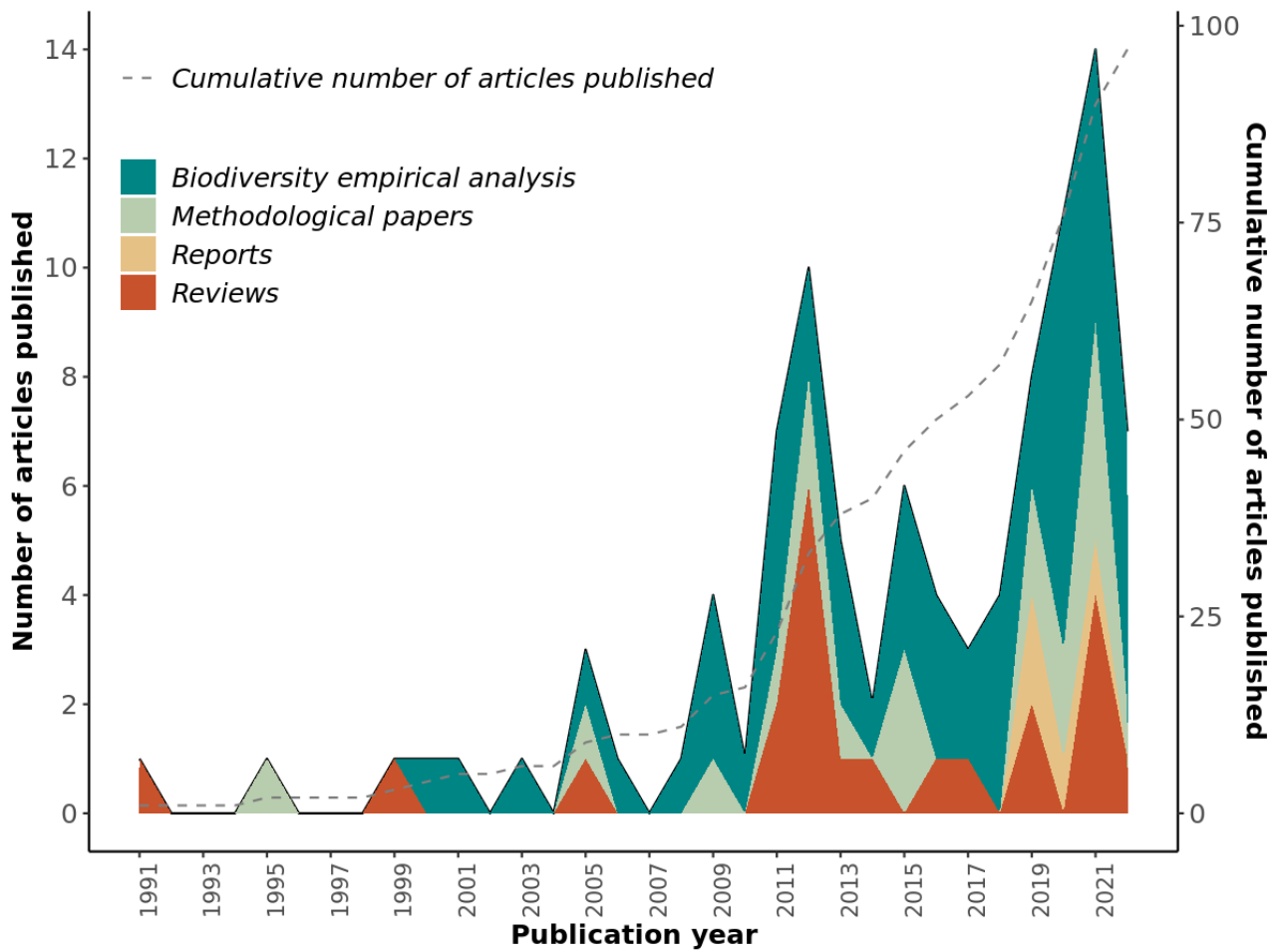


Appendix

Appendix S1: Sensitivity of the number of matches depending on the request.

