Multiscale Scoring Method for Socioeconomic Sustainability Assessment of Value Chains

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Several frameworks and tools have been developed to measure societal and business progress toward sustainability. This work builds on the concept of planetary boundaries, recognizing the need for changes in the livestock sector to remain within the "safe operating space for humanity." The livestock sector could transition following different pathways such as agroecology and organic farming, however it is necessary to extend the performance evaluation to socio-economic aspects and to the whole livestock value chains (VC), including the processing and distribution phases. The final goal of this study is to co-design a multiscale method to evaluate the socioeconomic sustainability of post-farm gate livestock value chains. The three dimensions that we will observe are techno-economic, socio-cultural and governance sustainability. The themes characterizing these dimensions in livestock VC can be numerous. Therefore, European sectorial experts were asked to choose the most relevant to be assessed. The identification and prioritization of sustainability themes were achieved using an online two-round Delphi Study. The final assessment method considers 22 themes, and associated to each theme, one or two indicators were selected after a review of available frameworks, primarily Sustainability Assessment of Food and Agriculture systems (SAFA). In the second round, an ordinal ranking of the themes was obtained with a best-worst scaling experiment and then converted into a system of numerical weights to be used in the assessment. The refinement and validation of the assessment method will be carried out through an empirical application to animal product VC, collecting primary data by interviewing VC actors. Researchers and policymakers could benefit by comparing phase by phase livestock VCs bringing similar products to market and identifying areas for improvement in socioeconomic sustainability. This research has been developed within the PATHWAYS project, funded by the European Union’s Horizon 2020 Research and Innovation Programme under grant agreement No 101000395.