



BIODIVERSITY  
BUILDING  
BLOCKS FOR  
POLICY

# Reporting on biodiversity indicators: Alien Rate of Establishment

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# Biodiversity Building Blocks for Policy

Standardising biodiversity data for improved policymaking



# Consortium



RESEARCH INSTITUTE  
NATURE AND FOREST

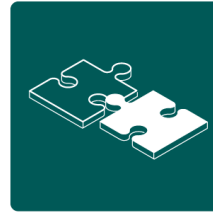


# About



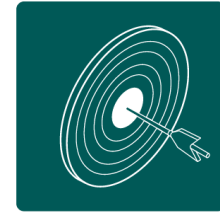
## Challenges

The global biodiversity crisis requires **rapid, reliable and repeatable biodiversity monitoring data** which decision makers can use to evaluate policy.



## Opportunities

Such information – from local to global level and within relevant timescales – calls for an **improved integration of data on biodiversity** from different sources.

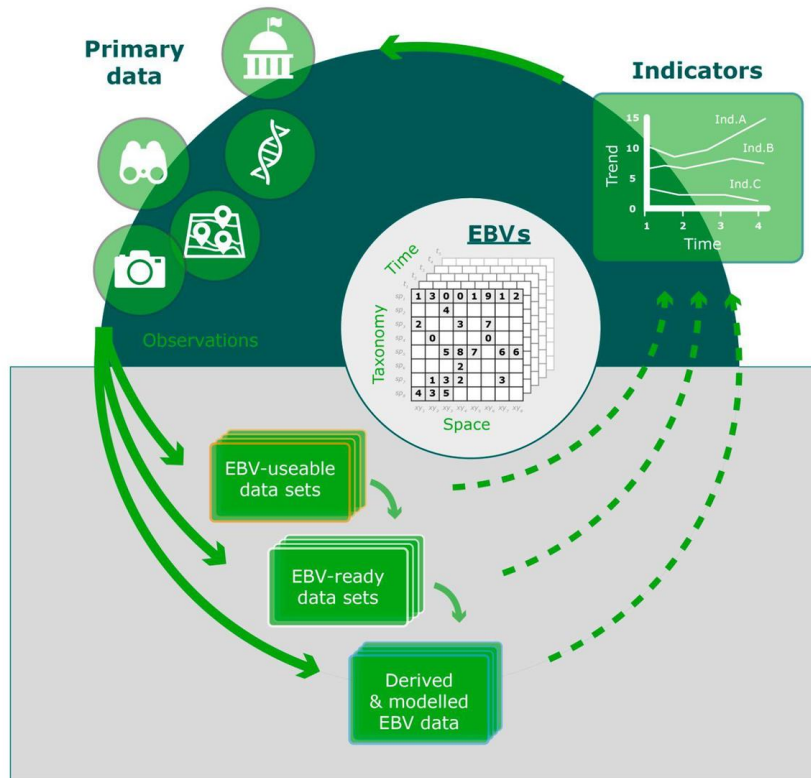


## Aim

B-Cubed is **standardising access to biodiversity data**, empowering policymakers to address the impacts of biodiversity change.



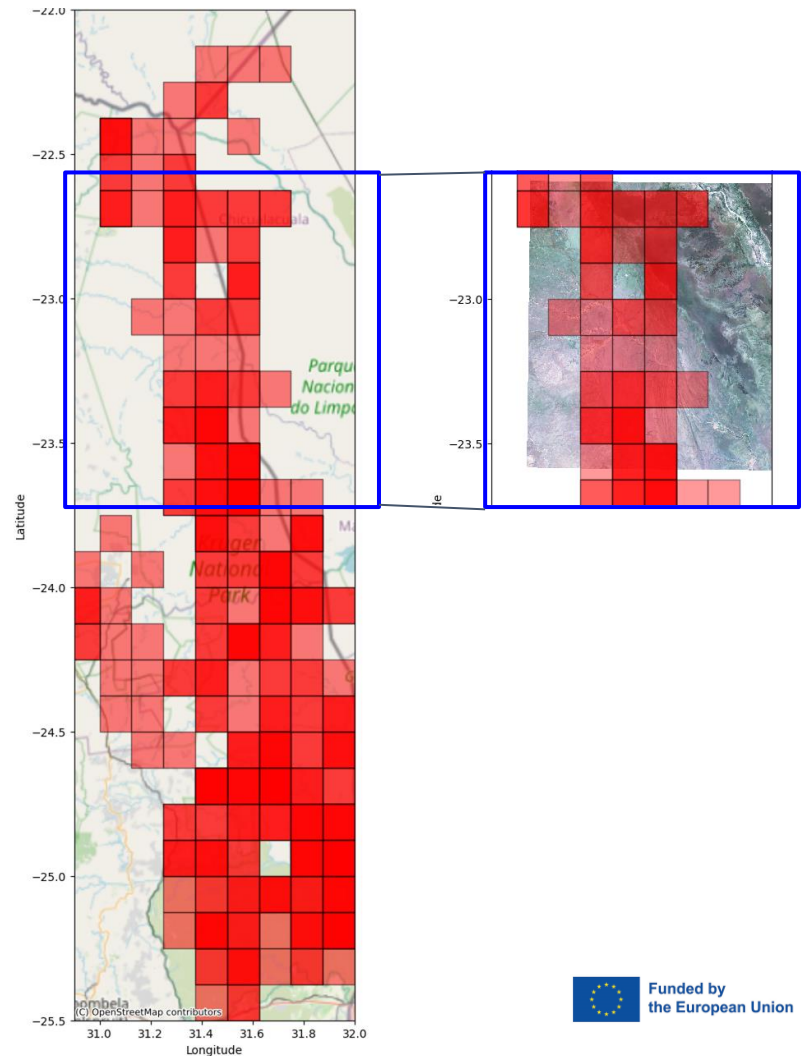
# Essential Biodiversity Variables (EBVs)



