

First insights and future prospects for the French dragonfly monitoring scheme (STELI)

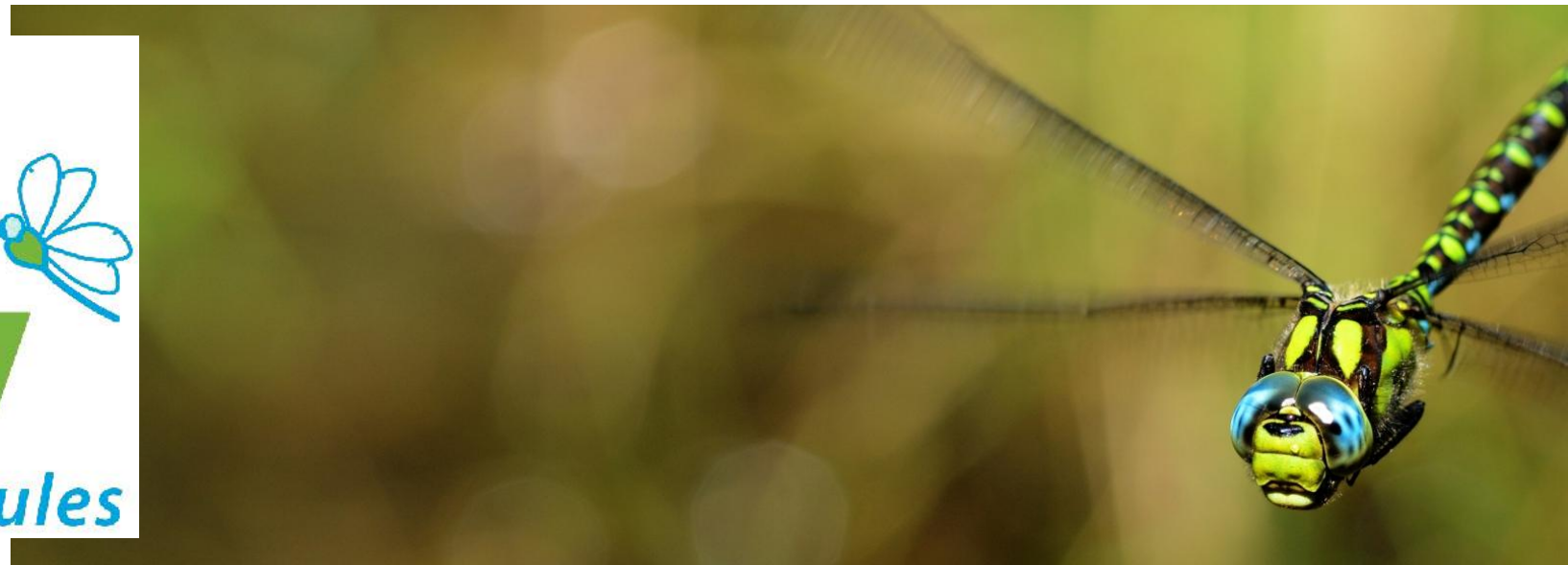


6th ECOD • Slovenia 2022

European Congress Of Odonatology – 28/06/2022

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Mathilde Vimont, Amélie Rusu-Stiévenard, Mathieu De Flores, Cédric Vanappelghem



MUSÉUM
NATIONAL D'HISTOIRE
NATURELLE

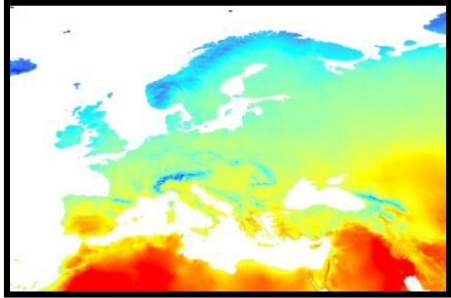


CESCO
Centre d'Écologie et des
Sciences de la Conservation

VIGIE NATURE
Un réseau de citoyens
qui fait avancer la science

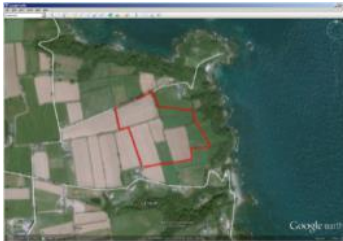


Monitoring schemes: essential tool to biodiversity

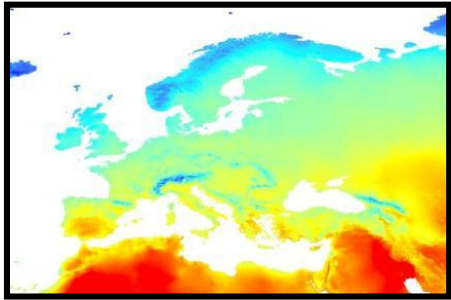


**Key
biodiversity
drivers**

Naturalist surveys, citizen sciences, etc.



