### Accepted Manuscript

Digital soil mapping across the globe

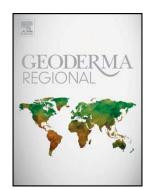
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## ACCEPTED MANUSCRIPT

# Digital soil mapping across the globe

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#### **Abstract**

Digital soil mapping has largely expanded across the globe since the early 2000s. Numerous national, continental and global digital soil mapping products have been produced. In this paper, we review some major developments and highlight areas where progress is needed, including refinements in uncertainty assessments and increasing soil data collection. There are several useful top-down approaches, but we sense that digital soil mapping should be conducted at a regional or local level to be consistent with its use and application, and to ensure efficient soil data collection, and involvement of end users. Despite the numerous mapping activities, a concerted action is needed for enhanced investment in soil mapping, including capacity building and training the next generation of soil surveyors who are grounded in pedology as well as digital soil mapping.

Key words: global environmental challenges, soil mapping, soil survey, international cooperation, soil science

#### 1. Introduction

Soil is essential for life and vital to solving the global environmental challenges such as food and water security, climate change mitigation and adaptation, and biodiversity protection. Numerous studies have advocated that soil is one of the top priorities for the global

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