



## **The global Land-Potential Knowledge System (LandPKS): a mobile app and cloud computing for sustainable land management, research and crowdsourcing**

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The phrase “information rich and knowledge poor” describes many land managers as well as natural resource scientists. Land managers can increasingly access vast amounts of data through internet searches, but lack the ability to identify what information is relevant to their particular piece of land. Scientists are responsible for generating and interpreting data, but often lack the knowledge necessary to translate their data into management-relevant knowledge. The global Land-Potential Knowledge System is an app consisting of a growing suite of user-friendly input and output modules linked to global data, knowledge-bases and models. It is being developed to assist both land managers and scientists (a) to identify their soil and climate based on their location and a simple soil description (LandInfo module) and (b) to inventory (e.g. for remote sensing calibration) and monitor (e.g. crop residue and covercrop cover for soil health management and carbon sequestration estimates) basic soil and vegetation cover and composition data (LandCover module). Future modules will allow land management and soil health data to be recorded. Future versions of the app will provide additional site-specific interpretive information, including soil erosion risk and management alternatives. Data can be collected without an internet connection, and upload to a public, global database when a connection becomes available. This is an open data initiative and all data can be accessed and downloaded through the portal at [landpotential.org](http://landpotential.org). Unique aspects of the app include allowing non-soil scientists to identify their soil with limited or no training, and the ability to rapidly record and automatically backup geolocated data anywhere in the world. The poster will provide examples of how the app is being used to support sustainable land management through land use planning, and for on-farm and other research projects throughout the world.