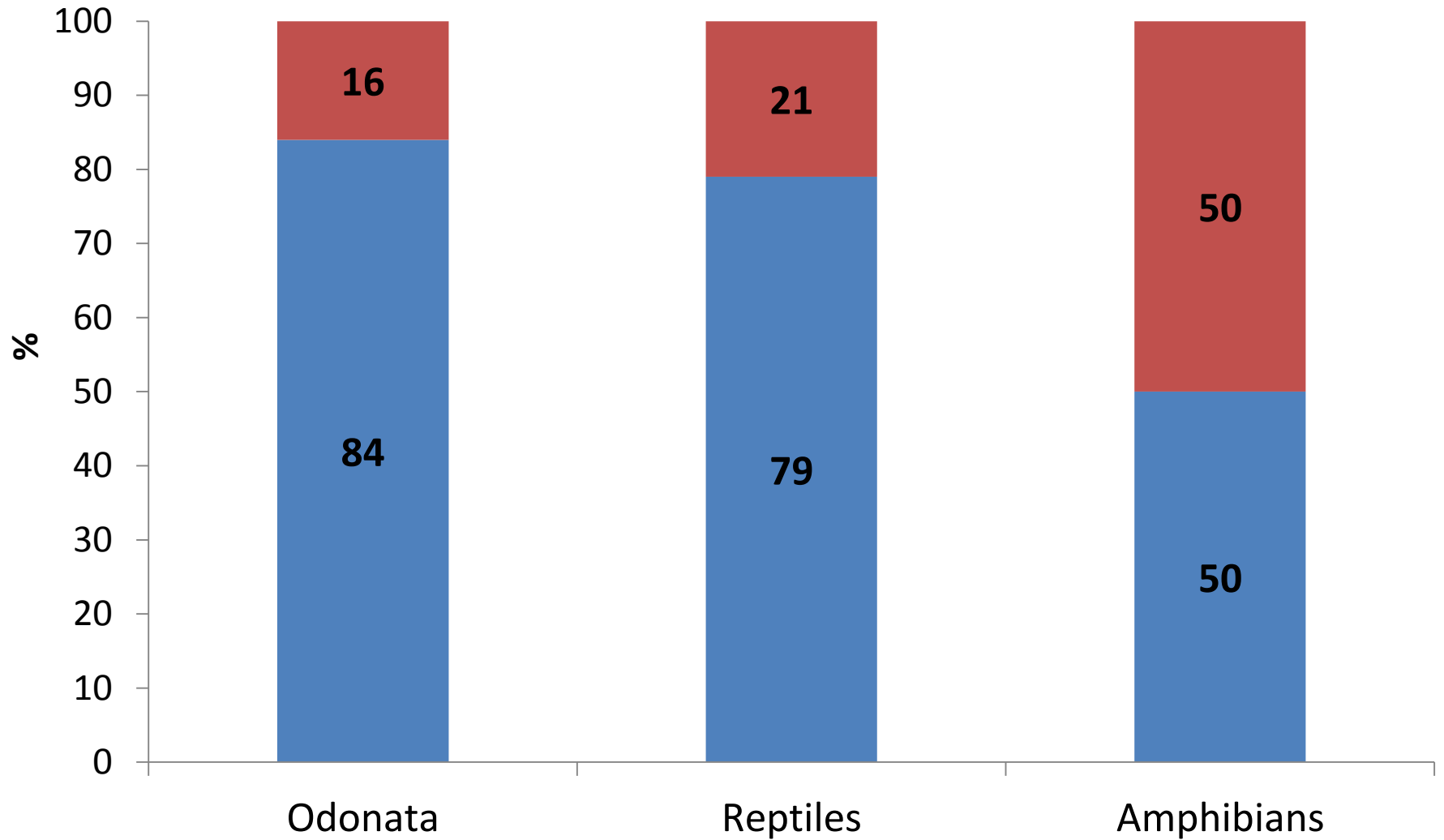


## REPTILES



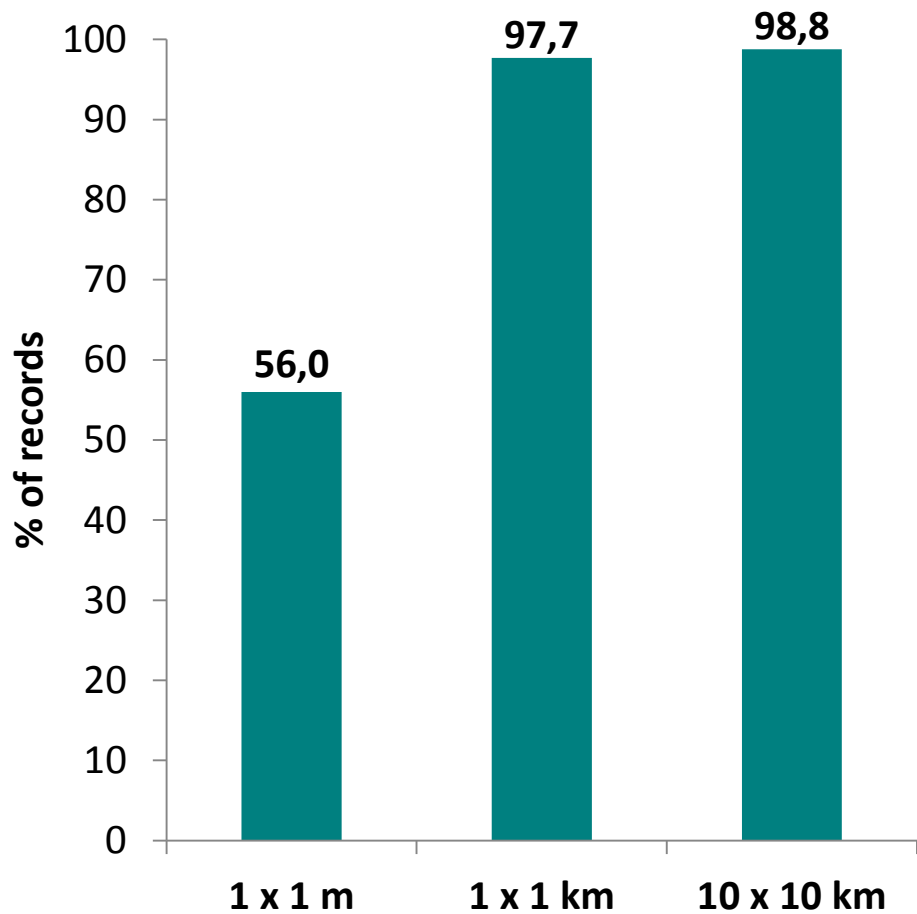
# RESULTS: % of works focused on...

