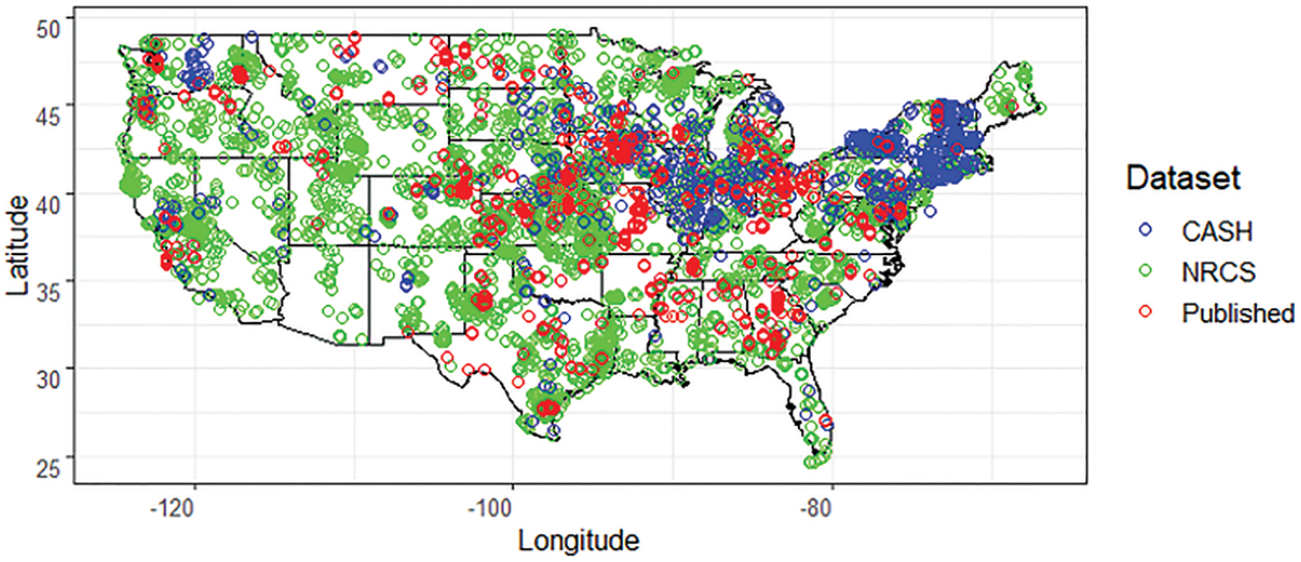
Science Societies

SHAPE: An improved soil health interpretation tool

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The concept of soil health has evolved. Now, scientists recognize that dynamic soil response to management is highly dependent on site-specific factors; these factors must be considered when interpreting soil health measurements.

A new article in the *Soil Science Society of America Journal* reports on a new and improved soil health interpretation tool: the Soil Health Assessment Protocol and Evaluation (SHAPE). This tool builds upon the Soil Management Assessment Framework (SMAF) and Comprehensive Assessment of Soil Health (CASH) concepts. It was developed using a large and representative soil health database including 14,680 soil organic C (SOC) observations from across the U.S. This tool accounts for edaphic and climate factors at the continental scale. In this approach, scoring curves were Bayesian model-based estimates of the conditional cumulative distribution function (CDF) for defined soil peer groups reflecting five soil texture and five soil suborder classes adjusted for mean annual temperature and precipitation. Also produced by SHAPE are scores between 0 and 1 (0–100%) for measured SOC values that reflect their position within the conditional CDF along with measures of uncertainty.

A flexible and quantitative tool, SHAPE provides a relevant interpretation of key soil health indicators.

Dig Deeper

Nunes, M.R., Veum, K.S., Parker, P.A., Holan, S.H., Karlen, D.L., Amsili, J.P., … & Moorman, T.B. (2021). The soil health assessment protocol and evaluation applied to soil organic carbon. *Soil Science Society of America Journal*. **https://doi.org/10.1002/saj2.20244**

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