Monitoring schemes: essential tool to biodiversity

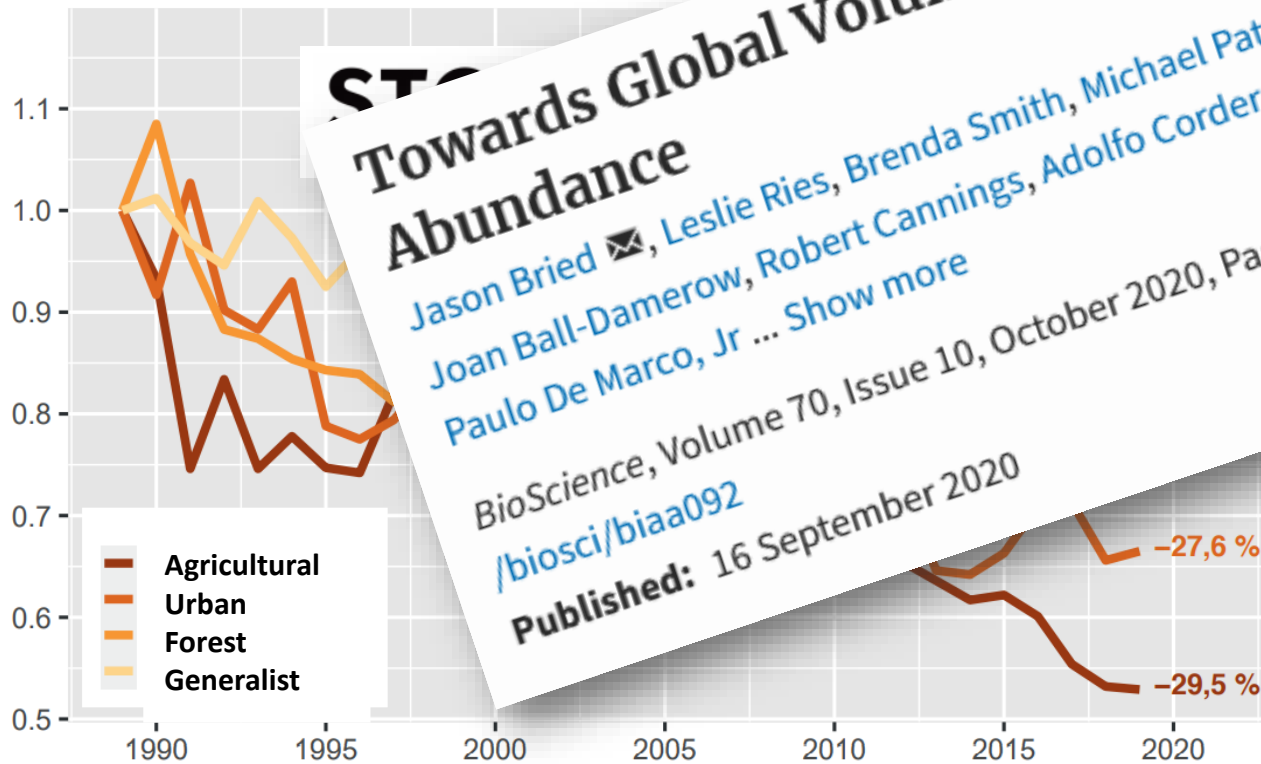


Towards Global Volunteer Monitoring of Odonate Abundance

Jason Bried ✉, Leslie Ries, Brenda Smith, Michael Patten, John Abbott, Joan Ball-Damerow, Robert Cannings, Adolfo Cordero-Rivera, Alex Córdoba-Aguilar, Paulo De Marco, Jr ... Show more

BioScience, Volume 70, Issue 10, October 2020, Pages 914–923, <https://doi.org/10.1093/biosci/biaa092>

Published: 16 September 2020



eurostat
Statistics Explained

Agri-environmental indicator - population trends of farmland birds

Data from November 2012. Most recent data: Further Eurostat information, Main tables and Database. Planned article update: June 2017.

This article provides a fact sheet of the European Union (EU) agri-environmental indicator population trends of farmland birds. This indicator is still a subject to development. The article provides a summary of the current state of play and is complemented by definitions, measurement methods and context needed to interpret it correctly. The population trends of farmland birds article is part of a set of similar fact sheets providing a complete picture of the state of the agri-environmental indicators in the EU.

iversity

engagement

Indicators to inform policies

Background of the STELI

VIGIENATURE

Un réseau de citoyens qui fait avancer la science

Protocols for naturalists



Vigie-Flore
Suivi des plantes communes



STERF
Suivi temporel des rhopalocères de France



STELI
Suivi temporel des libellules



Vigie-Chiro
Suivi des chauves-souris



SHOC
Suivi hivernal des oiseaux communs



SON
Suivi des orthoptères nocturnes



STOC
Suivi temporel des oiseaux communs

2001

For site managers (green spaces, protected areas)



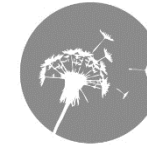
FLORILÈGES
Suivi de la flore urbaine



PROPAGE
Suivi des papillons de jour

For the general public (laypeople)

2006



Sauvages de ma rue



Opération Papillons



BioLit
Observatoire du littoral



Opération Escargots



Observatoire des bourdons



BirdLab
Observation aux mangeoires



Oiseaux des jardins



Spipoll
Suivi photographique des insectes pollinisateurs

For farmers



For school teachers

VIGIENATURE École



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VIGIENATURE École



Background of the STELI

2008 : European symposium

INTERNATIONAL SYMPOSIUM ON
MONITORING DRAGONFLIES
IN EUROPE

Wageningen, the Netherlands
13 and 14 June 2008

• Registration before 1 May 2008
• Abstract submission before 20 May 2008
• Registration Fee*: € 120,- per participant

*Including: coffee/tea and drinks during the symposium, lunches on both days, transport and excursion to the Weerribben, Conference dinner (barbecue) on Saturday 14th.

25 jaar
De Vlinderstichting

2009 : PNAO (Action 10)

Plan national d'actions
en faveur des Odonates
Libellules & Demoiselles menacées
2011-2015

Présent pour l'avenir

Ministère de l'Écologie, de l'Énergie, du Développement durable et de la Mer
en charge des Technologies vertes et des Négociations sur le climat

www.developpement-durable.gouv.fr

2009-11 : Launch

BDS
British Dragonfly Society

British Dragonfly Monitoring Scheme:
Summary of the 2009/10 pilot

Dave Smallshire & Steve Prentice
Convenor, BDS Dragonfly Conservation Group (davesmall@supanet.com)
BDS Dragonflies in Focus Officer (stephen.prentice@naturalengland.org.uk)

National Action Plan for Odonata
Initial thoughts for the development of a Dragonfly
national monitoring scheme, part of the Vigie-Nature
program

Anne-Laure Gourmand, MNHN, Vigie Nature
Cédric Vanappelghem, Conservatoire des sites naturels Nord - Pas-de-Calais, SEQ

Présent pour l'avenir

Den Haag
October 20th, 2010

Monitoring scheme: standardized protocol

Protocole du suivi national de l'évolution des populations d'Odonates

Relevé à vue et/ou par capture
Complément possible en prospectant
les exuvies ou les larves

Relevé des individus par :
présence / fourchette d'abondance /
dénombrement précis

Localisation du périmètre choisi
par l'observateur ou préconisé par
l'animateur régional



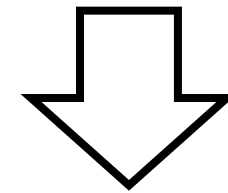
Calendrier des sessions de relevés pour
chaque site



3 possible time periods:

