

1 **Supplementary Information for**

2 **From Methodological Foundations to Biodiversity Applications: A**  
3 **Comprehensive Analysis of Environmental DNA Research Trends**  
4 **(1992-2024)**

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## Tables S1

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## Figures S1–S3

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### Supplementary Information

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**Table S1.** A complete reference list, with bibliometric information used to describe the references and the weights of each topic in the structural topic model.

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**Figure S1.** Flow chart summarizing the process of literature compilation and data cleaning for inclusion in bibliometric analysis and topic models.

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**Figure S2.** Relationship between model exclusivity and semantic coherence.

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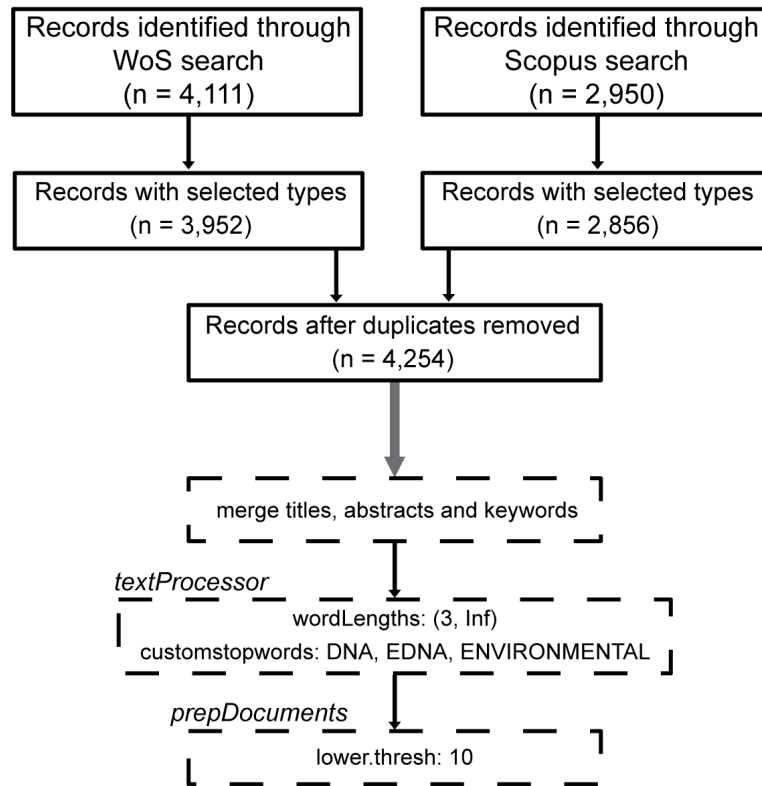
**Figure S3.** Absolute temporal trends with the Mann-Kendall trend test results.

31

32 **Table S1.** A complete reference list, with bibliometric information used to describe the  
33 references and the weights of each topic in the structural topic model.

34 (In the Excel file)

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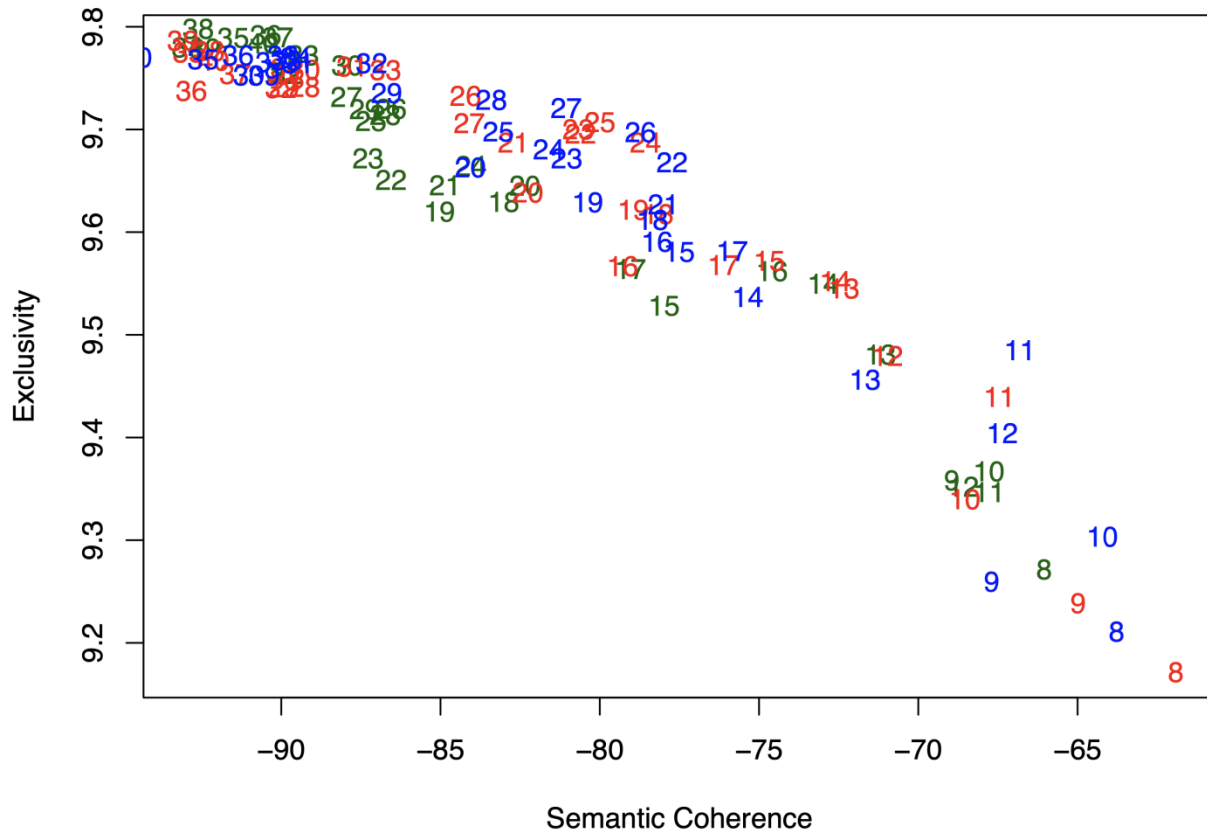
37 **Figure S1. Flow chart summarizing the process of literature compilation and data cleaning**

