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Abstract

The term “nature-based solutions” (NbS) is emerging as a research framework in higher education, governmental and NGO communities and refers to “a sustainable management approach of natural resources using natural features and processes in addressing social-ecological challenges.” NbS can be climate resilience strategies and is now being embraced in some agrifood systems. We performed a bibliometric analysis in the SCOPUS database and as of November 3, 2022 discovered that the term “nature-based solutions” appeared in the title, abstract or keywords in 2,244 publications between 2012 and 2022 with 518 (23%) containing agriculture and biological sciences subject matter, 1683 (75%) environmental science subject matter, and 770 (34%) social science subject matter. More than 66% of the publications appeared in 2021 and 2022. Some of the NbS publications with agriculture/food systems content overlapped with terms such as agroecology, regenerative agriculture, sustainable agriculture, and organic agrifood systems. NbS may provide additional transdisciplinary approaches and insights to build climate resilience and food security in agrifood systems. However, we must also remain vigilant to address some concerns that NbS may be used for greenwashing. Some examples of NbS approaches to agrifood systems will be shared and discussed.

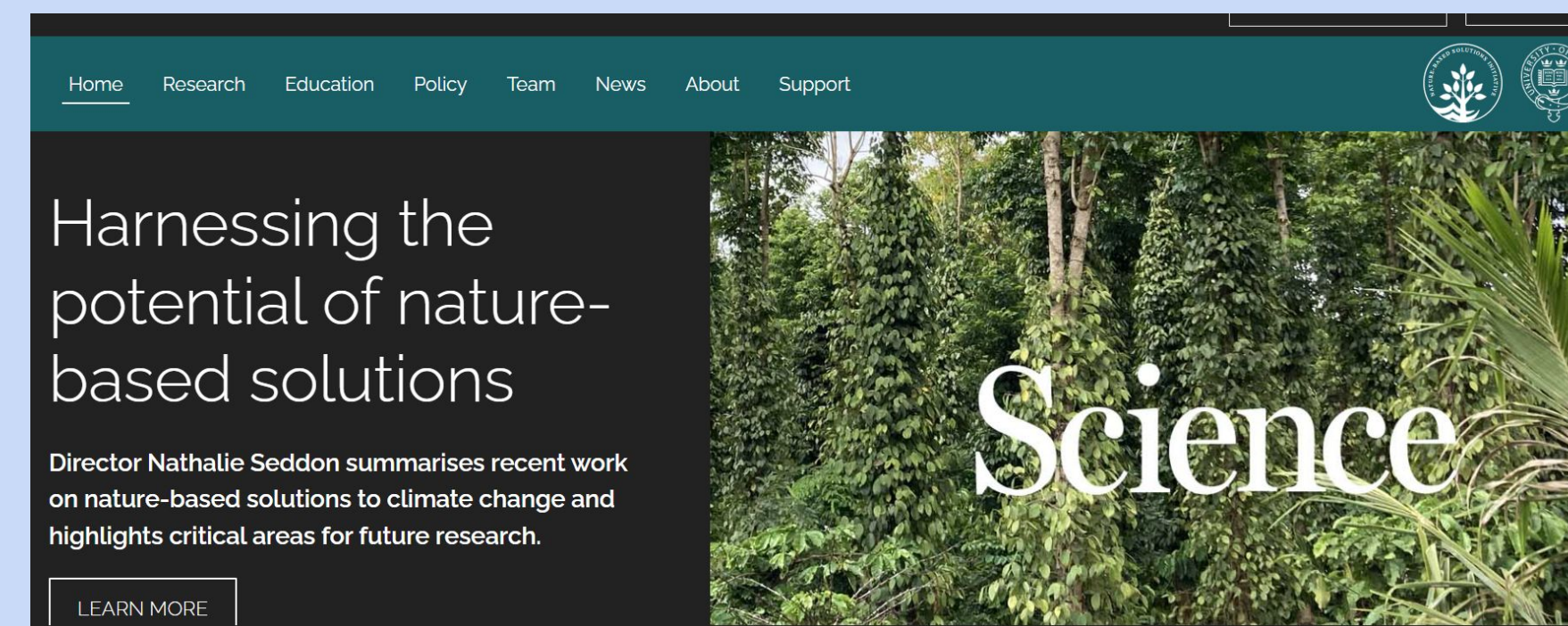
Research Questions:

Can nature-based solutions be integrated into agrifood systems’ transformation to build climate resiliency and food security? If so, under what conditions?

