

## INNOVATION IN ACTION: UNIVERSITY-BASED AGRO-EDUCATION TOURISM MODELS FOR PEATLAND SUSTAINABILITY IN INDONESIA (A Case of Arboretum Land Universitas Sriwijaya)

PART OF PENELITIAN PENUNJUKKAN LANGSUNG RESTORASI LAHAN GAMBUT SEBAGAI TINDAK PREVENTIF TERHADAP PERUBAHAN IKLIM DAN MEDIA PENDIDIKAN LINGKUNGAN BAGI MASYARAKAT PADA EKOSISTEM LAHAN BASAH

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### RESEARCH BACKGROUND

Sumatra's economic valuation reveals that community involvement in education and agriculture-based tourism can boost local awareness, promote sustainable management, and diversify income. University-based agro-education connects agriculture, conservation, and education.

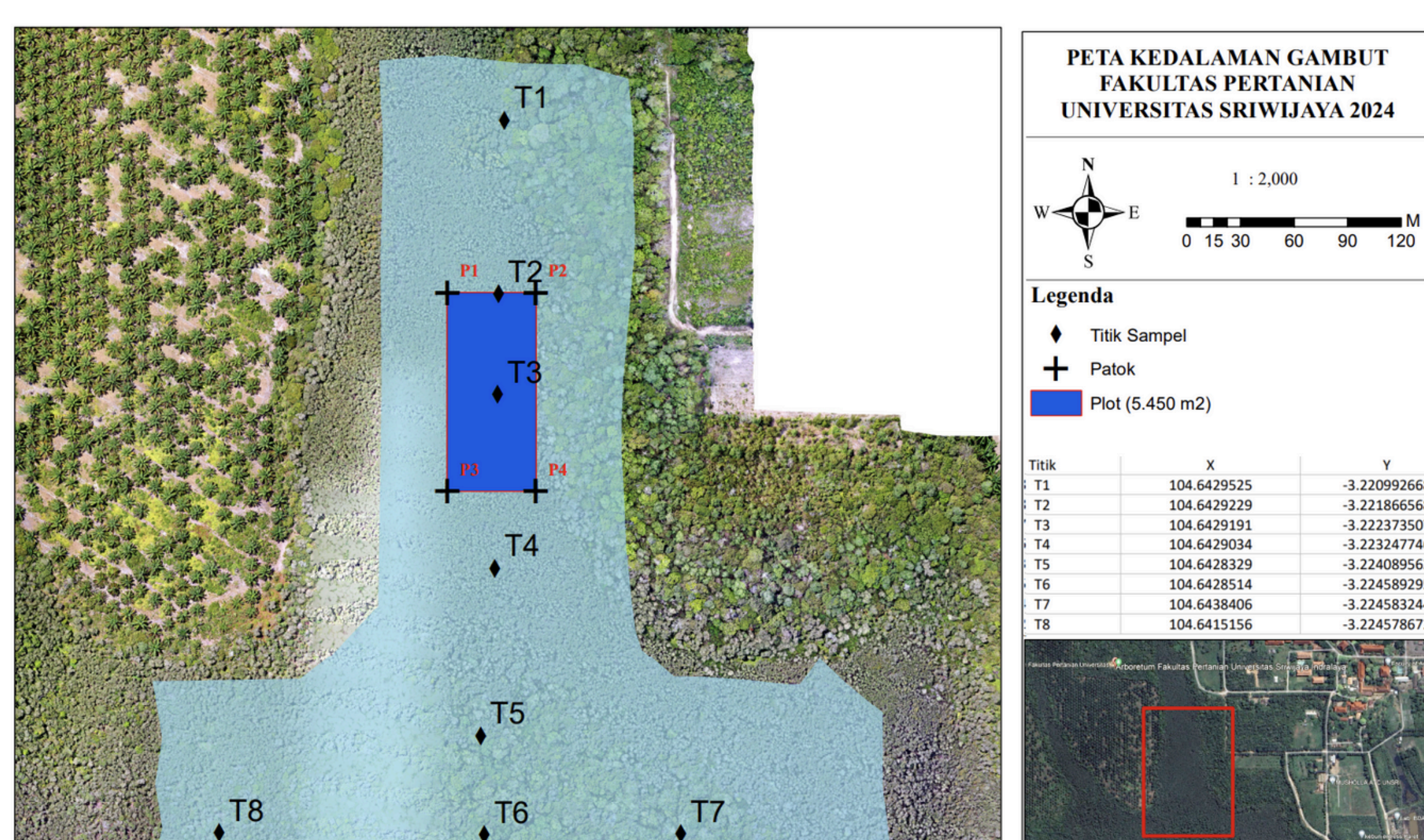
### RESEARCH OBJECTIVES

The research aims to investigate the economic and social impacts of university agro-education in peatland areas, aiming to create locally relevant and globally sustainable innovations.

### RESEARCH METHOD



### RESEARCH LOCATION



### RESEARCH RESULTS

Table 1. Respondent's Characteristics

No	Characteristics	Category	n	%
1	Age	< 40 yrs old	87	66,41
		40-55 years old	28	21,37
		> 55 years old	16	12,21
2	Gender	Male	53	40,46
		Female	78	59,54
3	Ethnicity	Malay	54	41,22
		Javanese	43	32,82
		Bataknese	9	6,87
		Padangnese	2	1,53
		Others	23	17,56

Table 2. Respondents' Views on the Existence of Arboretum Peatlands

Explanation	Farmers	Lecturer	Students	Alumni and others	Total
Very Important	2	15	25	0	42
Important	4	20	21	0	45
Neutral	3	7	9	2	21
Not Important	3	0	1	0	4
Very Unimportant	18	0	0	1	19
<b>Jumlah</b>	<b>30</b>	<b>42</b>	<b>56</b>	<b>3</b>	<b>131</b>

Table 3. Respondents' Willingness to Pay to Maintain the Existence of the Arboretum Land

Bidding Amount (Rp/person)	Total Respondent	Freq Relative (Person)	Total WTP (Rp/year)	Mean WTP (Rp/Person)
Rp25.000,00	61	0,4656	Rp1.525.000,00	Rp13.863,64
Rp50.000,00	25	0,1908	Rp1.250.000,00	Rp11.363,64
