GIS-BASED SPATIAL MAPPING INVENTORY OF AGRICULTURAL MACHINERIES IN BANSALAN, DAVAO DEL SUR

ARAH MAY Q. CULANGO

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ABSTRACT

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Adviser: Jeah A. Bejarasco, ABE

Agricultural machinery has become an integral part of agricultural sector today, and has revolutionized the way of farming and production. The study conducted to assess the status of all Agricultural machineries in the area.

This study was conducted at the municipality of Bansalan, Davao del Sur last November 2023 to January 2024. It aimed to assess and determine the status of all agricultural machineries in Bansalan, Davao del Sur. A complete enumeration sampling design was used in data gathering Among the eleven (11) barangays with identified agricultural machines in the municipality of Bansalan, Davao del Sur.

A survey questionnaire was used to determine the owners' profile and machinery's profile using the Global Positioning System (GPS), the coordinates of the location of all machinery storage in the municipality

was gathered.

Results showed that 90% of the agricultural machineries were functional while only 10% were under-maintenance and non-operational. Results showed that there was 85% of registered and 15% of unregistered machineries. These results may be useful as a source of monitoring and evaluation. Moreover, registration status of the agricultural machinery need improve regulatory compliance. The inventory was utilized to monitor the usage of agricultural machinery over time, assess the impact of interventions, and evaluate the effectiveness of agricultural programs and policies. Thus, the findings may be relevant in the development of municipal legislation wherein barangay or municipal officials may use the study to propose and implement projects such as mechanization level and index mapping in specific agricultural operations in the municipality to improve the production in the municipality. Also, promote Agricultural and Fisheries Mechanization Law of 2018.

Keywords: *agricultural machinery, spatial inventory, geographic information system, agricultural and fisheries modernization act law, registration status*