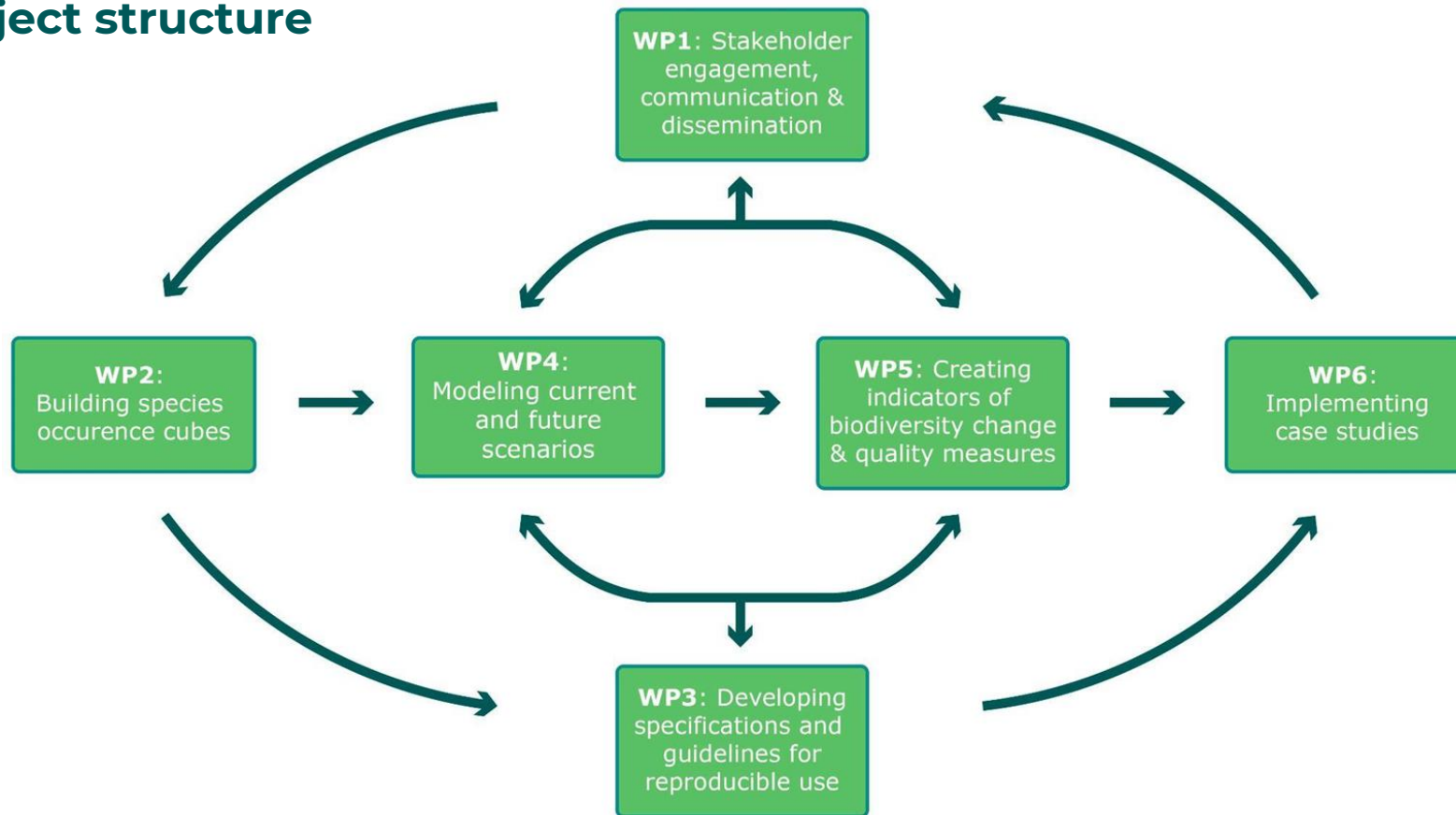
# Practical implementation



Aggregation  
Filtering  
Data cleaning



# Project structure



# CBD targets on invasive alien species

Practical use of the data cubes



# Convention on Biological Diversity (CBD)



Kunming-Montreal  
**GLOBAL BIODIVERSITY**

[GBF HOME](#) // TARGET 6

## Target 6

### Reduce the Introduction of Invasive Alien Species by 50% and Minimize Their Impact

*Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent, by 2030, eradicating or controlling invasive alien species especially in priority sites, such as islands.*

