



## **Soil mapping and process modeling for sustainable land use management: a brief historical review**

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Basic soil management goes back to the earliest days of agricultural practices, approximately 9,000 BCE. Through time humans developed soil management techniques of ever increasing complexity, including plows, contour tillage, terracing, and irrigation. Spatial soil patterns were being recognized as early as 3,000 BCE, but the first soil maps didn't appear until the 1700s and the first soil models finally arrived in the 1880s (Brevik et al., in press). The beginning of the 20th century saw an increase in standardization in many soil science methods and wide-spread soil mapping in many parts of the world, particularly in developed countries. However, the classification systems used, mapping scale, and national coverage varied considerably from country to country. Major advances were made in pedologic modeling starting in the 1940s, and in erosion modeling starting in the 1950s. In the 1970s and 1980s advances in computing power, remote and proximal sensing, geographic information systems (GIS), global positioning systems (GPS), and statistics and spatial statistics among other numerical techniques significantly enhanced our ability to map and model soils (Brevik et al., 2016). These types of advances positioned soil science to make meaningful contributions to sustainable land use management as we moved into the 21st century.

### References

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