- Before June 15th
- June 15th – July 31st
- After July 31st

3 sessions (30min minimum)
needed for each time periods

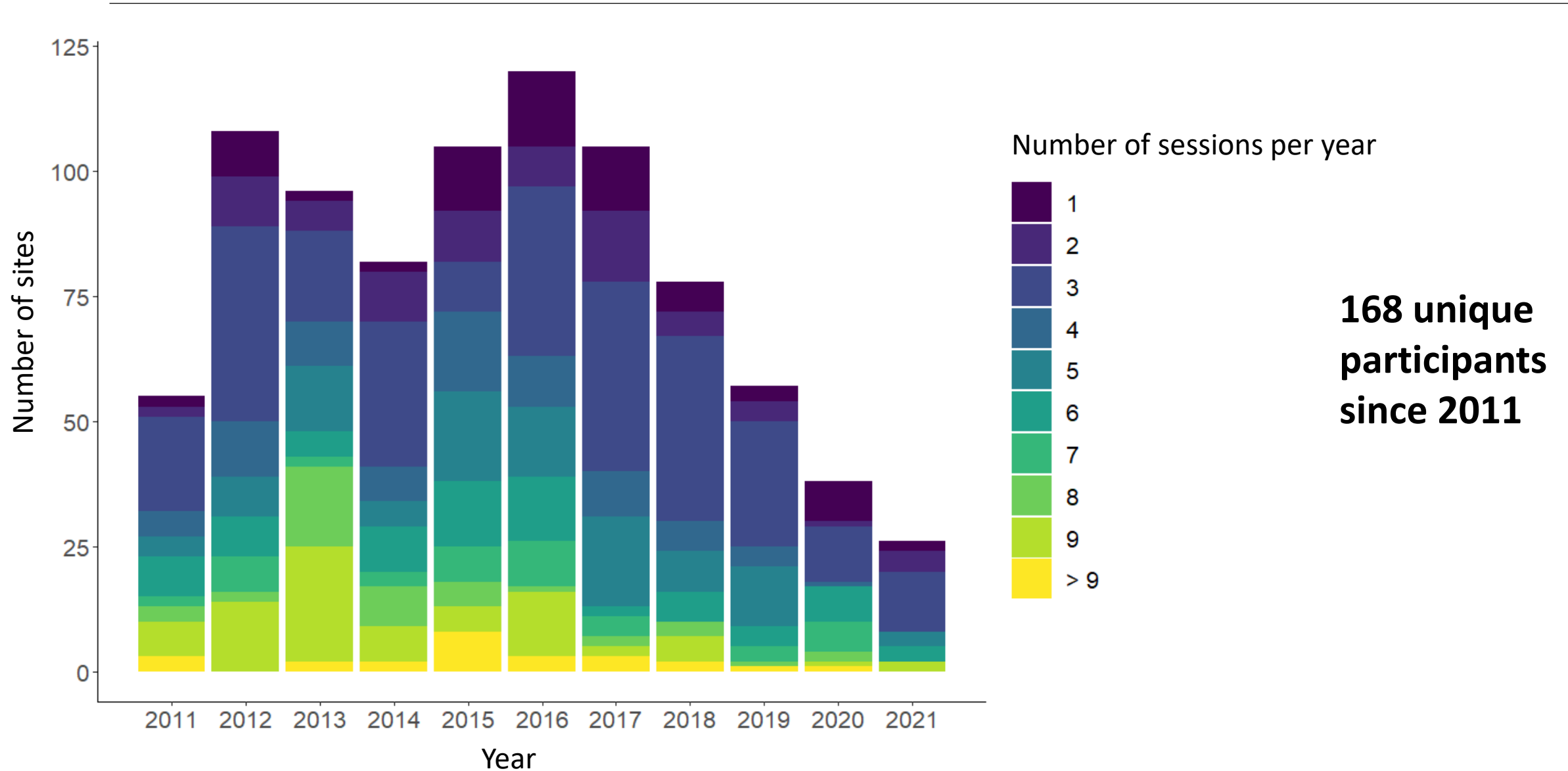


Occupancy models: inferring
species detectability and sites
occupancy



MINIMUM 30 MIN

A good first dynamic... that decreased over time

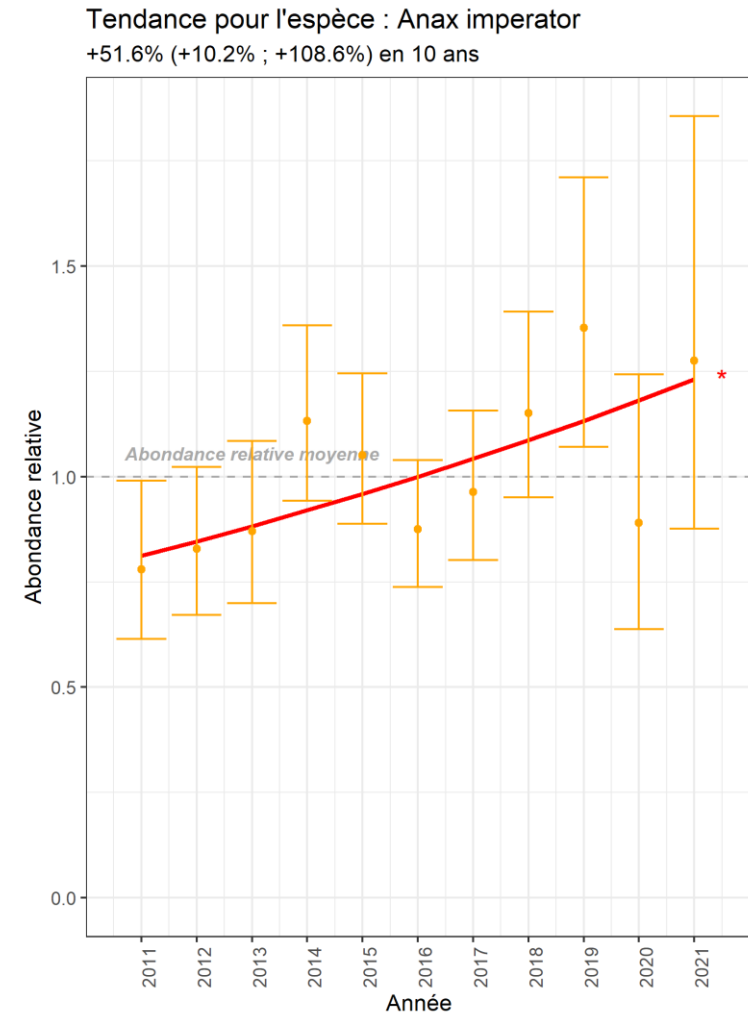
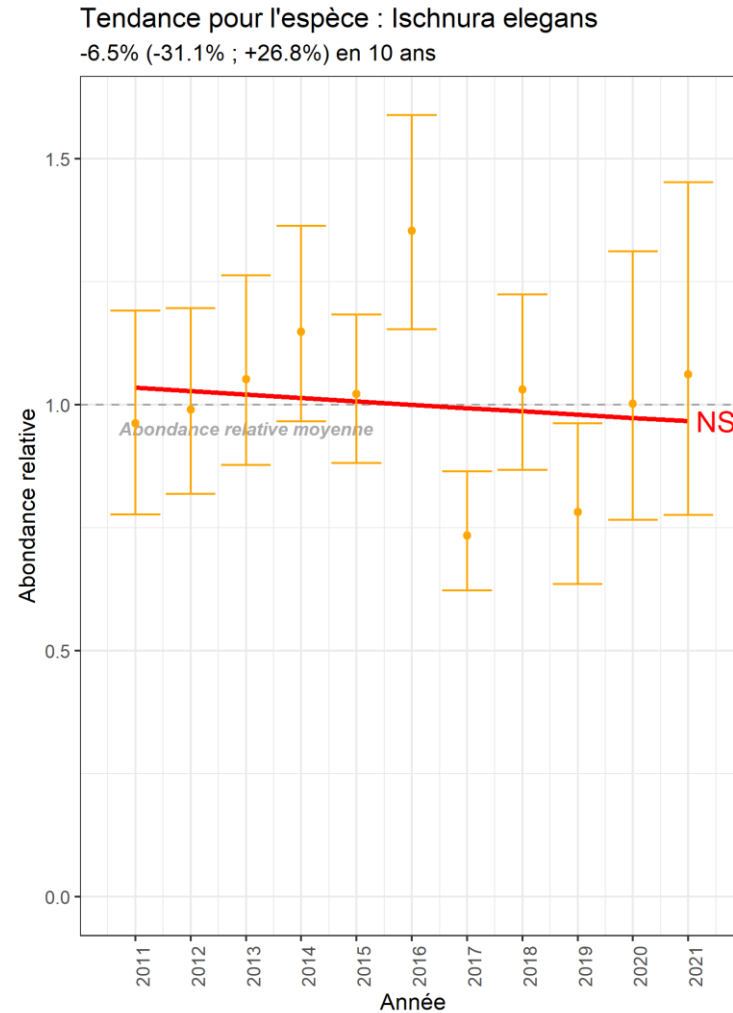


