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### **Producing a Dynamic Soil Information System for Society. Are we ready?**

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Soils are critical natural resources that support a wide range of human activities. Although their importance is recognized, the current systems in place for widely monitoring soils and their conditions, including physical, chemical, and, least of all, biological characteristics, along with measures of soil loss through erosion, do not provide an accurate picture of changes in the soil resource over time. Moreover, information on land use or other activities that might be creating changes in soils are not routinely collected and linked to soil data. This gap was noted by the U.N.'s Food and Agriculture Organization (FAO) in the 2015 report, State of the World's Soils. To achieve a better understanding of policies and practices affecting soils, there is a need for a robust, longitudinal, multi-location dataset that captures chemical, physical, and biological soil attributes, coupled to information on environmental conditions and land use activities. Conceiving and implementing such a broad dataset demands thoughtful consideration of the available and preferred methods for collecting uniform data, appropriate indicators and metrics for different soil attributes, and practical consideration of the needs of users of the data. Information for end users include documenting soil erosion, soil carbon, ecosystem services, food productivity and many others, Because such a database would be a significant endeavor and national resource, a serious discussion is needed to design such a dynamic soil information system.

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