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RELEASE: Palm Oil Industry to Jointly Develop Radar Monitoring Technology to Detect Deforestation

World's largest palm oil producers and buyers, including Bunge, Cargill, Golden Agri-Resources (GAR), Mondelēz International, Musim Mas, Nestlé, Pepsico, Sime Darby Plantation, Unilever and Wilmar to fund and develop radar-based forest monitoring system

Washington, DC (October 31, 2019)—A coalition of ten major palm oil producers and buyers are collaborating to support and fund the development of a new, publicly available radar-based forest monitoring system known as Radar Alerts for Detecting Deforestation (RADD). This partnership between **Bunge, Cargill, Golden Agri-Resources (GAR), Mondelēz International, Musim Mas, Nestlé, Pepsico, Sime Darby Plantation, Unilever** and **Wilmar** will make it much easier for companies and other stakeholders to see deforestation happening in near-real-time and with greater accuracy. With this information, they can more quickly mobilize follow-up actions on the ground and work to improve the sustainability of commodity supply chains.

The RADD system is currently being developed for Indonesia and Malaysia. **Preliminary results for Indonesia and Malaysia indicate that the new RADD system can detect tropical deforestation several weeks earlier than optical-based systems.**

Developed by Wageningen University and Satelligence, and facilitated by World Resources Institute, the RADD system will augment existing publicly available monitoring tools that rely on optical-based satellite imagery, which can be delayed when clouds obstruct the view of forests. Through the use of radar waves, the new system can penetrate cloud cover and gather forest change information without being affected by clouds or sunlight.

What makes RADD unique is that it is the first radar-based monitoring system of this scale that will make deforestation alerts publicly available. Once the system is complete, the alerts will be available on [Global Forest Watch](#) and [Global Forest Watch Pro](#), and the methodology behind the alerts will be published.

The new system will utilize freely available radar data from the European Space Agency's Sentinel-1A and B satellites, which orbit the earth every six to 12 days. These satellites provide high spatial detail that will also improve detection of smaller clearing events.

Throughout the RADD system development over the next two years, partner companies will receive alerts about detected deforestation events and will provide crucial feedback to improve the system. The open nature of the system will enable companies - plus governments, civil society organizations and concerned stakeholders - to monitor forests using the same information source and standards.

QUOTES

Bunge:

"Bunge has long believed in the power of technology to help create a more sustainable future. That's why we're proud and excited to see our long-term partnership with Satelligence extended to Global Forest Watch to improve transparency and enable a more sustainable supply chain."

- Robert Coviello, Senior Vice President, Sustainability & Government Affairs, Bunge

Cargill:

"Cargill is committed to working with industry partners to spur innovation and drive meaningful change to end deforestation. We are delighted about RADD's introduction to the palm oil sector and

look forward to developing credible, real-time data that is publicly accessible to enhance our ability to act on deforestation alerts."

- John Hartmann, Agriculture Supply Chain Sustainability Lead, Cargill

Golden Agri Resources:

"GAR has always believed in harnessing technology to spur excellence in agri-business. This pioneering initiative will support and boost our efforts in working towards full traceability to the plantation, as we will now be able to see the real-time picture from above while working with our suppliers on the ground towards responsible palm oil."

- Dr Gotz Martin, Head of Sustainability Implementation, Golden Agri-Resources Ltd

Mondelēz International:

"Technology is fast-evolving to enable sector-wide, near real-time monitoring of the palm sector. Sustainable palm oil production benefits everyone and tools like this bring it within reach."

- Jonathan Horrell, Director Global Sustainability, Mondelēz International

Musim Mas:

"RADD is a welcome addition to our supply chain monitoring "toolbox." Its technology will enable early and precise identification of deforestation. The open nature of RADD allows companies, governments and the public to access accurate, timely information. We welcome the new level of transparency RADD brings to the oil palm sector."