Using the abundance data to infer trends?

95% of data are at the species level

> 75% are precise counts or abundance estimations

Using « rtrim » like approach to calculate abundance trends



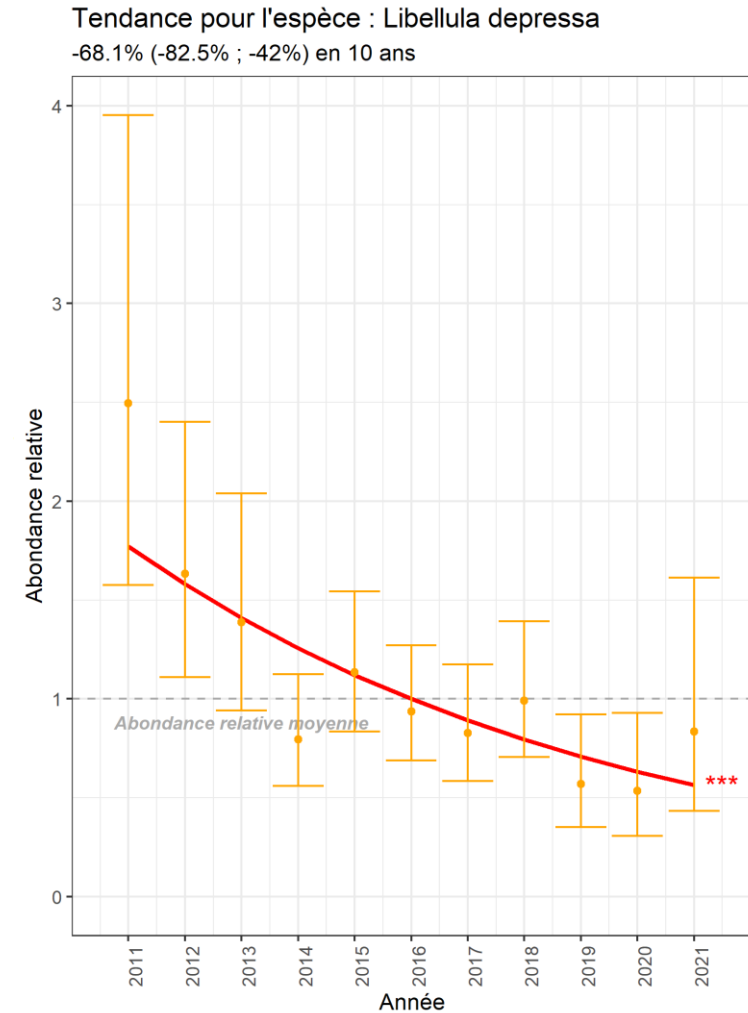
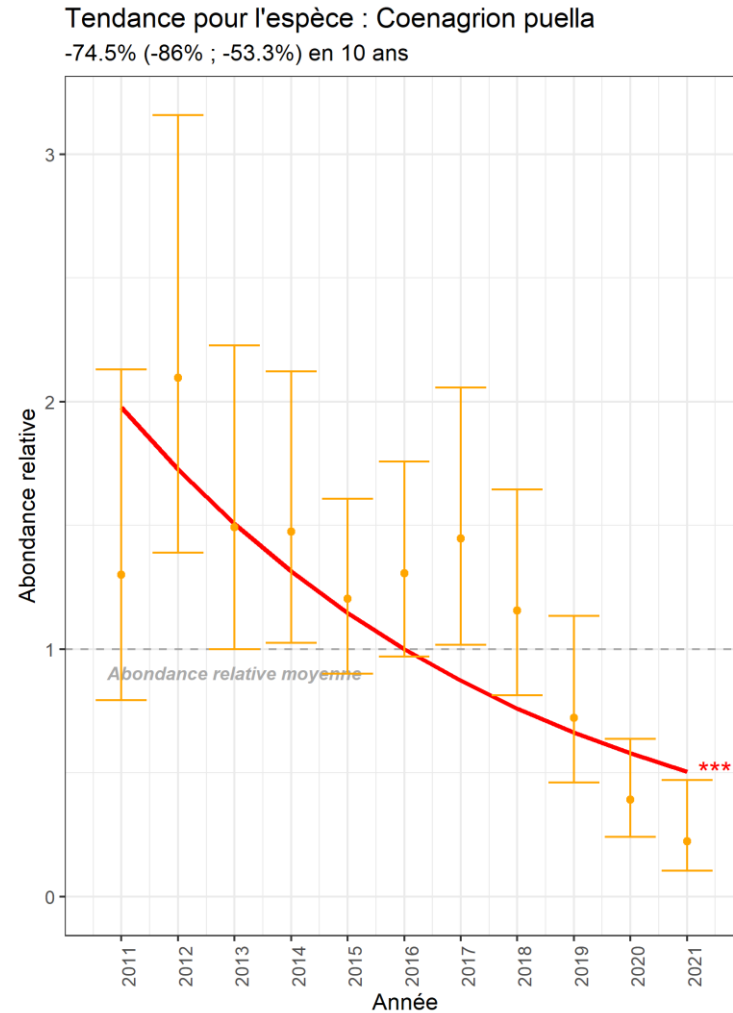
Tendance
— Globale
— Inter-annuelle (intervalle de confiance à 95 %)