Following are the guidance notes prepared by the Secretariat for Target 6

#### E. Indicators

The [monitoring framework](#) for the Kunming-Montreal Global Biodiversity Framework identifies the following indicators for this target:

##### Headline indicators:

- 6.1 Rate of invasive alien species establishment

##### Component indicators:

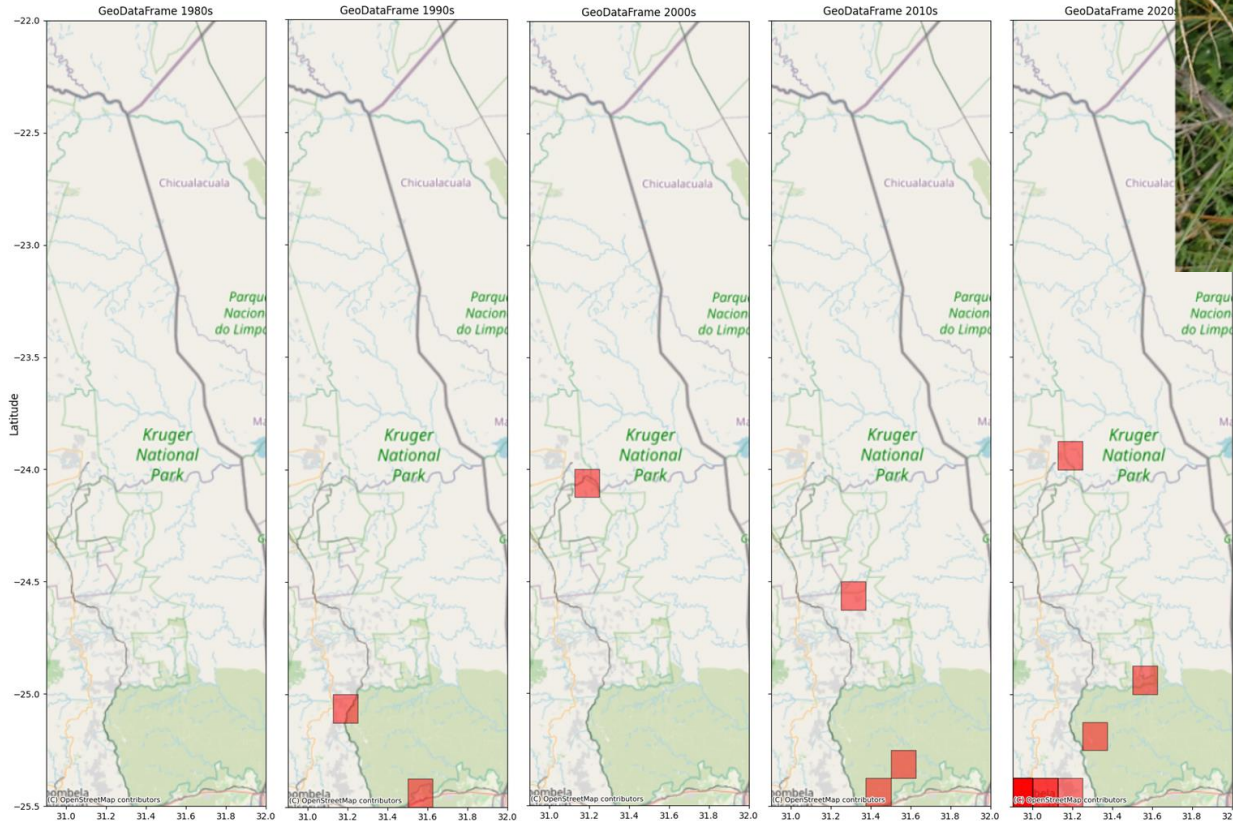
- Rate of invasive species impact and rate of impact
- Rate of invasive alien species spread
- Number of invasive alien species introduction events