Rp75.000,00	8	0,0611	Rp600.000,00	Rp5.454,55
Rp100.000,00	5	0,0382	Rp500.000,00	Rp4.545,45
Rp125.000,00	6	0,0458	Rp750.000,00	Rp6.818,18
Rp150.000,00	5	0,0382	Rp750.000,00	Rp6.818,18
<b>Total</b>	<b>110</b>		<b>Rp5.375.000,00</b>	<b>Rp 49.885,00</b>

Table 4. Total Economic Value of Environmental Services of the Arboretum Land Universitas Sriwijaya

No	Category	Value (Rp/year)	Total Value (Rp/year)	No	Category	Value (Rp/year)	Total Value (Rp/year)
<b>A. Direct Benefits</b>				<b>B. Indirect Benefits</b>			
1.	Direct Use		102.608.053,45	1.	Value of Existence	5.375.000,00	<b>18.335.805,34</b>
	Understory Plants	592.350,00		2.	Biodiversity Value	2.700.000,00	
	Litter	2.358.300,00		3.	Heritage Value	10.260.805,34	
	Nekromas	1.330.800,00		Value of Ecosystem Services of the Unsri		5.096.097.536,13	
	Vegetasi	98.326.603,45		<b>Value of Ecosystem Services of the Unsri Arboretum per Ha *</b>		<b>424.674.794,68</b>	
2.	Indirect Benefits		4.172.400.386,33	Note: * On average these sets of services yield USD 15,000/ha/year in benefits, but some provide benefits totaling nearly USD 50,000/ha/year.			
	Fire Extinguishing Costs	376.500.000,00		<b>Source:</b> <a href="https://www.worldbank.org/en/country/indonesia/publication/the-economics-of-large-scale-mangrove-conservation-and-restoration-in-indonesia">https://www.worldbank.org/en/country/indonesia/publication/the-economics-of-large-scale-mangrove-conservation-and-restoration-in-indonesia</a>			
	Pollution Cost	3.624.299.268,09		On average these sets of services yield USD 15,000/ha/year in benefits, but some provide benefits totaling nearly USD 50,000/ha/year.			
	Cost of Loss of Ntfah Plasma	171.600.000,00		USD 15,000	Rp 225.000.000,00		
	Carbon Absorption Cost Stored CO2	1.118,24		USD 50,000	Rp 750.000.000,00		
3.	Benefits of The Value Of Choice Usage		802.753.291,00				
	Tourism	585.753.291,00					
	Education	180.000.000,00					
	Research	37.000.000,00					