■ ... ecology    ■ ...records

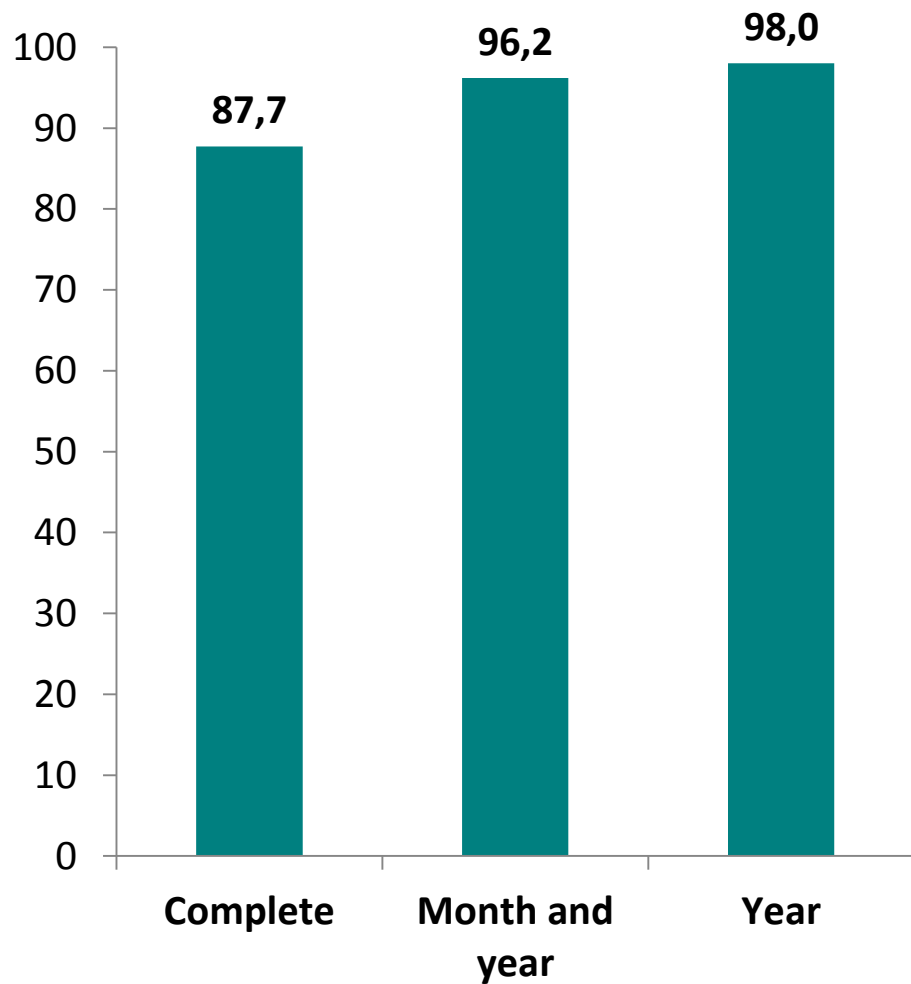


# RESULTS: information for further analysis

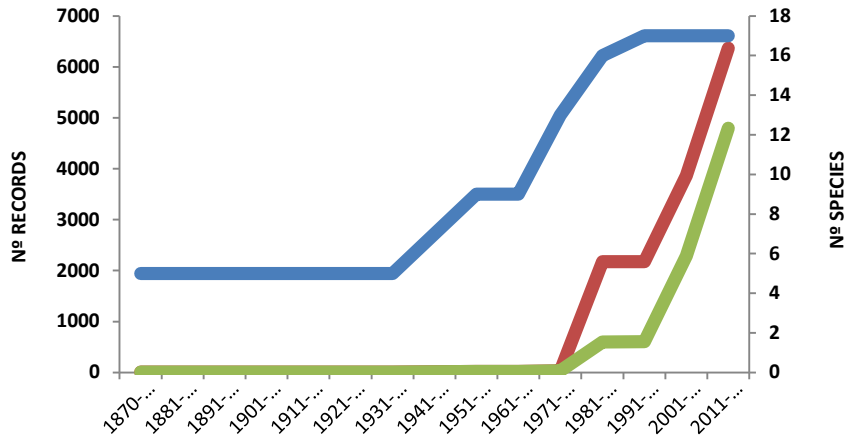
