Article:
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Supplementary Data

A. Study locations

Table 1. Coordinates of five survey stations in Baros mangroves.

Station	*Coordinate*	*Description*
I	08°00'33.6"S110°17'02.2"E	Located nearby land area which receive regular nutrient and waste from land-based activities such as farming. Muddy substrate with high density of mangrove dominated by *Rhizophora apiculata*
II	08°00'30.3"SE 110°17'00.2"E	Muddy substrate with low density of mangrove species.
III	07°46'04.5"S 110°22'46.0"E	Located in Opak river as an outer area of mangrove. However, some mangrove-related activities are present.
IV	08°00'33.8"S110°17'02.4"E	High density of mangrove with muddy substrate.
V	08°00'29.4"S110°16'49.8"E	High density of mangrove, muddy substrate, deep water during high tide.
VI	08°00'29.1"S110°16'49.2"E	High salinity (6‰), deep water during high tide, dominated by *Avicennia lanata*.

B. Mangrove data

Table 2. Important value of various mangrove species in Baros

Species	***Pi***	***Fi***	***Rfi***	***Important Value***
Rhizophora apiculata	6	0.75	42.86	77.16
Avicennia lanata	7	0.88	50.00	177.81
Mangrove associate *Thespesia populnea*	1	0.13	7.14	16.24

C. Water quality

Table 3. Each parameter of water quality in Baros water

Parameter	*Station*						*Optimum value for organism**
	1	2	3	4	5	6	
Water temperature (°C)	29.30	29	29.30	28.60	29	29.20	20-30
pH	7.28	7.36	7.40	7.30	7.22	7.20	7-8.5
Salinity (‰)	0.30	0.40	0.30	0.30	0.40	0.40	
TSS (mg/l)	0.97	0.70	0.93	0.87	0.87	0.69	< 50
DO (mg/l)	8.28	6.62	7.02	7.40	7.37	7.39	> 4
CO_2 (mg/l)	85.10	85.10	69.20	55.30	75.40	54.70	< 5

Alkalinity (mg/l)	68.50	73.80	63.36	86.20	77.20	75.80	30 – 500
Nitrate (mg/l)	0.52	0.09	0.34	0.42	0.16	0.05	0.9 – 3.5
Phosphate (mg/l)	0.31	0.23	0.48	0.32	0.29	0.27	0.09 – 1.8

*Optimum value for organism based on UNESCO, WHO and UNEP (1996)

D. Phytoplankton

Table 4. Phytoplankton conditions in each station

	Station					
	1	2	3	4	5	6
Density index	99	79	91	111	129	129
Diversity index	0.66	1.01	0.89	1.16	0.96	0.86
Evenness index	0.65	0.57	0.49	0.59	0.58	0.60
Dominance index	0.67	0.53	0.60	0.51	0.59	0.56

E. Social Data

Table 5. Percentage of community's participation on mangrove related activities

Participation		Involvement				Total	Percentage (%)
		No	Percentage (%)	Yes	Percentage (%)		
Seeking knowledge	never	16	26.7	4	6.7	20	33.3
	only once	1	1.7	0	0.0	1	1.7
	seldom	7	11.7	13	21.7	20	33.3
	often	2	3.3	13	21.7	15	25.0
	always	0	0.0	4	6.7	4	6.7
Outreach program	never	12	20.0	3	5.0	15	25.0
	only once	4	6.7	2	3.3	6	10.0
	seldom	6	10.0	16	26.7	22	36.7
	often	4	6.7	10	16.7	14	23.3
	always	0	0.0	3	5.0	3	5.0
Planning	never	12	20.0	2	3.3	14	23.3
	only once	5	8.3	2	3.3	7	11.7
	seldom	7	11.7	14	23.3	21	35.0
	often	2	3.3	14	23.3	16	26.7
	always	0	0.0	2	3.3	2	3.3
Mangrove planting	never	7	11.7	1	1.7	8	13.3
	only once	6	10.0	3	5.0	9	15.0
	seldom	6	10.0	14	23.3	20	33.3
	often	7	11.7	13	21.7	20	33.3
	always	0	0.0	3	5.0	3	5.0

