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Spire Global Selected by GIST Research to Provide Soil Moisture Data for Climate and Conflict Early Warning Research in Ethiopia's Somali Region

Supported by the International Organization for Migration (IOM), the project uses satellite-based soil moisture insights to strengthen early warning systems in one of Africa's most climate-exposed regions

VIENNA, Va.--(BUSINESS WIRE)-- Spire Global, Inc. (NYSE: SPIR) ("Spire" or "the Company"), a global provider of space-based data, analytics, and space services, today announced it was selected by GIST Research (GIST), an independent research and advisory consultancy specializing in fragile and climate-affected contexts, to provide its Soil Moisture Insights for a study mapping climate-driven pastoralist movement in Ethiopia's Somali Region. The data will feed into the International Organization for Migration's (IOM) Transhumance Tracking Tool (TTT), a system designed by the UN Agency to observe herder movements and mitigate conflict risks.

Supported by IOM, with funding from the Central Emergency Response Fund (CERF), the pilot aims to strengthen early warning systems that monitor environmental and livelihood stress in one of Africa's most climate-exposed regions, where scarce resources can heighten competition and foster tension between pastoralist communities. The resulting insights are expected to inform evidence-based policies, guide authorities and partners in their interventions, and contribute to conflict prevention efforts.

Pastoral communities in Ethiopia's Somali Region have long relied on mobility to sustain their herds, moving in search of rainfall, pasture, and water. Increasing climate variability is making these movements less predictable, with changing rainfall patterns shaping when and where herders travel.

Utilizing five years of Spire's high-resolution Soil Moisture Insights, GIST, in collaboration with IOM, combined in-depth field research and extensive on-the-ground consultations to map out conflict dynamics and trace how rainfall, water, and soil conditions influence pastoralist mobility across thousands of kilometers of rangeland. The findings highlight how soil moisture fluctuations shape herd movements and how space-based data can visualize the same environmental signals that pastoralists have long used to decide where to move next, following the clouds in search of rain and fresh pasture.

"The communities we speak with often describe their choice to move as 'following the clouds,'" said Romain Galgani, Senior Research Lead at GIST. "With satellite observations, we're able to use technology to carry that tradition forward: studying and analyzing the same patterns through data and helping translate them into information that supports timely, local

decisions."

"Pastoral mobility is one of the oldest forms of climate adaptation," said Sascha Nlabu, IOM Ethiopia Head of Programmes. "Across the Somali Region, herders depend on rapid decisions about when and where to move livestock. By reinforcing that intuition with reliable data, we are bridging centuries-old knowledge with modern satellite technology."

"This collaboration is a powerful example of how our space-based data can help people and organizations act sooner, not later," said Theresa Condor, Chief Executive Officer at Spire Global. "When we can turn near-real-time soil moisture signals into decisions that protect livelihoods, we move from monitoring the planet to truly empowering those living through its changes."

GIST and IOM are developing an interactive early-warning dashboard, powered by live Soil Moisture Insights from Spire, to map pastoral routes and ecological risks in real time, providing communities and organizations with a new tool to prepare for drought. This collaboration will enable the development of a mobility-sensitive early warning system that blends local knowledge with high-resolution satellite data to strengthen resilience and inform anticipatory action for pastoralist communities. The dashboard builds on GIST data analytics and predictive modeling capabilities. It serves as a proof of concept for how satellite-derived soil-moisture insights can enhance existing early-warning systems and enable faster, more localized decision-making before drought or displacement take hold.

Spire's Soil Moisture Insights deliver near-real-time readings of how wet or dry the ground is across every corner of the globe. Derived from the Company's fully deployed constellation of dual use satellites, the data penetrates cloud cover and darkness to reveal subsurface conditions at up to 100-meter resolution. From drought forecasting and flood monitoring to agriculture and supply-chain resilience, Spire's soil-moisture measurements are helping organizations anticipate change, protect resources, and adapt to a rapidly shifting planet.

About Spire Global, Inc.

Spire (NYSE: SPIR) is a global provider of space-based data, analytics and space services, offering unique datasets and powerful insights about Earth so that organizations can make decisions with confidence in a rapidly changing world. Spire builds, owns, and operates a fully deployed satellite constellation that observes the Earth in real time using radio frequency technology. The data acquired by Spire's satellites provides global weather intelligence, ship and plane movements, and spoofing and jamming detection to better predict how their patterns impact economies, global security, business operations and the environment. Spire also offers Space as a Service solutions that empower customers to leverage its established infrastructure to put their business in space. Spire has offices across the U.S., Canada, UK, Luxembourg and Germany. To learn more, visit spire.com.

About GIST Research Limited (GIST)

GIST is a global research and strategy consultancy that discovers insights, designs initiatives, and delivers unique, contextualized solutions for peace, security, development, and climate resilience in some of the world's most complex settings. Drawing on decades of field experience, GIST provides clear, evidence-based perspectives on evolving contexts and emerging risks for governments, international organisations, and private-sector partners.

Its disciplined focus on the core of each question ensures the clarity needed for sound, scenario-based decision-making and effective operational planning in rapidly changing conditions. Combining granular field research with open-source and satellite data, advanced analytical methods, and strategic advisory, GIST supports programmes and investments that strengthen governance, adaptation, and stability. Learn more at gist-research.com.

About IOM:

Established in 1951, IOM is part of the United Nations System and stands as the leading intergovernmental organization in the field of migration. IOM is dedicated to promoting humane and orderly migration for the benefit of all. It does so by providing support to migrants across the world, developing effective responses to the shifting dynamics of migration and providing advice on migration policy and practice. The organization collaborates with governmental, intergovernmental and non-governmental partners to improve the resilience of people on the move, particularly those in situations of vulnerability. It also works closely with governments to manage all forms of mobility, and their impacts. This work includes operations in some of the most complex emergency settings in the world. The IOM Constitution recognizes the link between migration and economic, social and cultural development, as well as to the right of freedom of movement. IOM's work is focused on the following three objectives: saving lives and protecting people on the move, driving solutions to displacement, facilitating pathways for regular migration. For more information, visit our website: iom.int.

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