Odonatofauna: coordinate precision



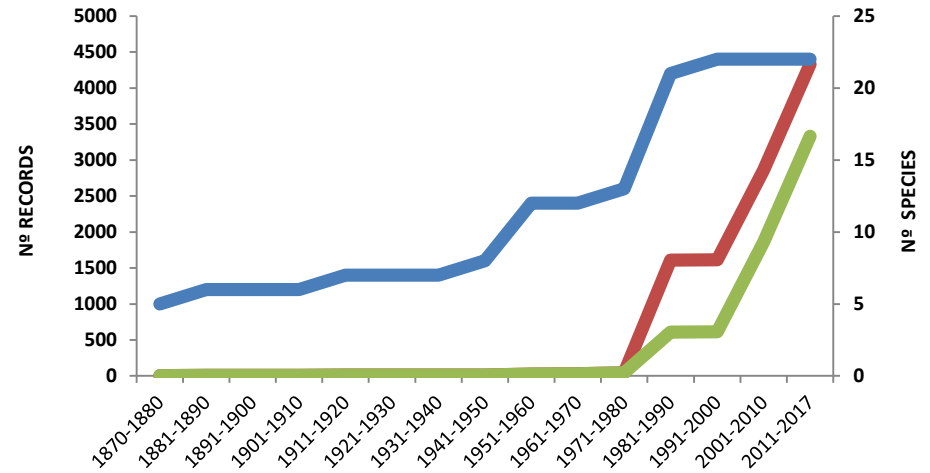
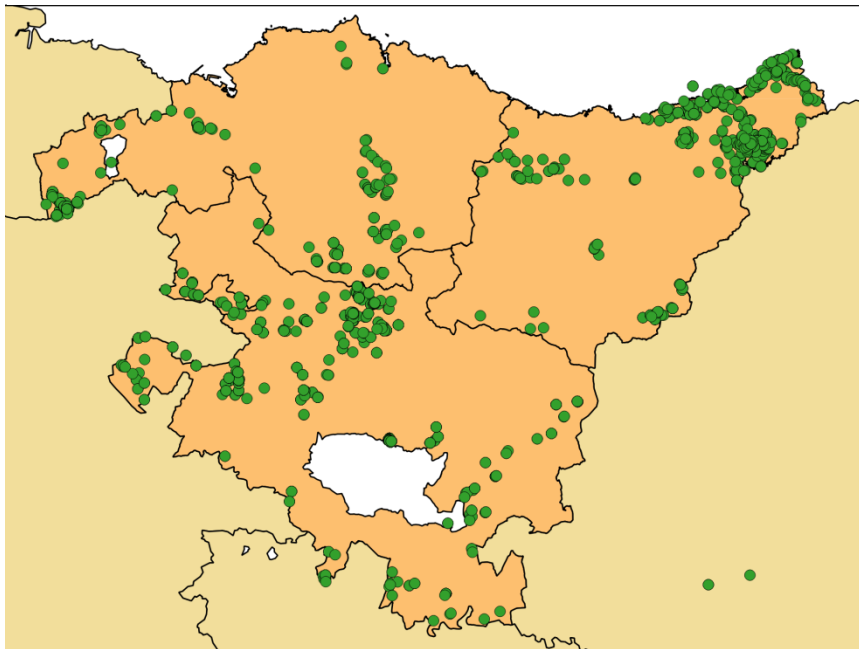
Odonatofauna: date precision



