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Sustainability and agroecology monitoring by private sector companies in the global rice value chain

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Abstract

Rice is a staple food consumed by over half the world's population and there is a projected production and consumption increase particularly in Asian countries. However, rice production contributes significantly to greenhouse gas emissions and has various negative effects on natural ecosystems. Consumers and policymakers are increasingly demanding evidence of more sustainable rice value chains. Consequently, many private companies involved at different value chain levels, such as inputs, production, packaging and storage, processing, distribution, and marketing of rice already report on the adoption of sustainable practices. Taking an agroecology perspective that distinguishes between five different levels of food system change, this study analyses patterns in sustainability transitions and the reporting gaps. This study conducted a systematic review of sustainability indicators and measurement methods used by 33 private companies with membership in the Sustainable Rice Platform (SRP). Sustainability reports published between 2018 and 2023 were screened to identify the reported sustainability indicators, assess the extent of their adoption, and evaluate their degree of alignment with the 13 principles of agroecology. Most companies attained levels 1 and 2 (farm layers) and 4 (community layer) but very few attain transformative agroecological levels 3 (landscape layer), and 5 (society layer). Performance regarding the agroecological principles; social values and diets, input reduction, and fairness were most reported, whereas synergy, co-creation of knowledge, and land and natural resource governance were least reported, with variations across regions and levels of the value chain. The indicators are measured using digital tools, satellite monitoring, farm visits, and reports from their suppliers, and most companies have reported concerns about data accuracy and completeness. Other bottlenecks include a lack of regular monitoring, confirmation, and verification of certified standards as well as their enforcement, especially in low and middle-income countries. Finally, companies can effectively contribute to a sustainable value chain by committing to ethical and transparent compliance, monitoring, and reporting sustainability indicators, and labeling market products. Thus, interventions such as consumer pressure, strict policies especially in LMICs, and enforcement of certification standards are crucial to accelerating the sustainability transition in global rice value chains.

Keywords: Agroecology, global value chains, rice, sustainability