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| <i>Session Title</i>       | <b>Empowering Crop monitoring system by GeoAI and Big Data for smallholder and marginalized communities</b>   |
| <i>Session Description</i> | <p>Global efforts have tried to boost agricultural productivity in major breadbaskets, yet SDG2 (Zero Hunger) progress remains critically uneven. In low-income countries or Global South regions, hunger is still on the rise, often linked to challenges within fragmented farming and smallholder agriculture. Addressing these vulnerabilities and unlocking these regions' potential yield is paramount. Producing roughly one-third of global food while hosting majority of food insecure, these communities paradoxically constitute a large proportion of the world's approximately 735 million chronically hungry people due to systemic vulnerabilities. Hunger stems not just from scarcity, but from unequal resource distribution and displacement, limiting their access to land, water, and vital agricultural support. Thus, achieving SDG2 demands intensified focus on smallholder farmers and marginalized communities. However, capturing the situation of smallholder agriculture through EO monitoring is still challenging. This session addresses critical gaps in monitoring soil, land and water resources, access and use by farmers in complex farming systems and marginalized communities. We will explore GeoAI and Big Data's opportunities — using high-resolution mapping, AI models, and localized agro-informatics applications — to bridge these divides. FAO and CBAS will leverage their expertise and collaborative networks in crop monitoring and Earth observation to demonstrate scalable solutions for resource equity, showcasing how these technologies enhance data access and accelerate SDG2 through improved resource management, sustainable agriculture, and inclusive resilience-building.</p> |