# Social Forestry Performances in Ketapang District, West Kalimantan

PS Objectives

Perhutanan Sosial (PS, Social Forestry) is the sustainable forest management system within the government-designated state or customary/rights forests areas and managed by the local communities/customary laws to increase the well-being of the community members, environment balances, and social-cultural dynamics [2]. The Indonesian Government is targeting to allocate 12.7 million hectares of forests to be the PS for the 2015-2019 periods [3].

The PS area in Ketapang district until the year of 2017 had covers an area of 184,000 hectares (See Figure 1 for the areas distribution and Table 1 for the number of villages within the PS areas) [1]. The natural forests cover 73% of the total PS areas, and around 28% of the natural forests inside the area of PS is on the peatlands.

Figure 1. *Perhutanan Sosial* **Locations in Ketapang District** [1].

Legend:
- Perhutanan Sosial
- Hutan alam mineral
- Hutan alam gambut
- Gambut bukan hutan

0   25   50 Km
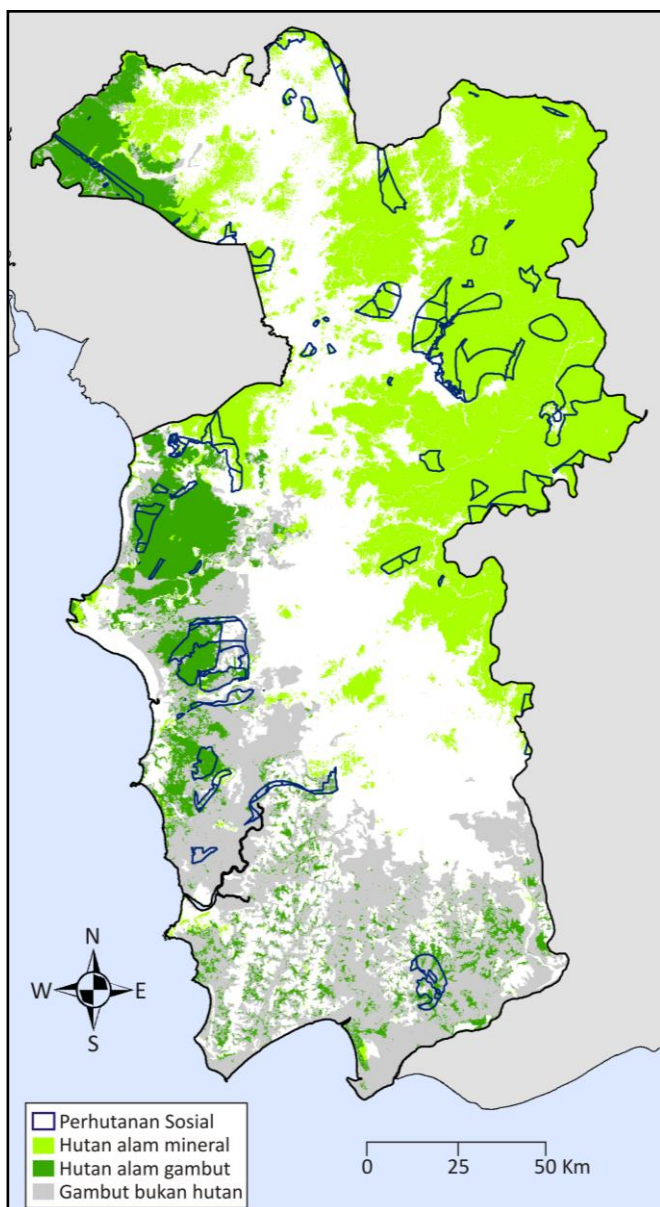
PS Monitoring and Evaluation

The communities that are managing the PS have the right to develop the forestry-based productive economical activities and utilize the land referring to the local wisdom. The PS management units are obligated to preserve the forest functions and establish the forest protection activities. The Monitoring and Evaluation activities are conducted every 5 years.

The PS performances include the aspects of forest sustainability and the well-being of communities. Therefore, **deforestation** and **livelihood** can be used as the performance indicators. Deforestation refers to the relatively intact natural forest area reduction. Livelihood refers to the basic facilities access (sanitation, electricity, and the cooking fuels) for the household, refers to the Villages Potential Data from Indonesia Central Agency on Statistics (PODES BPS).

Study Results

The study results for the deforestation status (Global Forest Watch Data, 2010 and 2016) and the communities' livelihood changes (PODES Data, 2008 and 2014) are presented in Figure 2.

The summary of villages/PS number and the area with different deforestation rates (low, moderate, or high) and the communities' livelihood changes (improving, constant, or reducing) are presented in Table 1.

