Research project of counterparts funded at UNJA

Name	Counterpart	Title
Rosyani, Fuad Mukhlis, Fazriyas, Neliyati, Nurhikmah	C02	Factors that affect the implementation of oil palm replanting in Jambi Province, Sumatra

Research summary

Oil palm smallholders in Jambi province are currently facing difficult times with declining production. This is due to the age factor of the oil palm trees, as the plantations have exceeded their economic lifespan, yet a significant portion of the land that should have been replanted remains untouched. This study's objective was to determine the condition of the oil palm replanting process and to analyze the factors that potentially influence farmers' decisions to implement the replanting of oil palm.

Jambi province has nine districts that have a distinct number of oil palm smallholders (Fig. 1). Our samples were taken from three districts, namely Tanjung Jabung Barat, Muara Jambi, and Merangin. In these three districts, there are farmers who have conducted replanting and those who have not yet. The sample consists of 298 farmers located in the district with the largest oil palm plantation area and the largest area of old plantations. Each district was chosen using the simple random sampling method (Department of Forestry and Plantations, 2021). The analysis method used in this research is binary logistic regression. The analysis tool used in this research is logistic regression, shown by Nasir, 2014; Bungin & Burhan, 2013; and Sugiono, 2018.

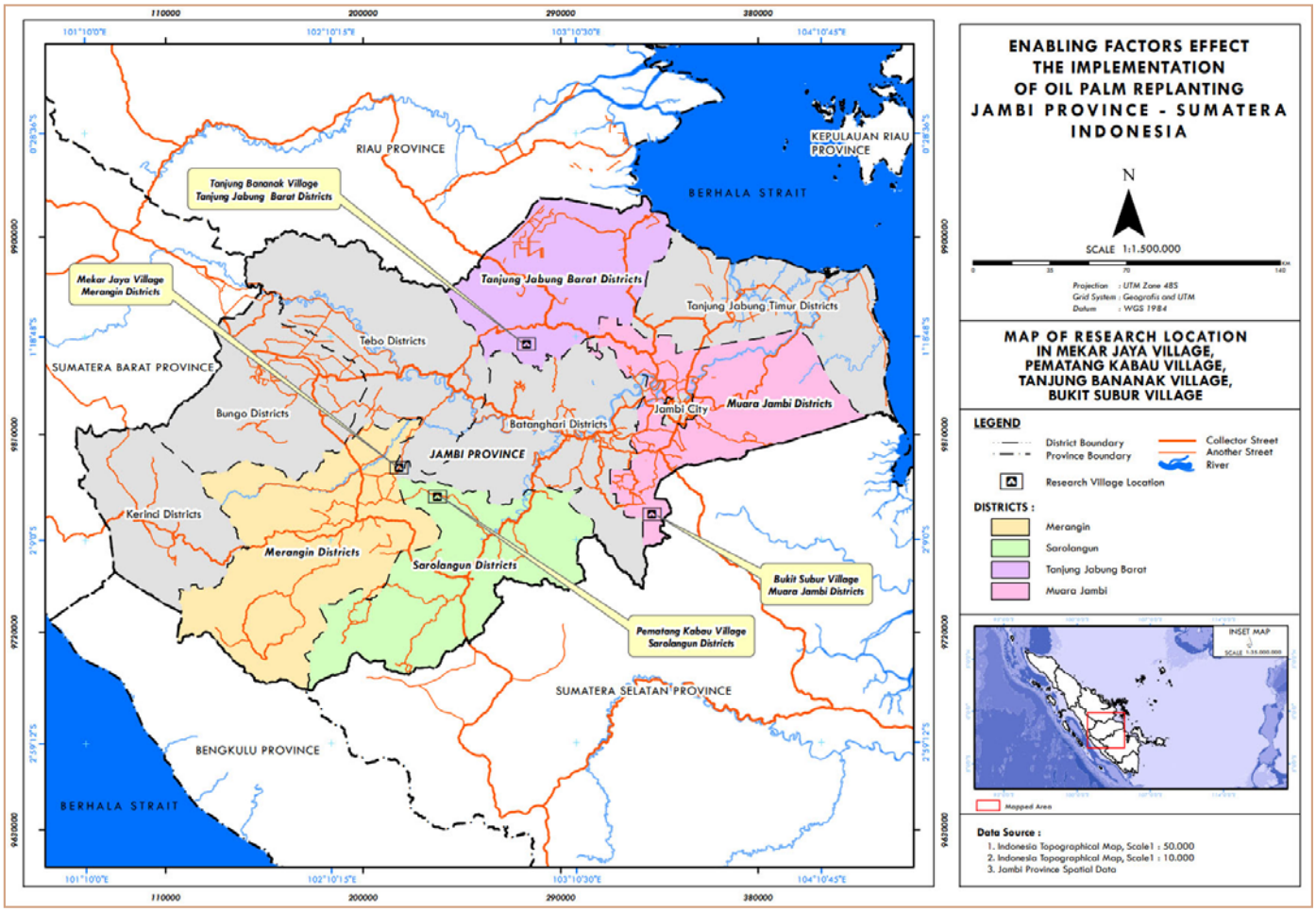

Figure 1. Research location

Y = 1 ; if the farmer decides to replant the oil palm
Y = 0 ; if the farmer decides not to replant the oil palm
The initial model of the binary logistic regression equation formula can be seen as follows:
$Pi=E(Yi=1|Xi)=\beta_o+\beta iXi$

Farmers are expected to be able to explain the process of replanting that they undertake, starting from the initial implementation of replanting to the end process. Furthermore, the results of the data analysis explain factors such as land area owned by farmers, their income, other sources of income, the price of Fresh Fruit Bunches (FFB), government subsidies, and involvement in farmer groups. Those factors affect the success of the implementation of replanting. The involvement of smallholders in a farmer association is identified as the dominant factor to replant their oil palms. This means that oil palm farmers should be part of an active farmer association to accelerate the replanting process (Table 1).

Table 1. Result of Analysis

Variable	B	wald	sig	Exp (B)
Land area (X1)	1,758	5,326	,021	1,248
Famers acceptance (X2)	4,816	3,888	,027	123,481
Another source of income (X3)	3,732	3,931	,047	,024
Price of TBS (FFB) (X4)	,331	7,748	,005	,970
Subsidies from the government (X5)	,471	,458	,499	,624
Involvement in a farmer association (X6)	6,222	5,492	,222	,000

References

Bungin, Burhan, (2013) Metodologi Penelitian Sosial dan Ekonomi: Format untuk Studi Sosiologi, Kebijakan Publik, Komunikasi, Manajemen dan Pemasaran Penerbit Kencana Prenada Media Group www.prenadamedia.com

The Forestry and Plantation Service (2021) Disbun data, Jambi Province, Dinas Perkebunan Provinsi Jambi berkerjasama dengan Biro Pusat Statistik Provinsi Jambi

Nasir M (2014) Research Method, Indonesia Ghalia, IKAPI Members

Sugiono (2022) Metode Penelitian Kualitatif. Penerbit Alfabeta