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Tendance
— Globale
— Inter-annuelle
(intervalle de confiance à 95 %)

Results for the most common species

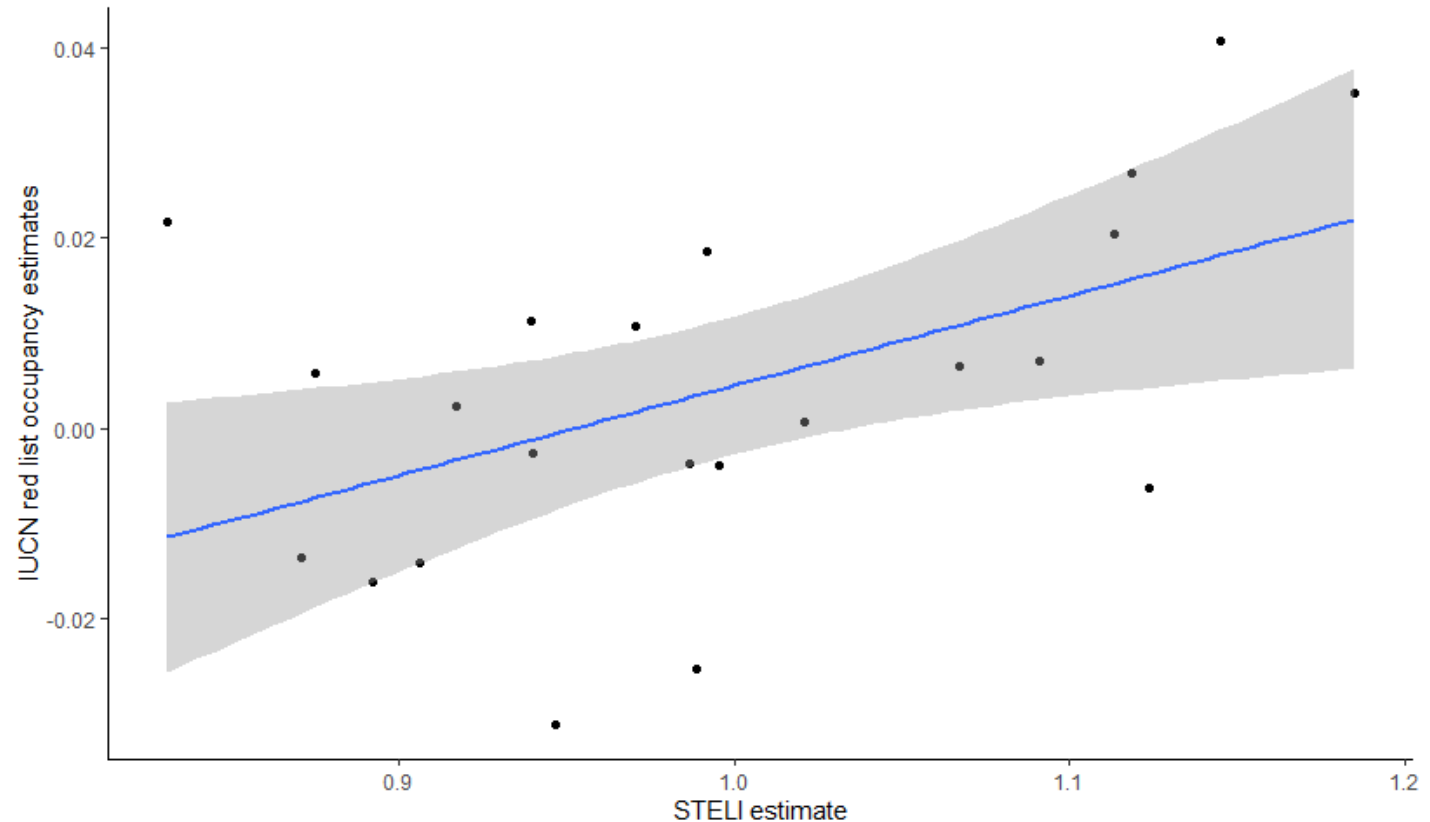
23 most common species chosen: e.g. *Ischnura elegans*, *Anax imperator*, etc.