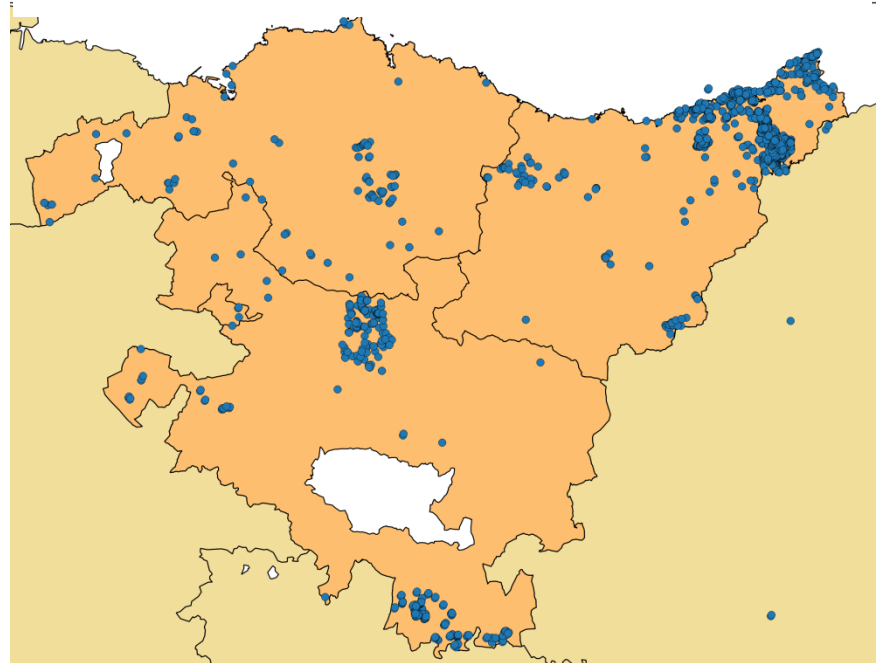
# RESULTS: information for further analysis



