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WORLDWIDE RESEARCH ON LAND USE AND LAND COVER IN THE AMAZON REGION

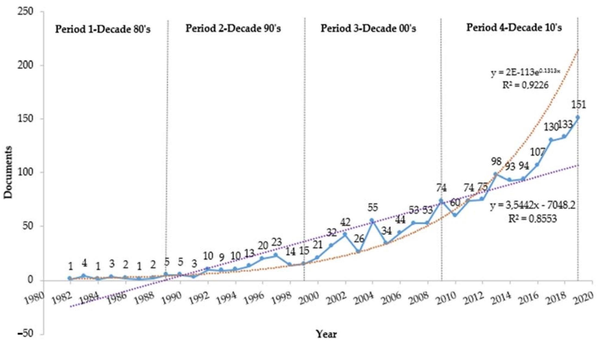
PROBLEM

Land cover is crucial for understanding terrestrial surfaces and their biophysical processes in global environmental change. Changes in land use reflect how land is managed and the reasons behind alterations in land cover, often driven by economic and social factors. The type of land use can influence local benefits and contribute to regional sustainable development. The Amazon, the world's largest tropical forest renowned for its unparalleled biodiversity, plays a pivotal role in climate regulation.

MAIN OBJETIVE

he present work proposes to carry out a bibliometric analysis of 1590 articles indexed in the Scopus database.

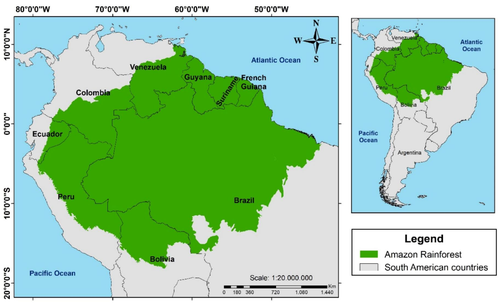
Evolution of scientific production on LULC in Amazon Region.

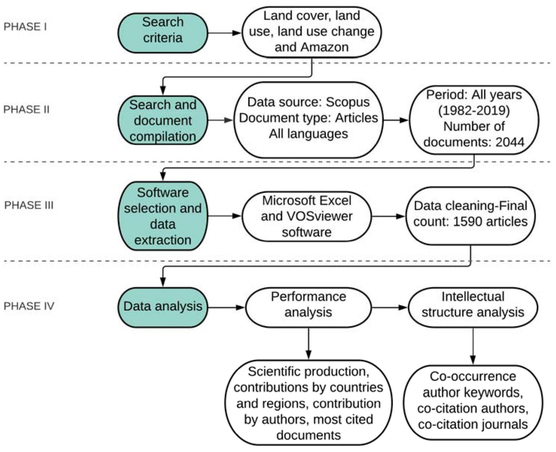


PROPOSAL

It uses both Microsoft Excel and VOSviewer software for the evaluation of author keywords, authors, and countries. The method encompasses (i) search criteria, (ii) search and document compilation, (iii) software selection and data extraction, and (iv) data analysis.

Study area location: Amazon Rainforest.



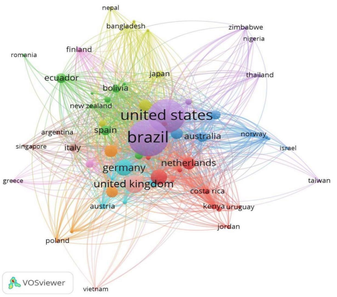


RESULTS

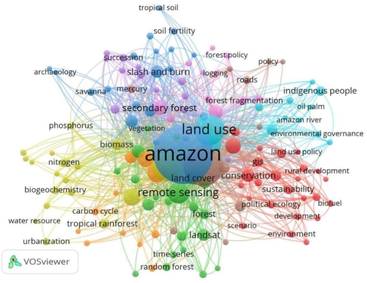
Top 15 most-cited articles.

Rank	Author	Article	Citations
1	Feddema et al. [6]	Atmospheric science: The importance of land-cover change in simulating future climates	660
2	Davidson et al. [146]	Effects of soil water content on soil respiration in forests and cattle pastures of eastern Amazonia	640
3	Barlow et al. [111]	Quantifying the biodiversity value of tropical primary, secondary, and plantation forests	633
4	Adams et al. [102]	Classification of multispectral images based on fractions of endmembers: Application to land-cover change in the Brazilian Amazon	631
5	Morton et al. [30]	Cropland expansion changes deforestation dynamics in the southern Brazilian Amazon	600
6	Houghton et al. [147]	Annual fluxes of carbon from deforestation and regrowth in the Brazilian Amazon	545
7	Nepstad et al. [148]	Inhibition of Amazon deforestation and fire by parks and indigenous lands	484
8	Saatchi et al. [149]	Distribution of aboveground live biomass in the Amazon basin	414
9	Asner et al. [119]	High-resolution forest carbon stocks and emissions in the Amazon	410
10	Houghton et al. [150]	The spatial distribution of forest biomass in the Brazilian Amazon: A comparison of estimates	377
11	Trenberth et al. [151]	Atmospheric moisture recycling: Role of advection and local evaporation	367
12	Macedo et al. [120]	Decoupling of deforestation and soy production in the southern Amazon during the late 2000s	342
13	Tian et al. [103]	Effect of interannual climate variability on carbon storage in Amazonian ecosystems	340
14	Van Der Ent et al. [152]	Origin and fate of atmospheric moisture over continents	336
15	Trumbore [104]	Comparison of carbon dynamics in tropical and temperate soils using radiocarbon measurements	331
		SUM OF TOP 15 CITATIONS	7110
		TOTAL CITATIONS (1590 ARTICLES)	57,305

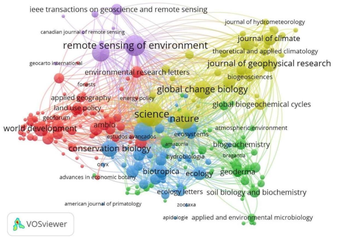
Countries network.



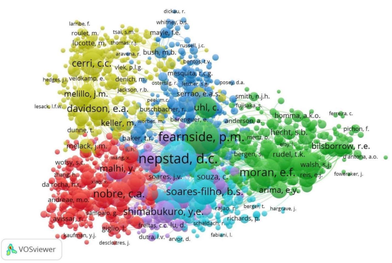
Co-occurrence author keyword network.



Journal-based co-citation clusters.



Co-citation network of cited authors.



CONCLUSIONS

- The results classify the main research fields into nine main topics with increasing relevance: ‘Amazon’, ‘deforestation’, ‘remote sensing’, ‘land use and land cover change’, and ‘land use’. In conclusion, the co-citation authors’ network reveals the development of such areas and the interest they present due to their worldwide importance.

ACKNOWLEDGMENTS

34 92th percentile
Citations in Scopus

2.75
FWCI

216
Views count