



iDiv

German Centre for Integrative Biodiversity Research (iDiv)
Halle-Jena-Leipzig

funbiogeo: an R package for functional biogeography

Principles & Roadmap

Matthias Grenié & Nicolas Casajus, et al. - FREE CESAB Group



CESAB
CENTRE FOR THE SYNTHESIS AND ANALYSIS
OF BIODIVERSITY

iDiv is a research centre of the

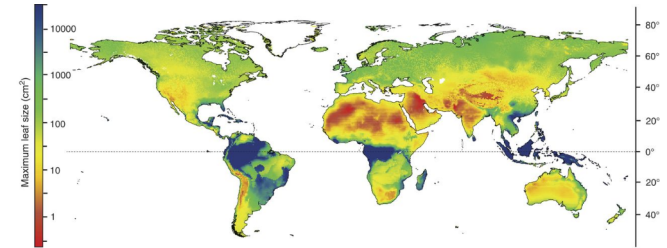
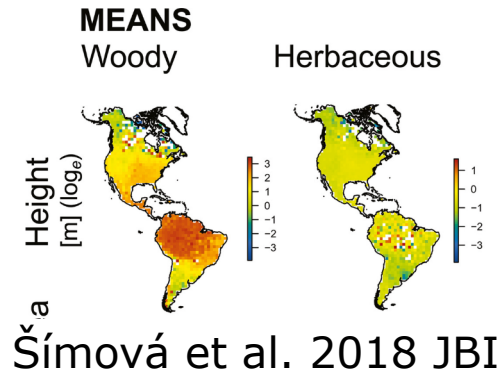
DFG Deutsche
Forschungsgemeinschaft

Functional Biogeography: close to than 10 years old?

The emergence and promise of functional biogeography

Cyrille Violle^{a,b,1}, Peter B. Reich^{c,d}, Stephen W. Pacala^e, Brian J. Enquist^{f,g,h}, and Jens Kattge^{i,j}

Violle et al. 2014 PNAS



Wright et al. 2017 Science

Increasing availability of data

Occurrences/Plots



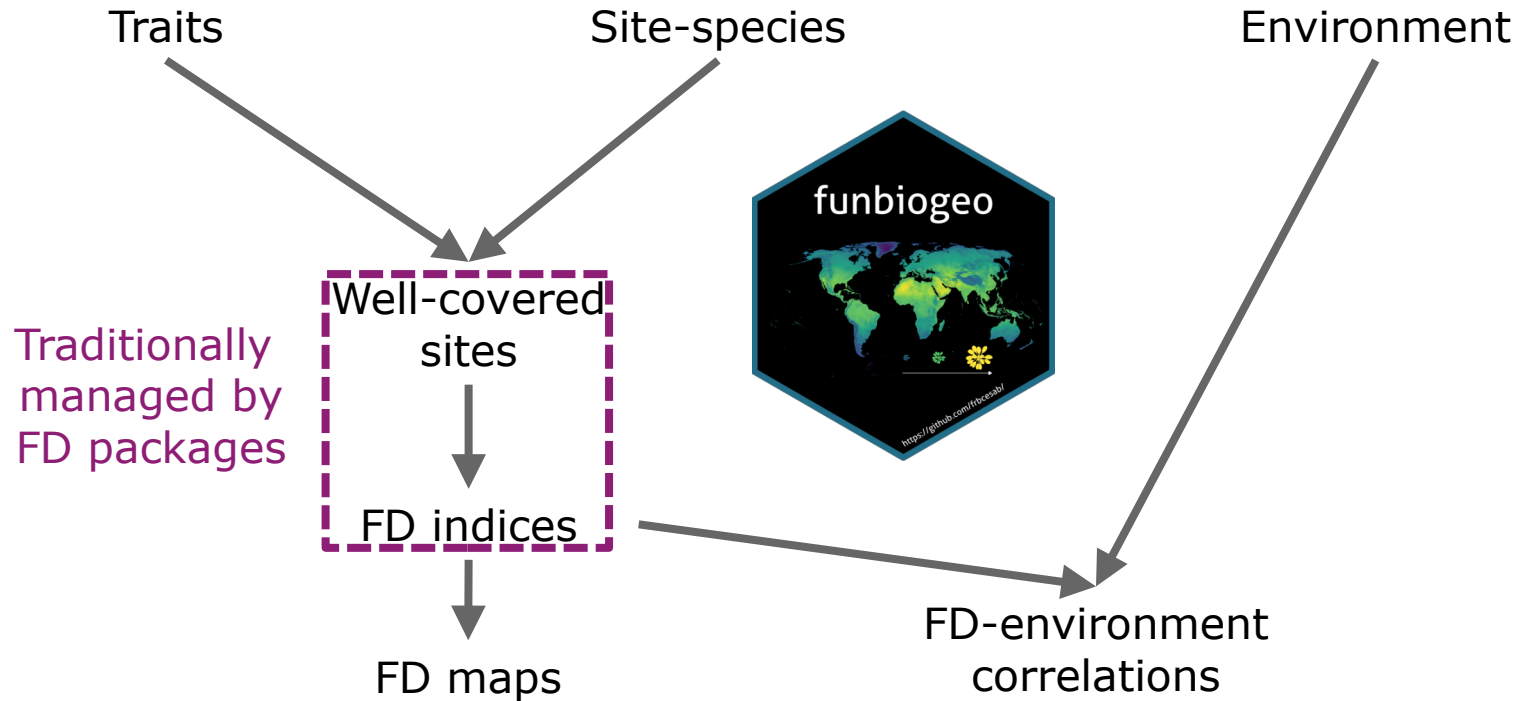
Traits



Climate (+other environmental layers)



Standard workflow... but no standard tool!

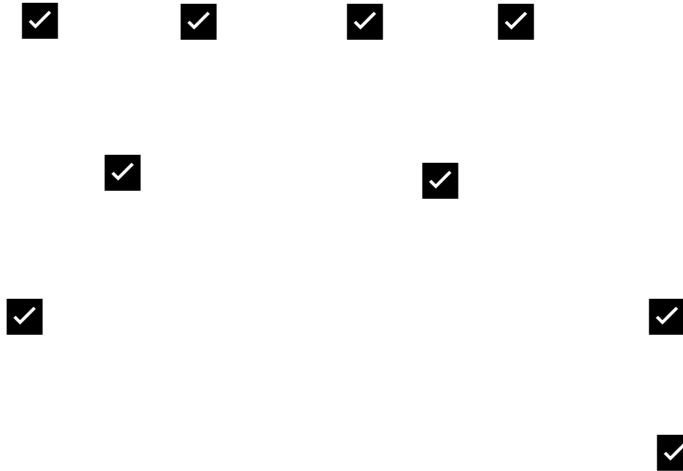


What should funbiogeo do?

1. Provide **standardized functions** to help build a standard workflow for functional biogeography
2. Be a **learning tool** for students and researchers interested in functional biogeography
3. Provide **diagnostic plots** to help functional ecologists navigate their analyses
4. Be **agnostic** about nature of functional diversity indices computed (many other good tools exist for that)

Previously discussed roadmap

Previously discussed roadmap: what has been achieved



What still needs to be done



Works with **non-continuous traits**

Add **nice default helper plots**:

1. Trait coverage visualization
2. Site-mapping visualization
3. Actual sites environmental coverage visualization

Add **discrete categorization** between **sites** and/or **species** (groups of sites/species)

Temporal dimension of sites

Think about **local trait measurements** inclusion

Thank you!

We welcome any contribution: ideas, suggestions, or even code
<https://github.com/FRBCesab/funbiogeo>