## AMPHIBIANS



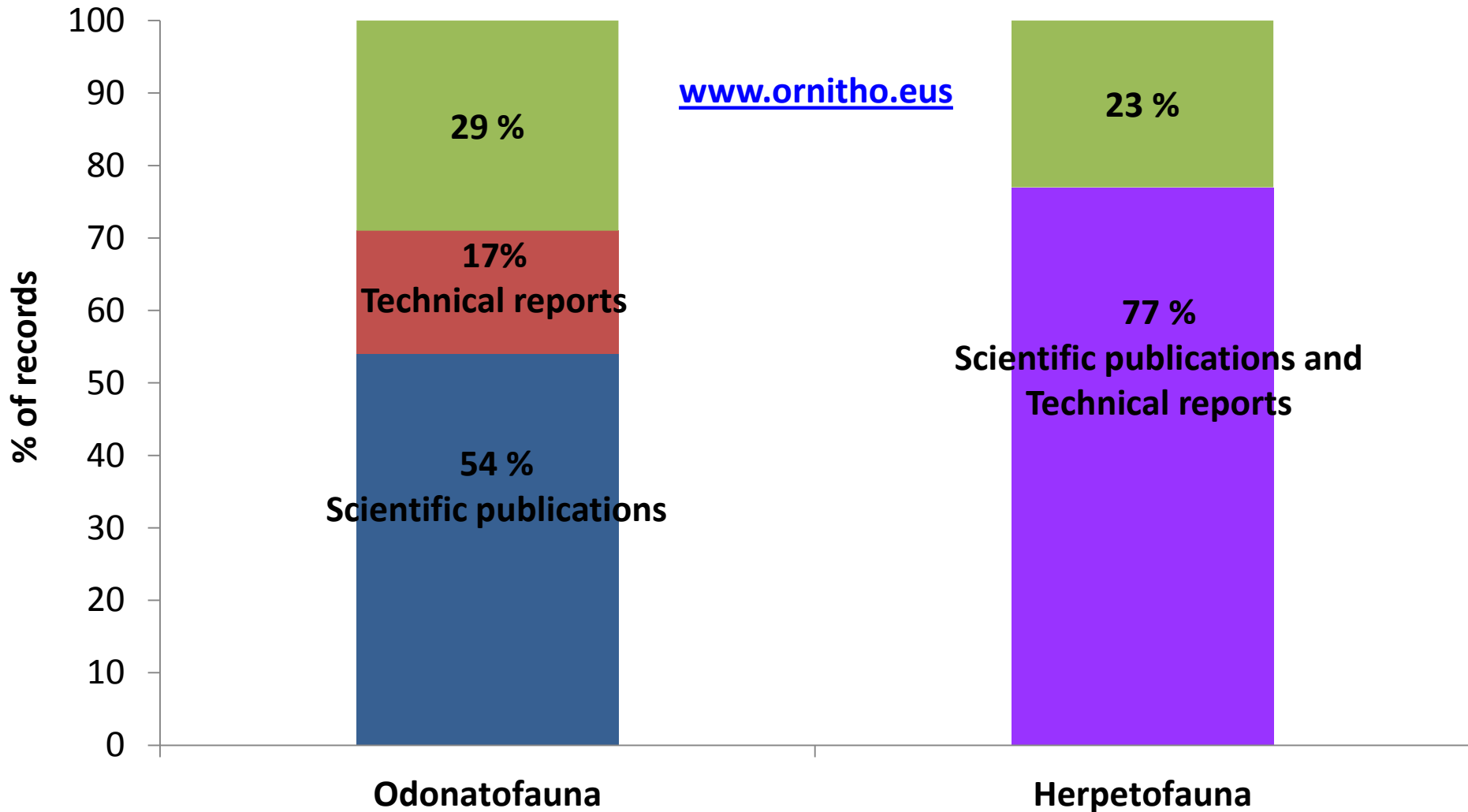
## REPTILES



# **DRIVING FORCES**

# RESULTS: sources of information

Update: November 2016





# RESULTS: data availability

[www.ornitho.eus](http://www.ornitho.eus) – online

Scientific publications – libraries, online, reprints from authors, publishers' purchase

Technical reports – public administrations (not all available online)

Access to technical reports always accepted.

