A CALL FOR BID PROPOSAL

TERMS OF REFERENCE

Procurement of Equipment to Support the Enhancement of Cooperatives via Innovative Solutions to Improve Productivity and Strengthen Supply and Market Chains

Project: Strengthened Cooperatives and Viable Agro-enterprises for Smallholder Farmers' Profitable Production and Engagement in the Value Chains (Coop-PROPEL Project)

I. BACKGROUND

The Coop-PROPEL Project "Strengthened Cooperatives and Viable Agroenterprises for Smallholder Farmers' Profitable Production and Engagement in Value Chains or Coop PROPEL Project" is being implemented by MASS SPECC in partnership with 8 primary cooperatives located in Regions 9, 11 and 12, and in collaboration with other stakeholders. Supported by the German Development Cooperation and the European Union through GIZ under the SPADe Project, this project enhances the initiative of MASS SPECC's farmer development support in its AgriBEST Program.

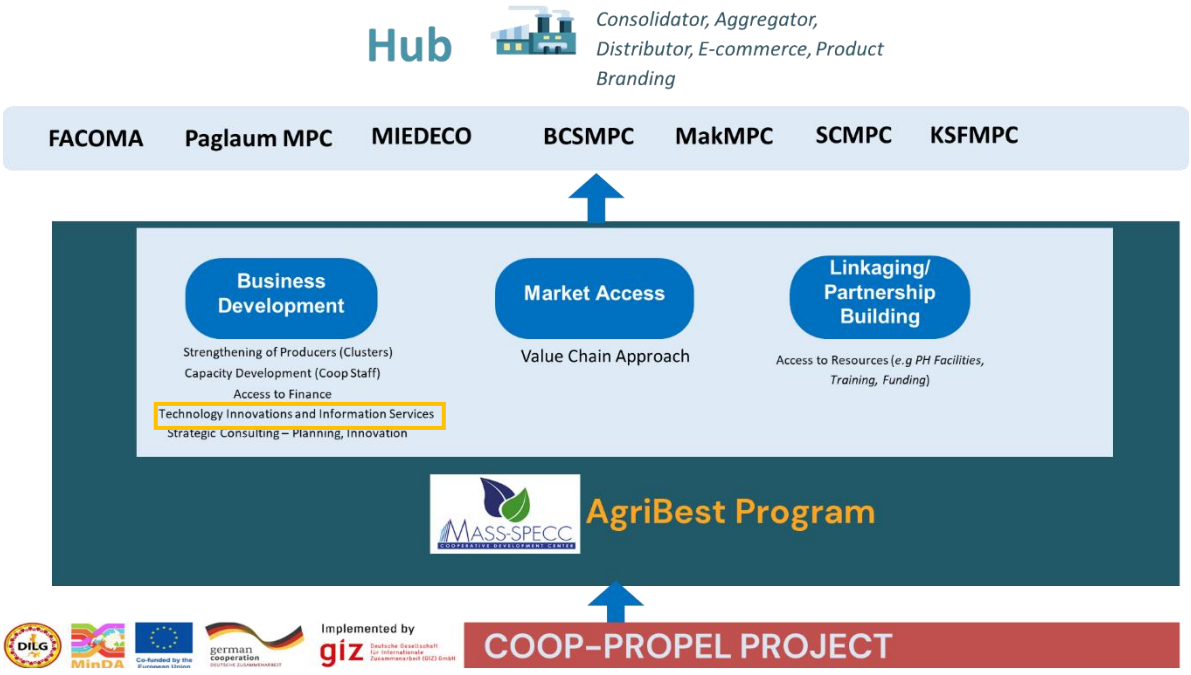
The project will contribute to the goal of increased income of smallholder farmers brought about by strengthened capacities of cooperatives to support smallholder farmers' profitable engagement in the value chains of coconut and cacao. The agro-enterprise clustering approach (AECA) was adopted for effective mobilization of farmers and consolidation of their products through small groups or farmer clusters, as well as their coordination for the cooperative's efficient value chain operations in consolidation, processing and marketing.

During the conduct of value chain assessments and learning exchanges with farmers, several key challenges were consistently identified. These include high operational costs, an aging farming population (as youth show declining interest in agriculture), increased vulnerability to pests and crop diseases, and adverse weather conditions caused by climate change. These issues have significantly affected productivity and resilience across various stages of the agricultural value chain. Among the proposed solutions, the most promising and effective approach identified is the adoption of innovative technologies—specifically, the use of agricultural drones. These drones offer advanced capabilities for crop monitoring, precision spraying, aerial mapping and data collection, thereby reducing labor intensity, minimizing input costs, and improving overall farm efficiency and sustainability.

While they are primarily used for farming tasks (like crop monitoring and spraying), their broader impact touches multiple stages of the supply chain — from production to logistics to decision-making.

In the cooperative level, this technology innovation will be anchored to the business development services of MASS-SPECC to its cooperative members down to the farmer members as part of the sustainability plan of MASS-SPECC/COOP -Propel Project (See below).

SUSTAINABILITY FRAMEWORK



II. PURPOSE

The procurement agricultural drones will ensure that the cooperatives will be able to provide advance tools for its farmer-members which reduces waste and lower cost of inputs, boost crop yield, attracts youths and eases labor for older farmers, detects treats outbreaks at early stage, speed up tasks so farmers can adapt quickly to unpredictable weather.

