

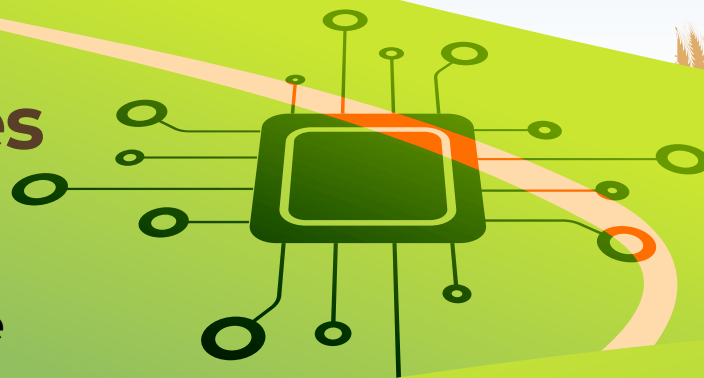


Food and Agriculture  
Organization of the  
United Nations

# Caring for soils: measuring, monitoring and managing through time

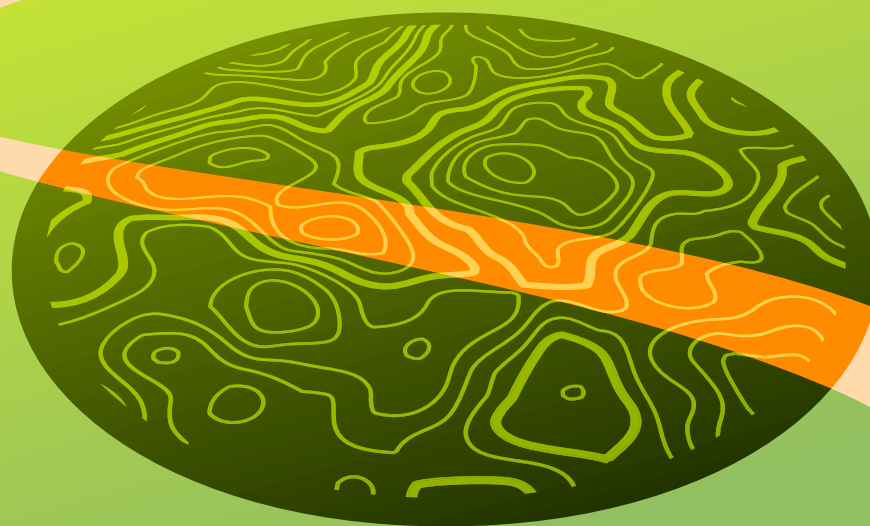
## FUTURE Emerging technologies

AI-driven insights for dynamic,  
real-time soil monitoring  
**supporting sustainable agriculture  
and global food security**



## PRESENT Digital soil mapping

Integrates remote sensing  
and advanced modeling  
**Faster, more accurate,  
and accessible soil data**



## PAST Traditional soil surveys

Relied on expert knowledge and  
hands-on fieldwork.  
**Deep insights but labor-intensive  
and time-consuming**

