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GAR and Arkadiah partners to advance High-Integrity Forest Carbon Measurement tailored to Southeast Asia

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GlobalÂ agribusinessÂ GoldenÂ Agri-Resources (GAR)Â announced a strategic collaboration with Singapore-based climate tech firmÂ Arkadiah Technology (Arkadiah)Â that aims to enhance monitoring and protection of climate-critical tropical forests. This initiative is supported by the Singapore Economic Development Board (EDB) and the Office for Space Technology and Industry (OSTIn), Singaporeâ??s national space office.

Southeast Asia is home to around 15% of the worldâ??s tropical forests, which play a vital role in mitigating climate change by removing and storing carbon from the atmosphere. Common tools and methodologies for forest carbon measurement are not designed for the unique challenges of measuring mosaic tropical landscapes common in this region, posing risks for accurate evaluation of these essential resources.

At the inaugural Singapore Space Summit, representatives from GAR, Arkadiah, EDB and OSTIn announced plans to launch a 5-year project to help address this challenge, deploying advanced Digital Monitoring, Reporting and Verification (DMRV)

technologies to measure forest carbon in a landscape in West Kalimantan, Indonesia.

Advancing Forest Monitoring Through AI and Satellite Technology

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The partnership also aims to overcome limitations of manual biomass measurements â?? which can be slow and prone to error â?? to guide and validate forest conservation and restoration efforts. Using a combination of high-resolution satellite data, aerial and on the ground Light Detection and Ranging (LiDAR) scanning, AI-enabled geospatial modelling and hydrological assessments, GAR and Arkadiah will create 3D digital twins of forest areas that can be tracked over time to produce high-integrity carbon sequestration data.

Haryanto Kurniawan, Head of Carbon and Renewables at GAR, said: â??Effective climate action must be guided by best-in-class data. With Arkadiahâ??s technical capabilities and the support of EDB, we see an opportunity to improve transparency and integrity in measuring forest carbon while delivering real results for nature protection tailored to critical Southeast Asian landscapes.â?•

Supporting Local and Regional Climate Ambitions

The initiative is supported under Singapore's EDBâ??sÂ Corporate Venture LaunchpadÂ (CVL) programme, which helps multinational companies build the capabilities for effective corporate-startup partnerships.Â

As part of the collaboration, the partners will jointly publish technical insights to guide best practices in high-integrity carbon measurement and monitoring. By sharing methodologies and learnings, the project will support wider climate solutions while reinforcing Singaporeâ??s role as a trusted regional centre for carbon services and new sustainability solutions.

Reuben Lai, Chief Executive Officer, Arkadiah Technology, said: â??We are proud to support GAR with advanced DMRV technologies that combine LiDAR, AI and satellite analytics. This partnership reflects our commitment to raising the bar for high-integrity climate solutions across the region.â?•

Chen Yiwen, Vice President, EDB, said: â??GAR and Arkadiahâ??s partnership shows how established companies can seamlessly work with startups in Singapore to innovate, stay competitive and produce high-quality solutions that serve global needs. Partnerships like this strengthen Singaporeâ??s participation in global carbon markets and create a repeatable model that can be applied across industries and markets.â?•