

Circulating Public Perception on Agroforestry: Discourse Networks Analysis Using Social Media and Online News Media in Four Countries of the Sahel Region

Authors : Luisa Müting, Wisnu Harto Adiwijoyo

Abstract : Agroforestry systems transform the agricultural landscapes in the Sahel region of Africa, providing food and farming products consumed for subsistence or sold for income. In the incrementally dry climate of the Sahel region, the spreading of agroforestry practices is integral for policymaker efforts to counteract land degradation and provide soil restoration in the region. Several measures on agroforestry practices have been implemented in the region by governmental and non-governmental institutions in recent years. However, despite the efforts, past research shows that awareness of how policies and interventions are being consumed and perceived by the public remains low. Therefore, interpreting public policy dilemmas by analyzing the public perception regarding agroforestry concepts and practices is necessary. Public perceptions and discourses can be an essential driver or constraint for the adoption of agroforestry practices in the region. Thus, understanding the public discourse behavior of crucial stakeholders could assist policymakers in developing inclusive and contextual policies that are relevant to the context of agroforestry adoption in Sahel region. To answer how information about agroforestry spreads and is perceived by the public. As internet usage increased drastically over the past decade, reaching a share of 33 percent of the population being connected to the internet, this research is based on online conversation data. Social media data from Facebook are gathered daily between April 2021 and April 2022 in Djibouti, Senegal, Mali, and Nigeria based on their share of active internet users compared to other countries in the Sahel region. A systematic methodology was applied to the extracted social media using discourse network analysis (DNA). This study then clustered the data by the types of agroforestry practices, sentiments, and country. Additionally, this research extracted the text data from online news media during the same period to pinpoint events related to the topic of agroforestry. The preliminary result indicates that tree management, crops, and livestock integration, diversifying species and genetic resources, and focusing on interactions and productivity across the agricultural system; are the most notable keywords in agroforestry-related conversations within the four countries in the Sahel region. Additionally, approximately 84 percent of the discussions were still dominated by big actors, such as NGO or government actors. Furthermore, as a subject of communication within agroforestry discourse, the Great Green Wall initiative generates almost 60 percent positive sentiment within the captured social media data, effectively having a more significant outreach than general agroforestry topics. This study provides an understanding for scholars and policymakers with a springboard for further research or policy design on agroforestry in the four countries of the Sahel region with systematically uncaptured novel data from the internet.

Keywords : sahel, djibouti, senegal, mali, nigeria, social networks analysis, public discourse analysis, sentiment analysis, content analysis, social media, online news, agroforestry, land restoration

Conference Title : ICFPE 2023 : International Conference on Forest Policy and Economics

Conference Location : Paris, France

Conference Dates : May 11-12, 2023