Social ecological response diversity in a Biocultural system

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Uncertainties in our local and global food systems require an ever-increasing diversity of responses to unexpected change. Meanwhile, the global food system is becoming ever more homogenous. Agricultural biodiversity has and will continue to play an important role in feeding an increasing population sustainably, often created and managed by farmers and communities with a corresponding high linguistic and cultural diversity (biocultural diversity). We propose a new concept, social-ecological response diversity, as a way to understand response configurations of biocultural systems undergoing transformative change. The resilience of ecosystems (including agricultural ones) depends on a variety of functions. Response diversity is the range of actions among species to contribute to the same functions. We venture into the cultural sphere, and propose a new framing of response diversity, in which functions are biocultural attributes and responses are social-ecological practices. The paper explores this concept through empirical data from the Pamir Mountains of Tajikistan and Afghanistan, a centre of secondary origin of a variety of grains, and home to seven endemic languages. The objective of the paper is to explore social ecological response diversity as a concept to better incorporate cultural aspects of sustainability in food systems.

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