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University of Oxford’s Nature-based Solutions Initiative may serve as an example of what can be done:

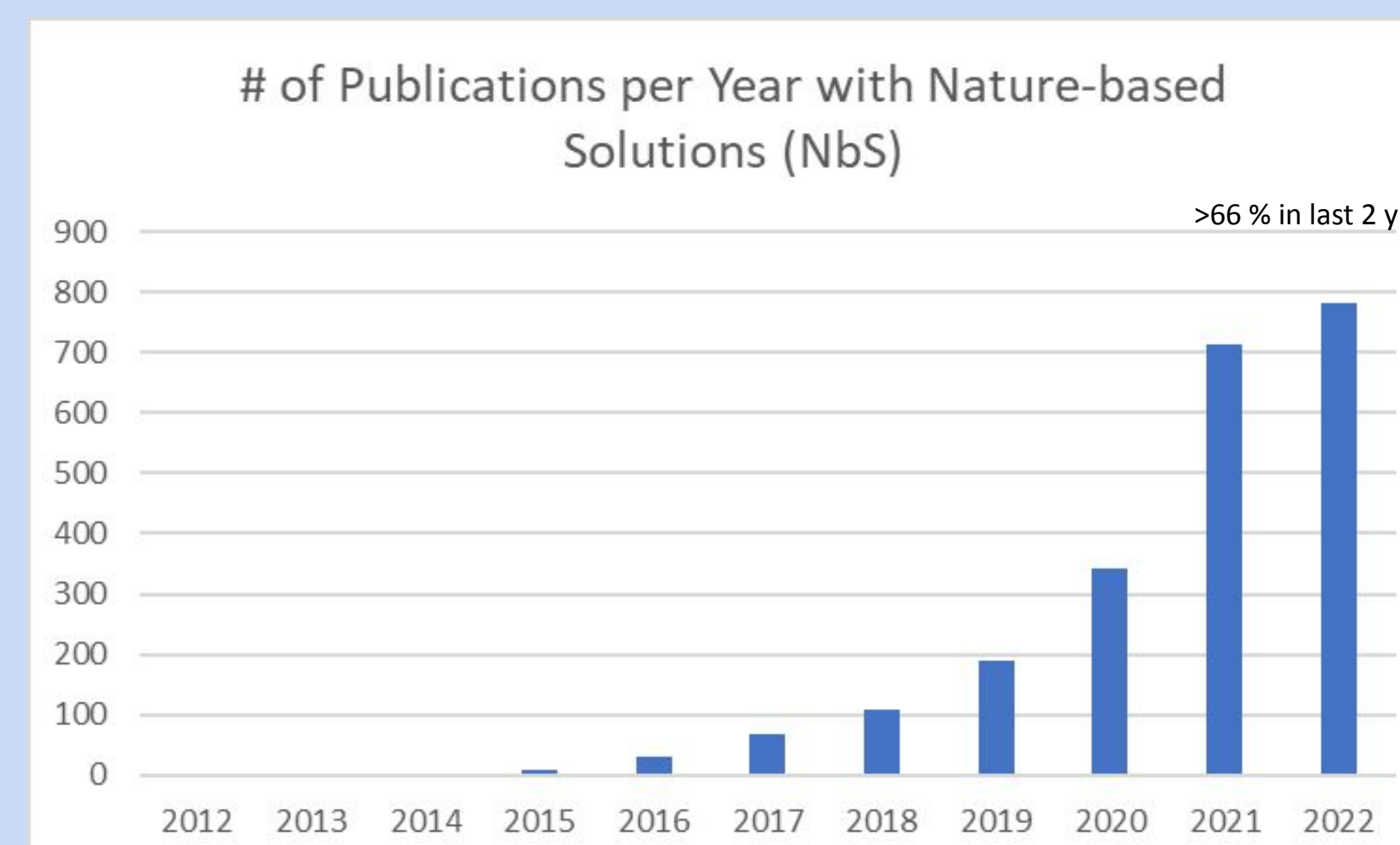


Methods:

