The 6th International Forum on Big Data for Sustainable Development Goals (FBAS 2026)

Session Proposal

Session Title	Advancing SDG 11 Monitoring through Geospatial Data: Insights for Housing Measurement and Policy	
Session Chair(s)	*Name*	Robert Ndugwa
	Affiliation	UN-Habitat
	Profile (200-word limit)	Dr. Robert Ndugwa, head of Data and A Statistics Section in UN-Habitat, is a seasoned urban development and data analytics leader with extensive experience in advancing evidence-based policymaking globally, leads innovation in urban data, analytics, and capacity development. He has played a pivotal role in the development and global application of the City Prosperity Index (CPI), enabling cities to monitor performance and align with the SDGs and New Urban Agenda. He brings a strong track record in resource mobilization, securing nearly USD 20 million to support urban monitoring and post-conflict programming. He has built strategic partnerships with UN agencies, international financial institutions, and global networks, and has contributed to system-wide coordination on urban data and policy.
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Preferred Topics	Geospatial Data，SDG 11 Monitoring ，Housing	

Session Description ***(200-word limit)***	Achieving Sustainable Development Goal 11 (SDG 11) requires timely, spatially detailed data to capture the complexity of urbanization, housing conditions, and intra-urban inequalities. However, traditional data sources, such as censuses and household surveys, often lack the resolution needed to monitor rapidly changing urban environments, particularly in low- and middle-income countries. This session explores how geospatial data and Earth Observation (EO) technologies can enhance SDG 11 monitoring, with a focus on housing and policy applications. Drawing on advances in satellite imagery, building footprint data, population grids, and geospatial analytics, it will demonstrate how these sources can complement official statistics to produce more granular and scalable indicators for housing adequacy, informal settlement mapping, land use efficiency, and access to services. Case studies will highlight the use of machine learning and GeoAI to analyze settlement patterns, estimate housing density, and monitor urban expansion in near real time. The session will also address key challenges, including data quality, interoperability, validation, and the need for harmonized frameworks such as the Degree of Urbanization. It will conclude by showcasing how geospatial data can inform evidence-based urban planning and more targeted, responsive housing policies.
Expected outcomes ***(50-word limit)***	Participants will gain practical insights into leveraging geospatial and Earth Observation data to enhance SDG 11 monitoring, particularly for housing. The session will strengthen understanding of integrating innovative data with official statistics, highlight implementation challenges, and support more evidence-based urban planning, policy design, and targeted interventions in rapidly urbanizing contexts.

Please submit filled session proposal to fbas@cbas.ac.cn before **April 20, 2026**