Searches	Resulting number of matches (2023)
<p>Final searched terms</p> <p>TI=((biodiversity OR population* OR communit* OR indicator* OR natur* OR richness OR species OR "biological diversity" OR abundance OR assemblage OR *flora OR *fauna) AND (trend* OR dynamic* OR "time series" OR declin* OR loss OR extinct* OR increas* OR gain OR coloni* OR change* OR fluctuat* OR trajector* OR tempo*)) AND AB=(("temporal" OR time) AND ("analys*" OR "model*" OR stud* OR quantifi*)) NOT TI=("human population" OR "urban population") AND (TI=(global OR worldwide) OR AB=(global OR worldwide)) NOT WC=("meteorology atmospheric sciences" OR "infectious disease" OR "biochemistry molecular biology" OR "paleontology" OR "microbiology")</p>	<p>2,359 (<i>initial match in February 2022 : 2,008</i>)</p>
<p>Broad search on papers topics (not titles and abstracts)</p> <p>TS=((biodiversity OR population* OR communit* OR indicator* OR natur* OR richness OR species OR "biological diversity" OR abundance OR assemblage OR *flora OR *fauna) AND (trend* OR dynamic* OR "time series" OR declin* OR loss OR extinct* OR increas* OR gain OR coloni* OR change* OR fluctuat* OR trajector* OR tempo*) AND ("temporal" OR time) AND ("analys*" OR "model*" OR stud* OR quantifi*)) AND (global OR worldwide))</p>	<p>84,435</p>
<p>Search without the exclusion terms</p> <p>TI=((biodiversity OR population* OR communit* OR indicator* OR natur* OR richness OR species OR "biological diversity" OR abundance OR assemblage OR *flora OR *fauna) AND (trend* OR dynamic* OR "time series" OR declin* OR loss OR extinct* OR increas* OR gain OR coloni* OR change* OR fluctuat* OR trajector* OR tempo*)) AND AB=(("temporal" OR time) AND ("analys*" OR "model*" OR stud* OR quantifi*))</p>	<p>29,847</p>
<p>Search without the global constraints</p> <p>TI=((biodiversity OR population* OR communit* OR indicator* OR natur* OR richness OR species OR "biological diversity" OR abundance OR assemblage OR *flora OR *fauna) AND (trend* OR dynamic* OR "time series" OR declin* OR loss OR extinct* OR increas* OR gain OR coloni* OR change* OR fluctuat* OR trajector* OR tempo*)) AND AB=(("temporal" OR time) AND ("analys*" OR "model*" OR stud* OR quantifi*)) NOT TI=("human population" OR "urban population") NOT WC=("meteorology atmospheric sciences" OR "infectious disease" OR "biochemistry molecular biology" OR "paleontology" OR "microbiology")</p>	<p>27,363</p>
<p>Search without the quantification terms on the abstracts</p> <p>TI=((biodiversity OR population* OR communit* OR indicator* OR natur* OR richness OR species OR "biological diversity" OR abundance OR assemblage OR *flora OR *fauna) AND (trend* OR dynamic* OR "time series" OR declin* OR loss OR extinct* OR increas* OR gain OR coloni* OR change* OR fluctuat* OR trajector* OR tempo*)) AND AB=(("temporal" OR time)) NOT TI=("human population" OR "urban population") AND (TI=(global OR worldwide) OR AB=(global OR worldwide)) NOT WC=("meteorology atmospheric sciences" OR "infectious disease" OR "biochemistry molecular biology" OR "paleontology" OR "microbiology")</p>	<p>2,875</p>



Appendix S2: Number of articles published each year. Colored areas are proportional to the number of papers published each year within each defined type of papers.

Appendix S3: Detailed description of the exclusion criteria used to go through the screening process.

Criteria	Explanation
Not global	Only one continent, national, regional or local scale; or number of species too low
Not actual	Not during the Anthropocene
Not on biodiversity	<i>e.g.</i> on human populations, CO2 levels
Wrong type of data	<i>e.g.</i> spatial and not temporal data, microcosm experiments
No empirical data	Only simulations or projections