##### Complementary indicators:

- Number of invasive alien species on national lists as per the Global Register of Introduced and Invasive Species
- Trends in abundance, temporal occurrence and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species, notably in risk areas (in relation to the main vectors and pathways of spreading of such species)
- Red List Index (impacts of invasive alien species)

Reduce the  
Introduction and  
Impact of Invasive  
Alien Species

# Data cubes to monitor invasions



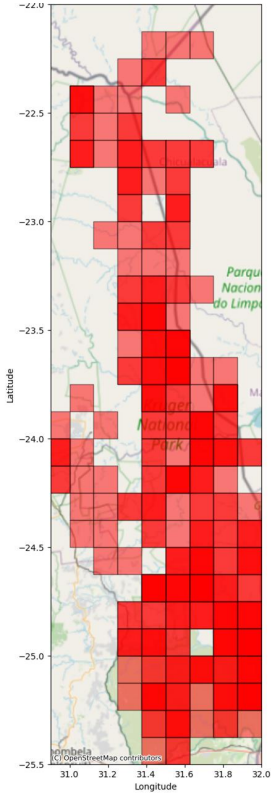
## ***Chromolaena odorata* (L.)**

**R.M.King & H.Rob.**

Observed in South Africa

by Mahomed Desai (licensed under  
<http://creativecommons.org/licenses/by/4.0/>)

# AlienRoE.jl as a practical implementation (under development!)



GRIIS  
checklist  
+  
decision  
logic

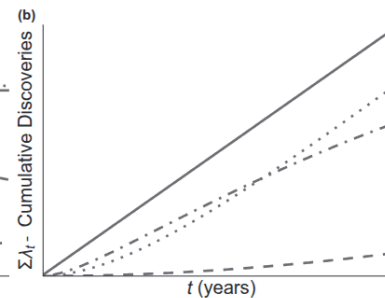
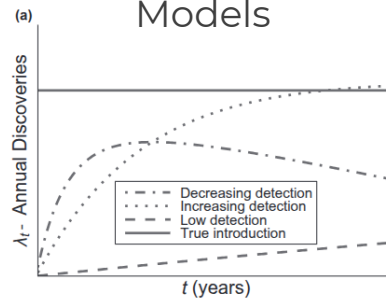
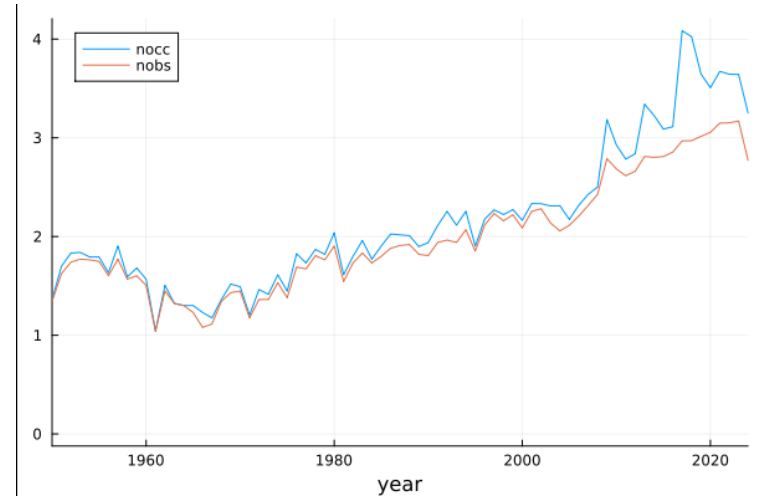




Models



(Spatially explicit) indicator



Buba, Y., Kiflawi, M., McGeoch, M. A., & Belmaker, J. (2024). Evaluating models for estimating introduction rates of alien species from discovery records. *Global Ecology and Biogeography*, 33, e13859. <https://doi.org/10.1111/geb.13859>



# WE NEED YOU!! Open questions

- Reporting needs: how, what form...?
- Additional datasets to accommodate?
- Data format and data use?
- Validation?
- ...

And most importantly: how do you like to get started with data cubes?



# Thank you!

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**Biodiversity Building Blocks for policy**

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