Figure 1. Respondents' Expectations for the Arboretum Area

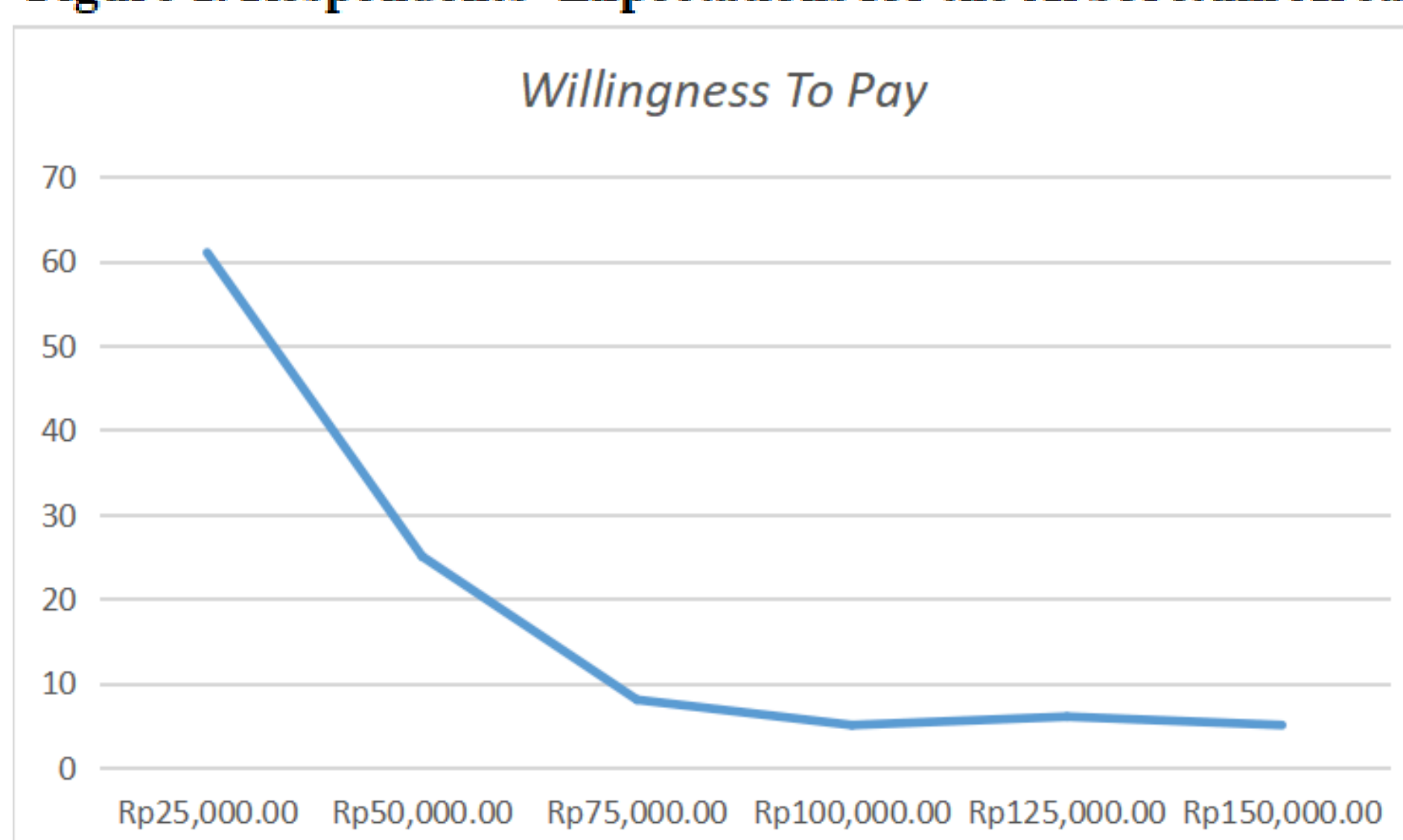
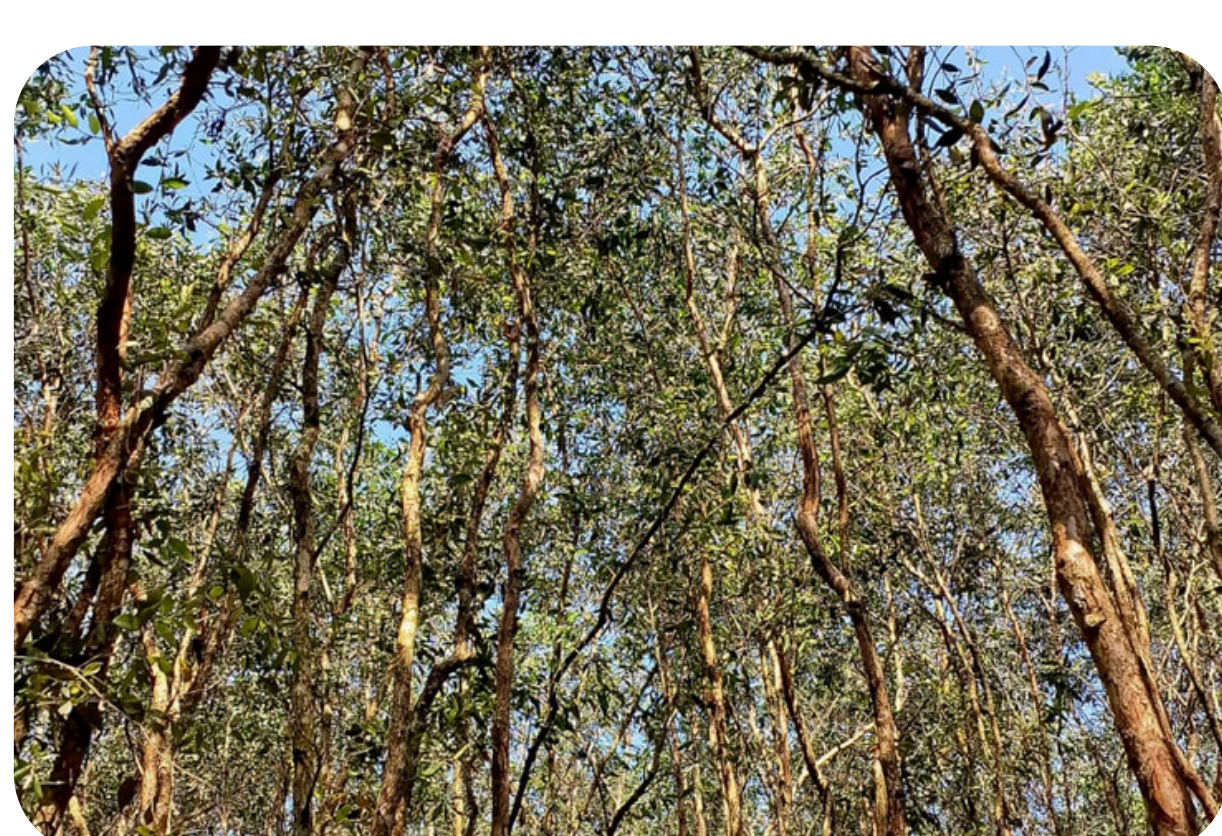


Figure 2. Willingness to Pay to maintain the existence of land



**CONCLUSION**  
Total Economic Value of Environmental Services of the Arboretum Land at Sriwijaya University. Amounting to Rp 5,096,097,536.13. According to Louange, E. T. (2024) and Vam Zanten (2022), the calculated value in the research is still lower their publication, where on average, this series of services generates benefits of USD 15,000/ha/year, but some of them provide benefits reaching almost USD 50,000/ha/year.

### ACKNOWLEDGEMENT

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