- Olivier Tichit, Musim Mas Director of Sustainable Supply Chain, Musim Mas

Nestle:

"We take an integrated approach in addressing the risks of deforestation, combining tools like certification, supply chain mapping, on-the-ground verification and satellite monitoring. We are pleased to support the development of publicly available forest monitoring system like RADD as it will bring accountability and transparency across the industry."

- Benjamin Ware, Global Head of Responsible Sourcing, Nestlé

Satelligence:

"We are very pleased to work together to pinpoint the highest risk areas and focus engagement and mitigation where it is needed most. RADD will enable companies to focus better on what really matters: making deforestation-free sourcing decisions."

- Niels Wielaard, Director, Satelligence

Sime Darby:

"People around the world are concerned about the rapid rate of deforestation and regrettably the oil palm industry is often associated with it. As producers of sustainable palm oil, Sime Darby Plantation understands this concern and believes that traceability in our supply chain is necessary to draw the line on deforestation. While we have developed our own traceability tool called Crosscheck, we know we cannot do it alone because change requires an industry-wide effort. We believe that working together with like-minded partners on the development of RADD will ensure we move towards a sustainable future for our world and the industry."

- Dr. Simon Lord, Chief Sustainability Officer, Sime Darby

Unilever:

"We are committed to developing a range of technologies that will enhance and accelerate our efforts to address potential issues within our supply chain. Better radar monitoring is an essential piece of this puzzle. We always aim to be the first to know and the first to act, so we are pleased to be supporting advanced tools that will make risks known to us even sooner."

- Petra Meekers, Head of Sustainable Sourcing, Unilever

Wageningen University:

"I am very excited to be part of this unique project, and with this to support transparent forest management. Advancing our radar and machine-learning methods to build an operational monitoring system that detects deforestation more quickly and accurately is a great challenge. Providing radar-based deforestation alerts as a public good will help to further increase transparency of unsustainable and illegal activities in tropical forests."

- Johannes Reiche, Assistant Professor Radar Remote Sensing, Wageningen University

Wilmar:

"Monitoring over 14.75 million ha of supplier's concessions is challenging and resource-intensive. We look forward to the new RADD system helping us detect deforestation activities with accuracy and speed. This will in turn strengthen monitoring methods and responses to take us another step towards a deforestation-free supply chain. Such a collective undertaking by industry players is crucial and will achieve far better outcomes in translating monitoring results to action."

- Perpetua George, General Manager – Sustainability, Wilmar

World Resources Institute:

"We're thrilled to see a major group of companies coming together in this way to create a collective change. Uniting around this shared, cutting-edge monitoring system will allow for more efficient use of resources, create more streamlined conditions for companies to follow up and ultimately help prevent further deforestation."

- Anne Rosenbarger, Commodities Manager, World Resources Institute

About Golden Agri-Resources Ltd (GAR)

GAR is one of the leading palm oil plantation companies with a total planted area of 500,202 hectares (including plasma smallholders) as at 31 March 2019, located in Indonesia. It has integrated operations focused on the production of palm-based edible oil and fat.

Founded in 1996, GAR was listed on the Singapore Exchange in 1999 and has a market capitalisation of US\$2.6 billion as at 31 March 2019. Flambo International Limited, an investment company, is currently GAR's largest shareholder, with a 50.35 percent stake. GAR has several subsidiaries, including PT SMART Tbk which was listed on the Indonesia Stock Exchange in 1992.

GAR is focused on responsible palm oil production. In Indonesia, its primary activities include cultivating and harvesting of oil palm trees; processing of fresh fruit bunch into crude palm oil (CPO) and palm kernel; refining CPO into value-added products such as cooking oil, margarine, shortening, biodiesel and oleo-chemicals; as well as merchandising palm products throughout the world. It also has operations in China and India including a deep-sea port, oilseeds crushing plant, production capabilities for refined edible oil products as well as other food products such as noodles.

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