38 **for inclusion in bibliometric analysis and topic models.** The solid boxes outline the literature

39 collection process, and the dashed boxes detail the structural topic modeling (STM) data cleaning

40 steps, performed using the stm package in R.

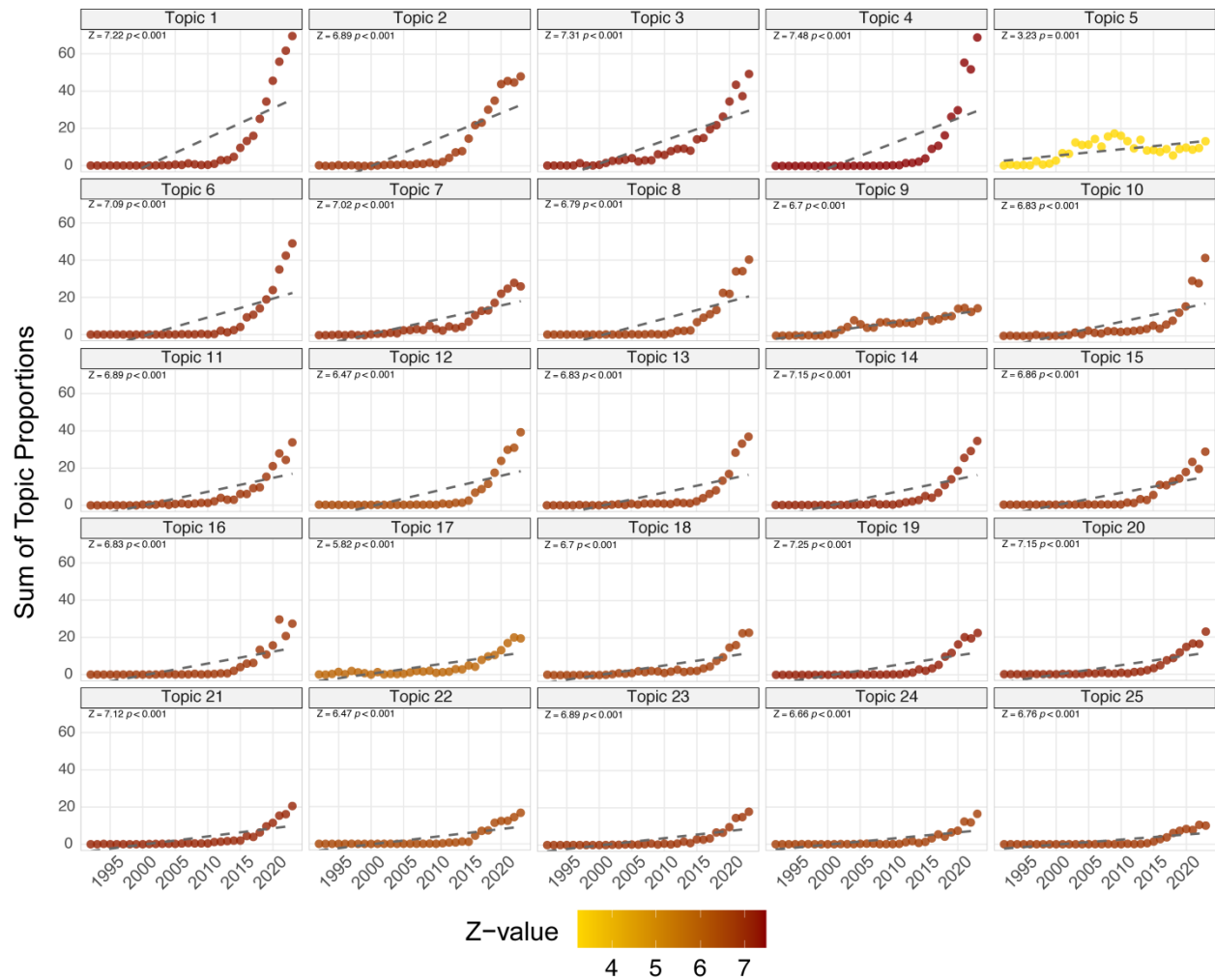
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43 **Figure S2. Relationship between model exclusivity and semantic coherence.** Each number  
 44 refers to an individual topic model with a specific number of topic (K). The position of each  
 45 number on the graph indicates the mean values of exclusivity and semantic coherence for the  
 46 corresponding topic model. Because topic modeling estimation is not deterministic, each  
 47 configuration of the topic model was executed three times to ensure conclusions were consistent  
 48 across model runs (model runs denoted by different colors).

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51 **Figure S3. Absolute temporal trends with the Mann-Kendall trend test results.** Each

52 subgraph corresponds to one topic (Topic 1-25). The higher the Z-value, the more significant the

53 increasing trend.

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