27% (6) show a decrease

23% (5) show an increase

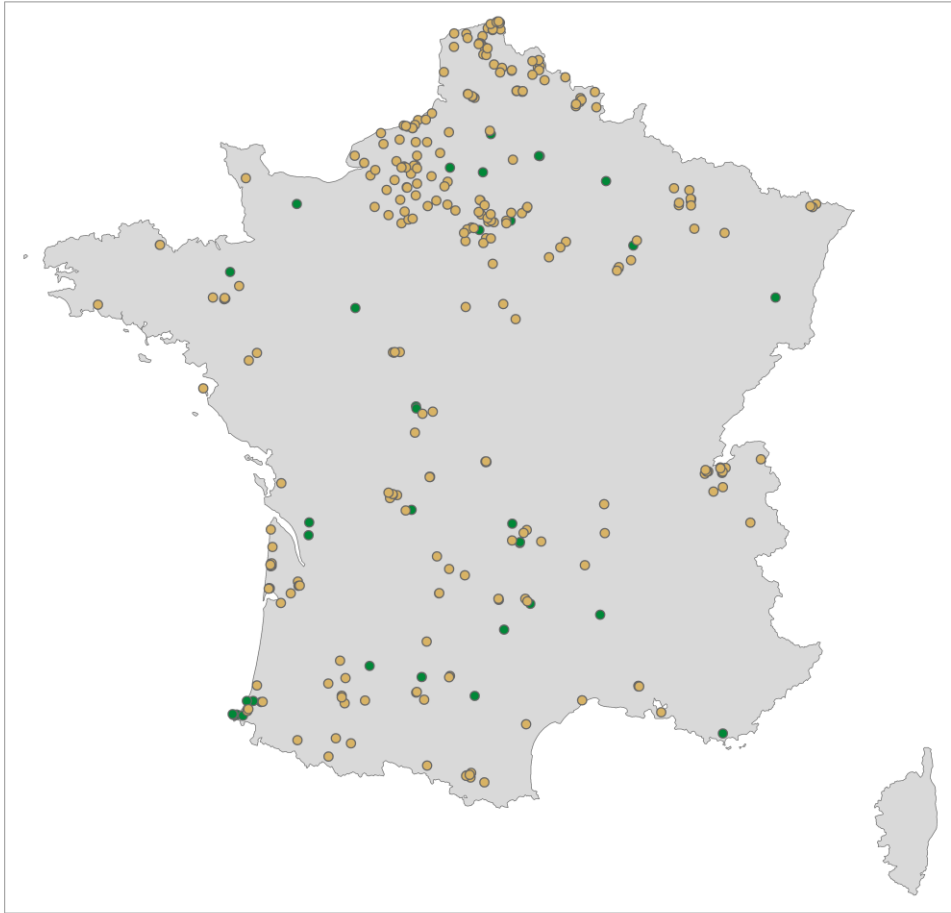
23% (5) stable

27% (6) have no significant trends

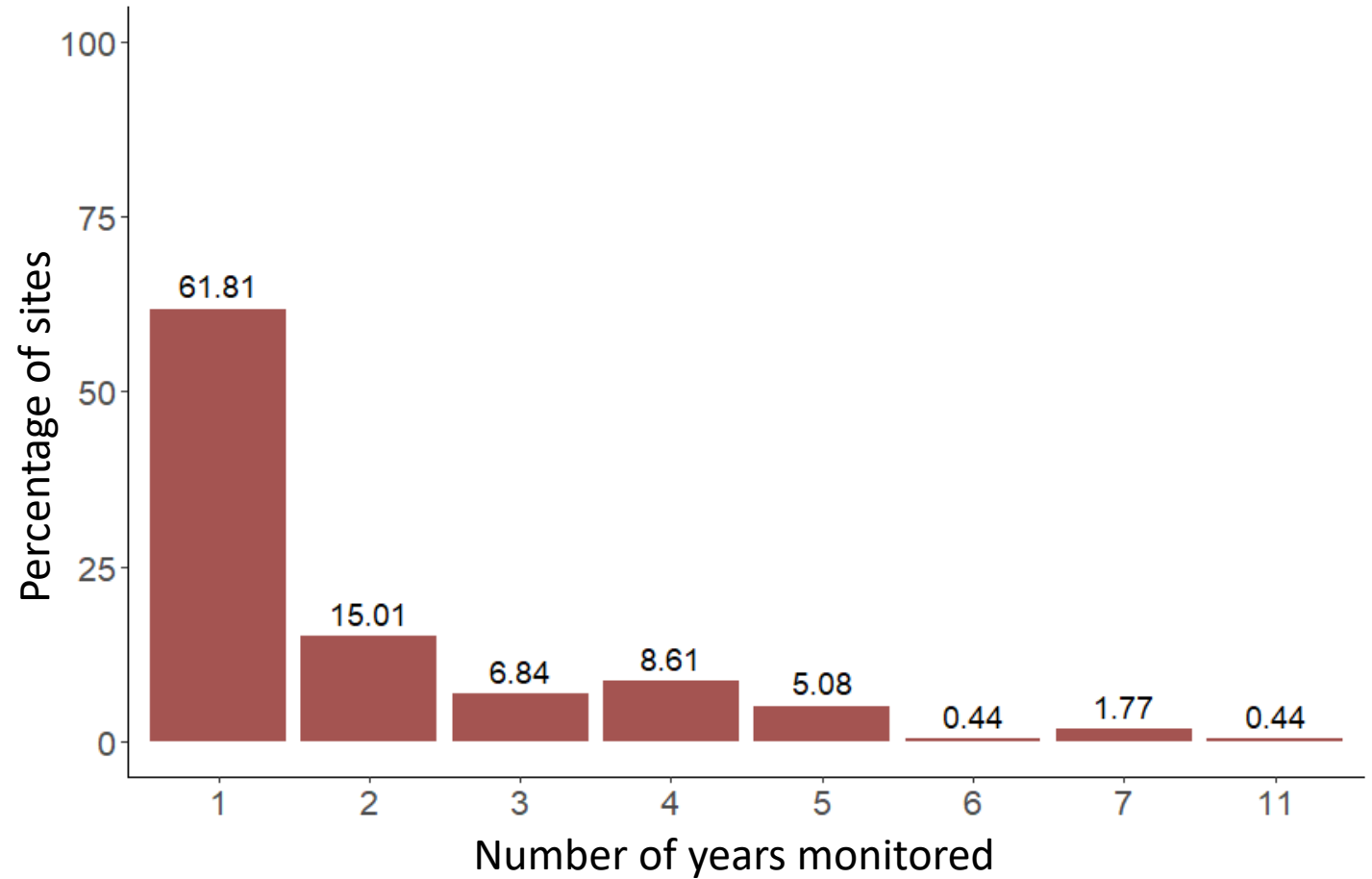


Results were « congruent » with trends of occupancy calculated for the last european red list

Issues: Sites distribution and long term monitoring?