By integrating drone services into the loan processing workflow, financial institutions can make better-informed decisions, reduce field inspection costs, and support farmers with timely recommendations for improving productivity and sustainability.

This access of drone shall be part of the business development support services to be offered by MASS-SPECC to the cooperatives and to its farmer members. This will be a pilot project of MASS-SPECC for the enhancement of primary cooperatives agricultural services.

Procurement of Agricultural Drones:

Model	Features/Capabilities	Business Development Services
1) DJ Agras T50	Enhance farming efficiency – for large scale spraying, spreading and surveying tasks. It handles large	Service rental for farmer members / cooperative for spraying and seeding purposes

	payloads (40kgs for liquid spraying and 50kgs for spreading), high flow rates, and it comes with advanced sensing and safety features like dual radars and binocular vision. This makes it ideal in maximizing productivity across extensive farm acreage while maintaining precision and operational safety	
2) DJI MAVIC 3 Agri Multispectral Drone (Agri Mapping and Survey Drone)	Is a compact, professional drone designed for precision agriculture. It combine a high resolution RGB camera with four multispectral sensor enabling farmers and agricoops to monitor crop health, detect issues early, and make data-driven decisions for higher yield and lower input cos. With farm management software, it delivers reliable, actionable insights from the field.	Drone services leverage aerial imaging and advanced sensors to capture real-time data on the condition and productivity of agricultural land. This technology enables loan processors and agricultural assessors to: **Evaluate Crop Health**: Multispectral and thermal imaging helps detect crop stress, disease, or pest infestation early. **Assess Land Utilization**: Identify underused or idle portions of farmland for better planning and financial forecasting. **Monitor Seasonal Progress**: Track crop growth stages and harvest readiness to align financing with actual farm cycles. **Support Risk Assessment**: Provide objective, up-to-date insights into farm conditions, reducing reliance on self-reported data. **Improve Loan Decision-Making**: Enhance the accuracy and reliability of loan assessments by using visual, data-backed evidence. *By integrating drone services into the loan processing workflow, financial institutions can make better-informed decisions, reduce field inspection costs, and support farmers with timely*

		recommendations for improving productivity and sustainability. **Enterprise operations –** this will assist the management for the probable harvest volume and capacity per area/farmer. Drone services play a vital role in enterprise operations by providing high-resolution aerial data that supports management in estimating probable harvest volumes and production capacity per area or per farmer. Key benefits include: **Accurate Yield Estimation:** Drones collect real-time imagery and multispectral data to assess crop health and forecast harvest output with precision. **Area-Based Analysis:** Enable detailed mapping of farmland to evaluate productivity per plot, per hectare, or per individual farmer. **Operational Planning:** Support data-driven decisions in resource allocation, supply chain planning, and market forecasting. **Performance Monitoring:** Continuously monitor crop development to compare actual outcomes against projected targets. *By integrating drone services into enterprise operations, agricultural businesses and financial institutions can optimize planning, reduce uncertainty, and improve overall efficiency in managing large-scale farming operations.*

III. OBJECTIVES:

- MASS-SPECC to promote innovations in providing services to the agricultural sector
    - Strengthen the agriloan evaluation system of the cooperative
    - Act as digital enabler which helps optimize the entire agricultural ecosystem. They support farmers directly while also making the supply chain more data-driven, efficient, and responsive to market needs.
- To offer advance tools to cooperatives and its members in ensuring on farm efficiency and strengthen supply and market chains.

IV. SCOPE:

- Procurement of 2 equipment for agricultural services and farm area survey, mapping and monitoring
- Flight Planning and Approvals: Develop flight plans and obtain all necessary regulatory approvals or permits from relevant authorities (e.g., Civil Aviation Authority).
- Delivery on the specified timetable, Training of pilot and testing
- After sales – technical support

V. TECHNICAL SPECIFICATIONS:

DJI MAVIC 3 Agri Multispectral Drone

Item	Description
1	DJI Agri Mavic 3 Multispectral Drone (Agri Mapping and Survey Drone)
2	Mavic 3 Enterprise Series Battery Kit
3	D-RTK 2 High Precision GNSS Mobile Station Package
4	DJI Terra - Standard – Permanent (1 Device)
5	Peplink Pepwave BR1 Mini 5G Secure SD-WAN Router
6	Ecoflow Delta Max Portable Power Station with NextGen 220W Portable Solar Panel
7	TRAINING / TECHNICAL SERVICES / CONSULTANCY

DJ Agras T50

The XAG P100 Pro is a state-of-the-art agricultural drone designed to enhance farming efficiency through precision spraying, seeding, and mapping.

Item	Description
1	DJI AGRAS T50 Agricultural Drone (Oversea V2) Kit
2	DB1560 Intelligent Flight Battery (Oversea)
3	D12000iE Multifunctional Inverter Generator
4	Peplink Pepwave BR1 Mini 5G Secure SD-WAN Router
5	TRAINING / TECHNICAL SERVICES / CONSULTANCY

VI. EXPECTED DELIVERABLES

Specification	Quantity
1. DJI MAVIC 3 Agri Multispectral Drone with parts and accessories	1
2. DJ Agras T50 with parts and accessories	1

VII. SUMISSION OF PROPOSAL & TIMELINE:

Submission of contract for bidding documents is due on or before September 30, 2025.

It is to be addressed to Ms. Bernadette O. Toledo, Chief Executive Officer at bo.toledo@mass-specc.coop