# RESULTS: contributors and work flow

Contracts services or awards grants

Availability of data:  
public administration



Data compilation and diagnosis:  
professional and amateur experts



Fieldwork:  
amateur and professional experts,  
volunteers



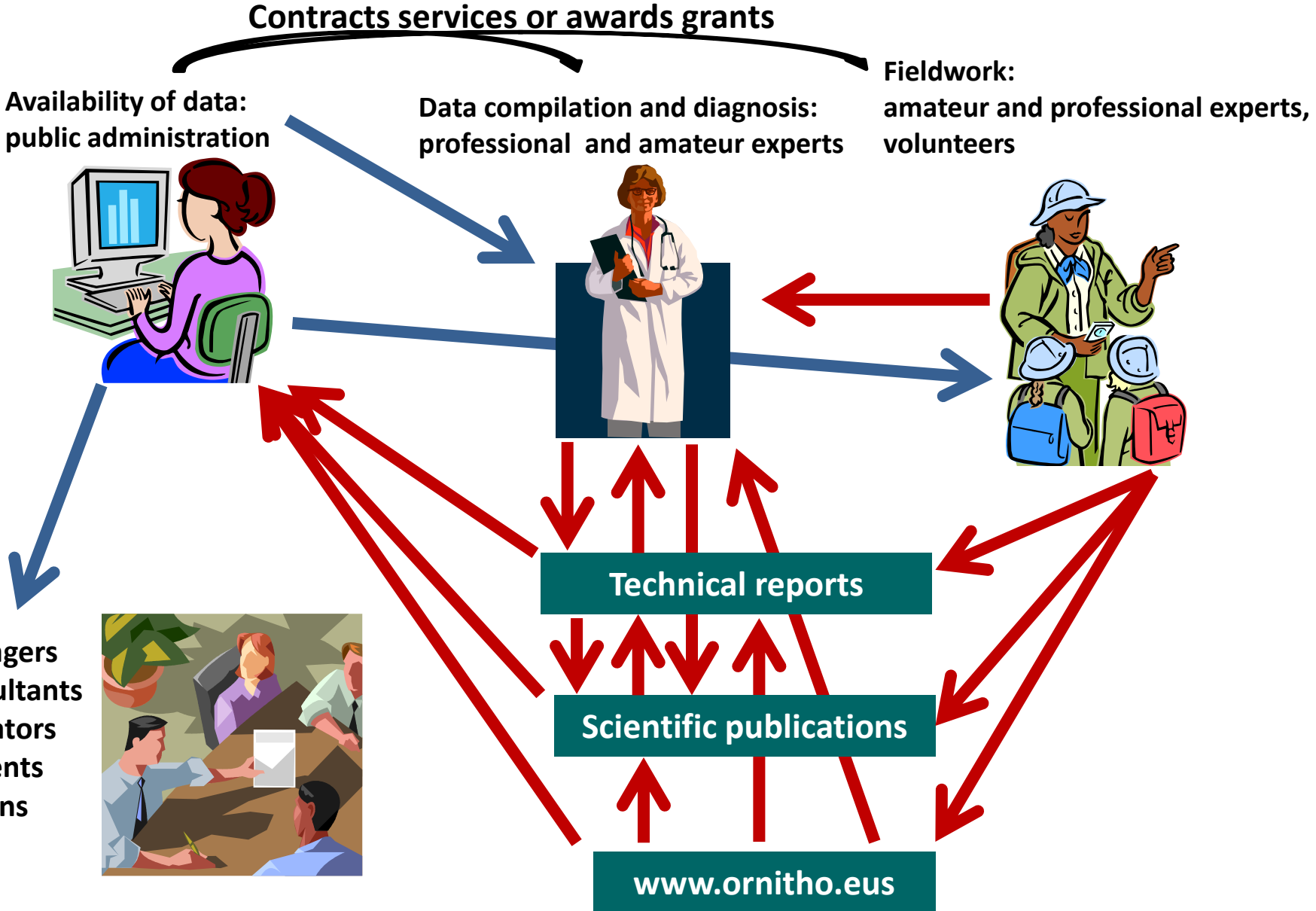
Managers  
Consultants  
Educators  
Students  
Citizens  
Etc.



Technical reports

Scientific publications

www.ornitho.eus



# CONCLUSIONS: does the information we need exist?

Topic	Available knowledge	Further research needs	
		Computational analysis (GIS and statistical)	Fieldwork
Inventory completeness	Good	-	Odonata: rare species
Detection of “hot spots”	Poorly and well know places identified	Drivers of diversity patterns	Addition of more sampling sites
Status of populations	Odonata: distribution Herpetofauna: recent distribution	Preliminar assessments based on distributions and habitat preference	Autoecology of poorly known species
Monitoring	Standard protocols. Recent data	Optimization of sampling and economic efforts	Restart and continue schemes

**Partially: as a necessary starting point that will help to obtain more needed information**

# TOPICS FOR DISCUSSION: SWOT analysis

## STRENGTHS

- Basic useful information
- Qualified experts
- Sampling methods developed
- Online portal for volunteers

## OPPORTUNITIES

- Planning works to obtain needed information
- Making information accessible online
- Having more participants than ever
- Determining green/blue infrastructures' roles

## WEAKNESSES

- Natura 2000 declared before databases
- Lack of ecological data
- Political changes
- Economic crisis

## THREATS

- Risk of vulnerability of some species
- Lack of continuity of ongoing works
- Replacement of experts by "citizen science"

# THANKS!



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Alberto Gosá