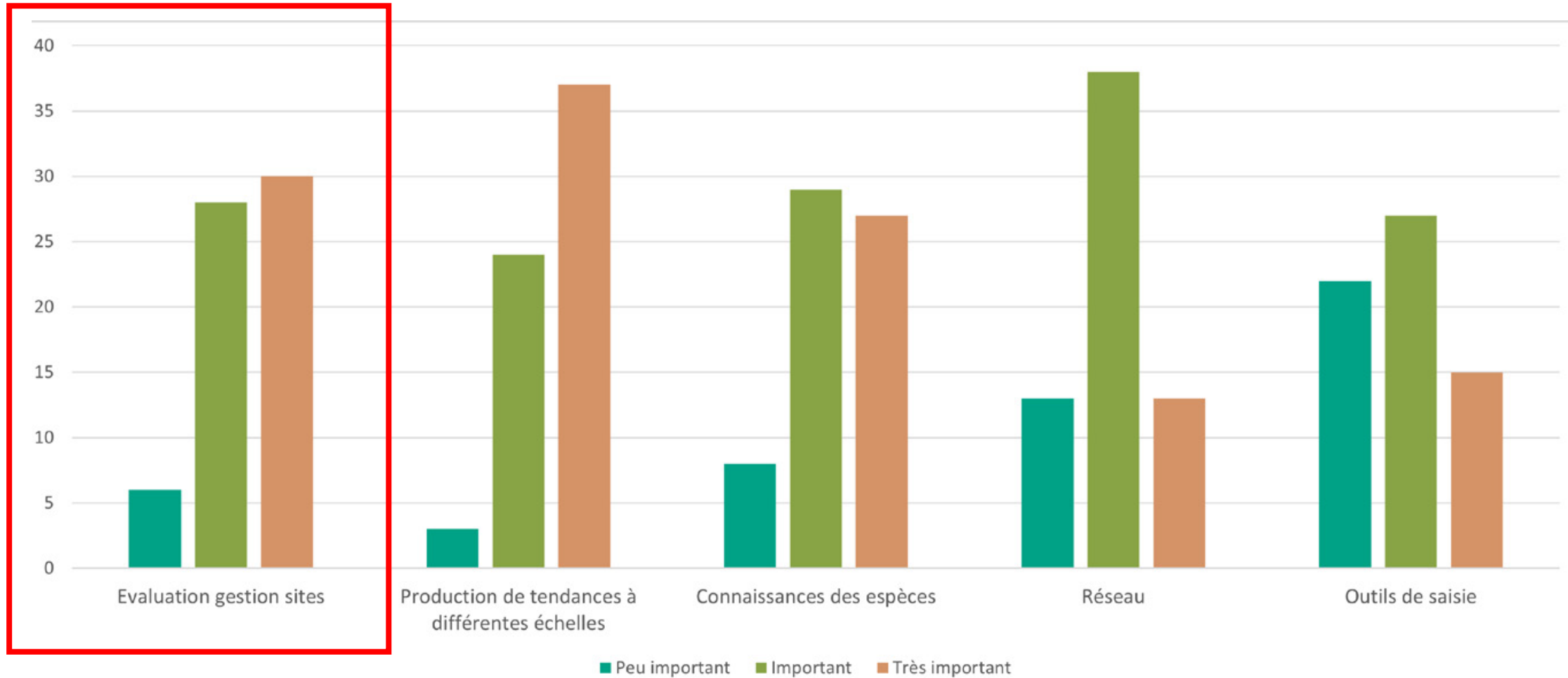


In green: sites with data from the last 3 years
In brown: abandoned sites



Issues: how to respond to site managers' expectations (local scale)?

Survey STELI participants: 61 respondents



Adaptability of the protocol to participants constraints?

- Allowing to make « complete list » surveys?



Biodivers Conserv (2013) 22:673–686
DOI 10.1007/s10531-013-0436-1

ORIGINAL PAPER

Occupancy modelling as a new approach to study supranational trends using a case study for the dragonfly *Calopteryx splendens*

Diversity and Distributions
Open Access

A Journal of Conservation Biogeography

BIODIVERSITY RESEARCH | Open Access | CC BY

Distribution trends of European dragonflies under climate change

Tim Termaat, Arco J. van Strien, Roy H. A. van Grunsven, Geert De Knijff, Ulf Bjelke, Klaus Burbach, Klaus-Jürgen Conze, Philippe Goffart, David Hepper, Vincent J. Kalkman ... See all authors

First published: 12 March 2019 | <https://doi.org/10.1111/ddi.12913> | Citations: 39

Fig. 2
Calopteryx splendens

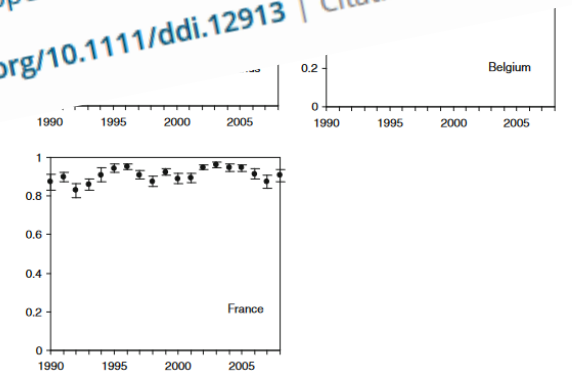
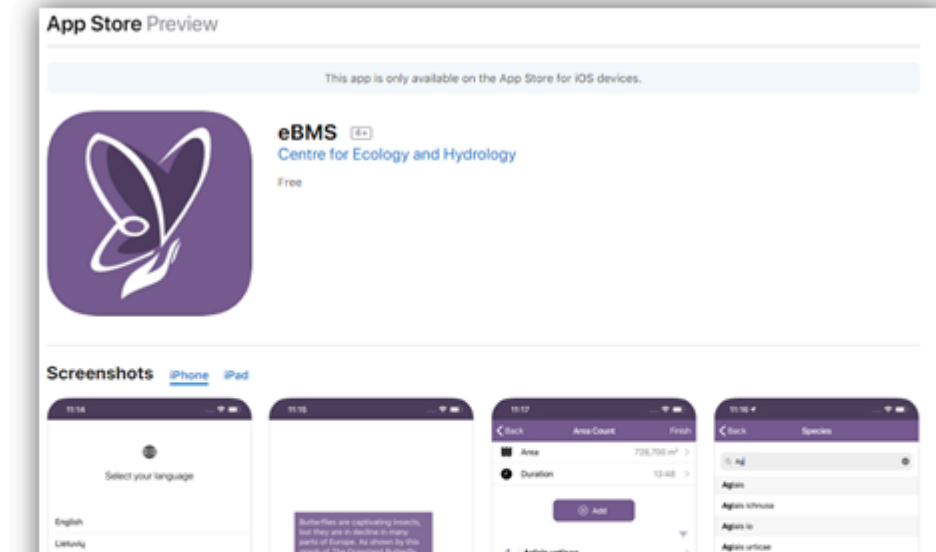