Monitoring	never	4	6.7	1	1.7	5	8.3
	only once	2	3.3	1	1.7	3	5.0
	seldom	8	13.3	6	10.0	14	23.3
	often	11	18.3	17	28.3	28	46.7
	always	1	1.7	9	15.0	10	16.7
Giving contributions (funds)	never	22	36.7	9	15.0	31	51.7
	only once	0	0.0	8	13.3	8	13.3
	seldom	4	6.7	5	8.3	9	15.0
	often	0	0.0	11	18.3	11	18.3
	always	0	0.0	1	1.7	1	1.7
Fund rising program	never	21	35.0	10	16.7	31	51.7
	only once	2	3.3	6	10.0	8	13.3
	seldom	2	3.3	8	13.3	10	16.7
	often	0	0.0	8	13.3	8	13.3
	always	1	1.7	2	3.3	3	5.0
Security	never	5	8.3	0	0.0	5	8.3
	only once	1	1.7	0	0.0	1	1.7
	seldom	4	6.7	7	11.7	11	18.3
	often	15	25.0	18	30.0	33	55.0
	always	1	1.7	9	15.0	10	16.7
Expanding networking	never	9	15.0	1	1.7	10	16.7
	only once	3	5.0	2	3.3	5	8.3
	seldom	7	11.7	7	11.7	14	23.3
	often	7	11.7	14	23.3	21	35.0
	always	0	0.0	10	16.7	10	16.7
Developing new program	never	10	16.7	3	5.0	13	21.7
	only once	2	3.3	1	1.7	3	5.0
	seldom	5	8.3	6	10.0	11	18.3
	often	7	11.7	13	21.7	20	33.3
	always	2	3.3	11	18.3	13	21.7

Table 6. The distribution of respondent's knowledge on mangrove Baros based on their age

Knowledge	Age												
	18- 30		31 - 40		41 - 50		51 - 60		>60		Total		
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Total
Not knowing	0	0	0	0	0	0	1	0	0	0	1	0	1
Less knowing	0	0	0	0	0	0	0	0	3	0	3	0	3
Moderate	0	1	2	0	0	0	2	0	0	0	4	1	5
Knowing	2	6	4	3	4	4	2	4	5	1	17	18	35
Knowing everything	0	15	0	0	1	0	0	0	0	0	1	15	16
Total	**2**	**22**	**6**	**3**	**5**	**4**	**5**	**4**	**8**	**1**	**26**	**34**	**60**
Percentage (%)	**3.3**	**36.7**	**10.0**	**5.0**	**8.3**	**6.7**	**8.3**	**6.7**	**13.3**	**1.7**	**43.3**	**56.7**	**100**

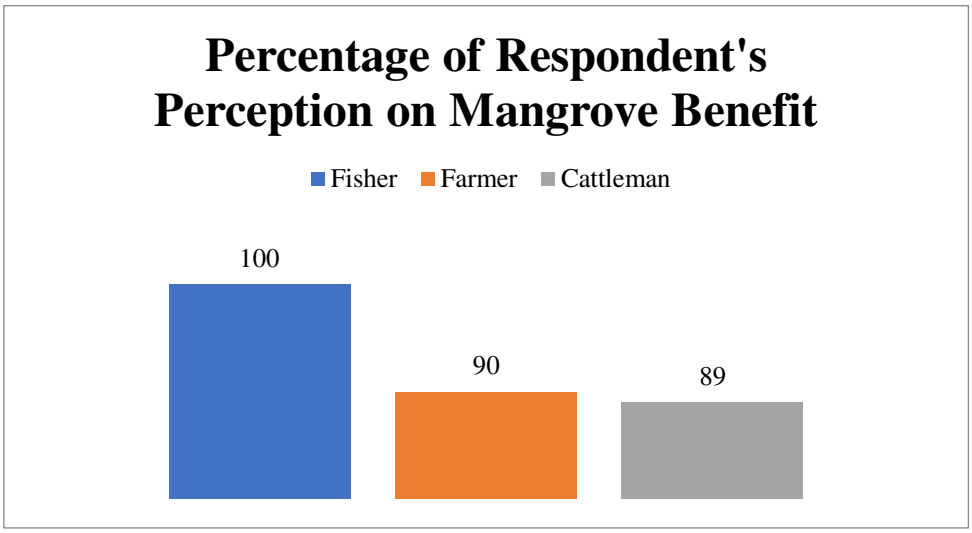

Figure 1. Diagram chart of respondent's perception on mangrove's benefit

F. Economic data

Table 7. Total Economic value of mangrove benefit in Baros

Type of Benefit	*Economic value (USD/ha/year)*	*Percentage (%)*
Direct benefit		
a. Fishing	1,116.66	11.7
b. Tourism	257.90	
Indirect benefit		
a. Green-belt function	6,326.16	
b. Feedlots	1,458.23	78.2
c. Erosion prevention	1,400.69	
Optional benefit	11.87	0.1
Existence benefit	1,168.86	10

1 USD = IDR 14,373

G. Interpolation

Table 8. Weight value of each parameter used on GIS interpolation

Station	*Traditional fishing*	*Mangrove nursery and planting*	*Feedlots*	*Aqua-culture (shrimp)*	*Tourism: bird watching and camping*	*Education and research*	*Green-belt area for farming*
I	0	5	1	3	0	4	4
II	0	5	2	3	4	4	4
III	5	0	2	0	4	4	0
IV	1	4	2	2	4	4	4
V	3	4	0	2	0	4	0

VI	5	3	2	2	4	4	4

Reference

UNESCO, WHO and UNEP. 1996. Water Quality Assessments - a Guide to Use of Biota, Sediments and Water in Environmental Monitoring. Second Edition. Edited by Chapman, Deborah. Publishing by F & FN Spon, London.