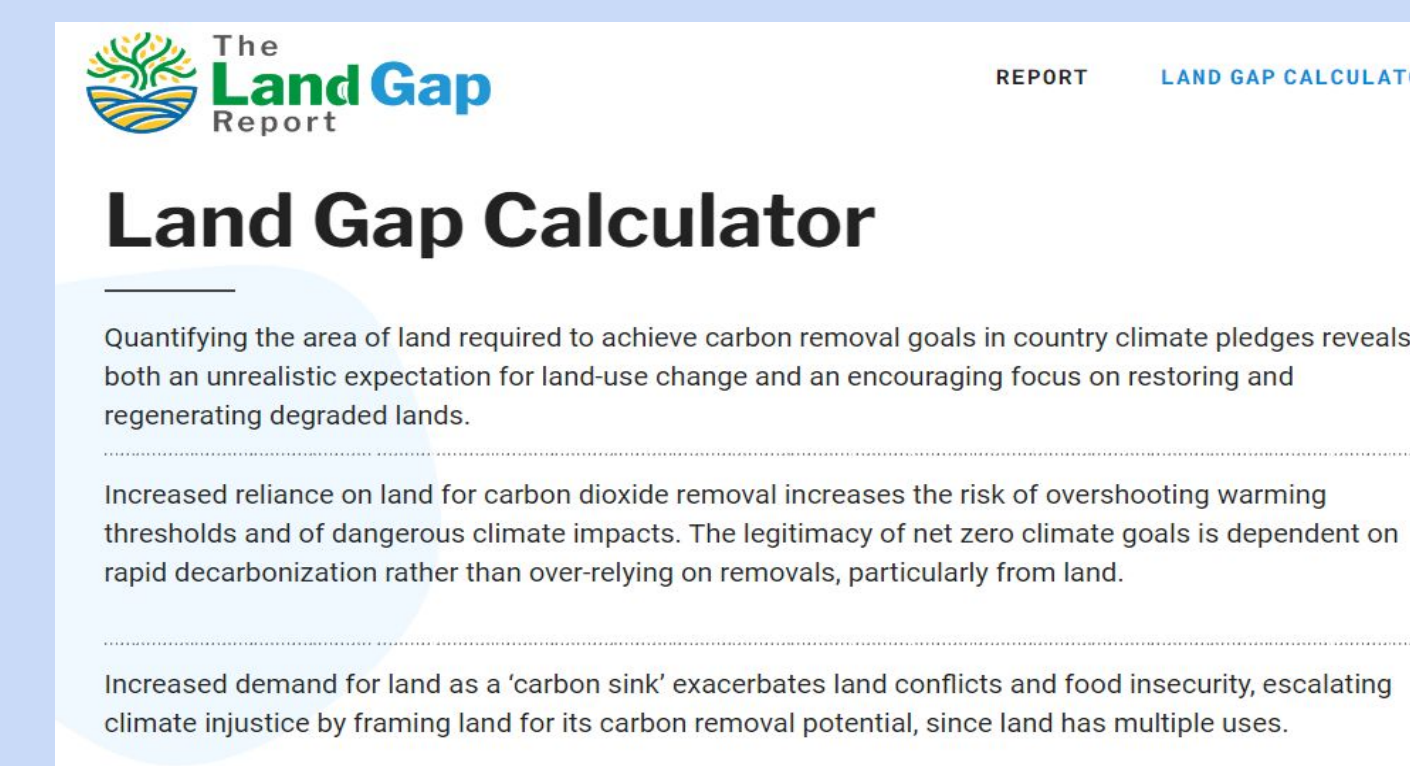
Literature review using the key term “nature-based solutions” (NbS) in Scopus Database with search of this keyword phrase in the Title, Abstract, and Keywords field for years 2012-2022. Reviewed recent reports by governments and non-profit organizations.

Relevant Literature: SCOPUS Bibliometric Analysis with examples

- 518 of 2,244 publications in Agriculture and Biological Sciences
- 770 of 2,244 publication in Social Science
- 1,682 or 2,244 publication in Environmental Sciences
- 66% publications in the last 2 years



Land Gap Report 2022: Possible Greenwashing



Next steps:

- Deeper dive into the literature focusing on agrifood systems, climate resiliency, and food security.
- Evaluate greenwashing claims and how these claims might undermine NbS applied to agriculture and food systems

References:

University of Oxford Nature-based Solutions Initiatives
 Land Gap Report 2022. [Land-Gap-Report-2022.pdf](https://landgap.org/land-gap-report-2022.pdf) (landgap.org)
 United Nations Environment Programme. 2022. *Nature-based Solutions: Opportunities and Challenges for Scaling Up - Summary*. <https://wedocs.unep.org/20.500.11822/40822>
 United Nations FAO Nature-based Solutions in Agriculture Website: [Agriculture | Nature-Based Solutions | Land & Water | Food and Agriculture Organization of the United Nations | Land & Water | Food and Agriculture Organization of the United Nations](https://www.fao.org/nbs) (fao.org)

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