Fig. 3 Annual occupancy probability (\pm se) of *Calopteryx splendens* in Ireland, Great Britain, the Netherlands, Belgium and France, analysed with a dynamic occupancy model

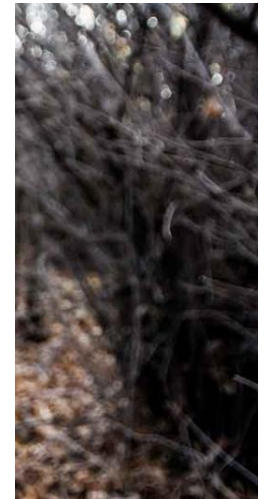
Adaptability of the protocol to participants constraints?

- Allowing to make « complete list » surveys?
- « Opportunistic » transect with standardized abundance data (cf. eBMS app)?



What options does the application give?

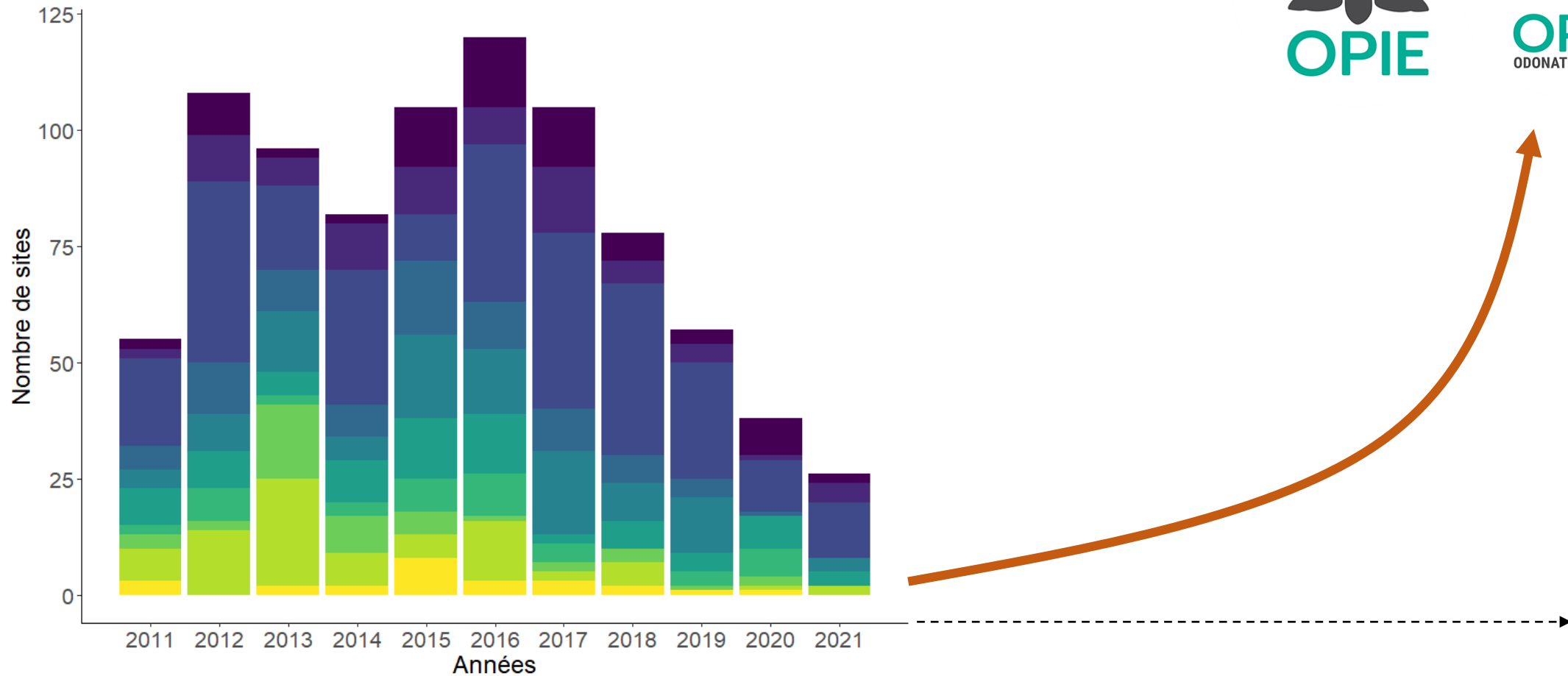
- Make visits to your **eBMS transects** directly with the app. You just need to log in to the app with your eBMS account
- **15-minute Counts**: a method for counting butterflies for 15 minutes wherever and whenever you want.
- **15-minute Single Species Count**: the same methodology applied to register one species; useful for threatened or protected species
- Small **Picture guide** with photos of species per country
- Possibility of registering butterflies, moths, bumblebees and dragonflies from Europe in the species list (need to be selected in the settings)



Every registered individual through the ButterflyCount app will be stored its coordinates, providing more detail information.

A new hope!

- New national facilitation and coordination by Opie



A new hope!



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- New national facilitation and coordination by Opie
- **Call for proposals FRB: an opportunity for dragonflies?**

DEADLINE 22ND SEPTEMBER 2022

[Call for proposals FRB-MTE-OFB 2022]
Impacts on terrestrial biodiversity in the
Anthropocene

- 3 data SYNTHESIS projects of three years- these projects should develop syntheses of ideas and/or concepts, analyses of existing data, and should focus on factors affecting the state, evolution and dynamics of biodiversity.

3 years

200k€ project

Build on the previous granted LOLA-BMS project (eBMS)?



Thank you for your attention!

Any questions?



Contacts:

Opie – Animation:

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mathieu.deflores@insectes.org



MNHN – Scientific coordination:

Benoit Fontaine

benoit.fontaine@mnhn.fr



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