Table 1. Number of Villages/PS areas with deforestation rates and livelihood status.

DEFORESTATION RATES	LIVELIHOOD LEVELS	TOTAL VILLAGES/PS		PS AREAS	
		NUMBER	%	HECTARES	%
LOW	IMPROVING	6	8.2	5,111	2.8
	CONSTANT	10	13.7	58,171	31.6
	DECREASING	5	6.9	10,911	5.9
MODERATE	IMPROVING	7	9.6	9,082	4.9
	CONSTANT	20	27.4	45,802	24.9
	DECREASING	6	8.2	13,324	7.2
HIGH	IMPROVING	3	4.1	4,368	2.4
	CONSTANT	8	11.0	27,800	15.1
	DECREASING	8	11.0	9,493	5.2

Figure 2. Deforestation rates and livelihood changes on the PS locations in Ketapang district.
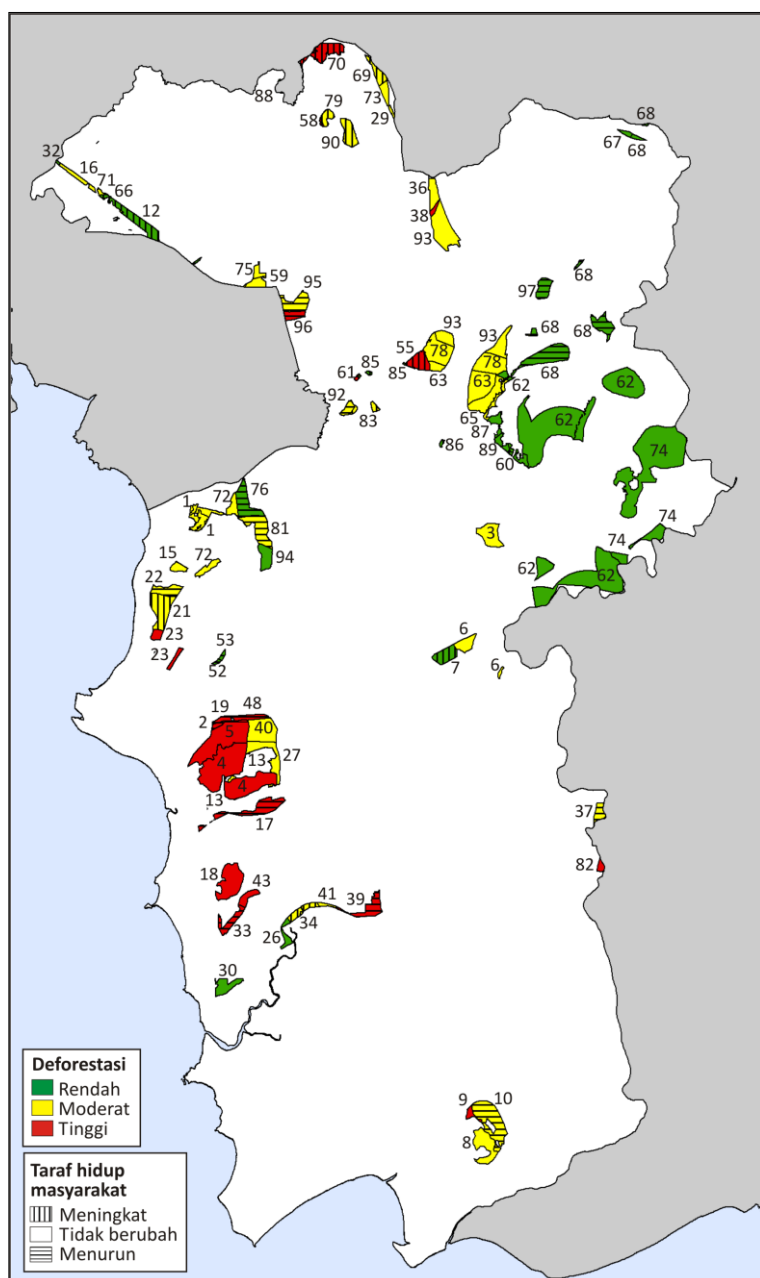
ID	VILLAGES/PS NAME	ID	VILLAGES/PS NAME
	HD IN-PROCESS		*COMMUNITIES-INPUT INFORMATION*
1	LAMAN SATONG	63	BENUA KRIO
2	SUNGAI PELANG	65	CINTA MANIS
3	SEBADAK RAYA	66	KAMPAR SEBOMBAN
4	PEMATANG GADUNG	67	KENYABUR
5	SUNGAI BESAR	68	KRIO HULU
6	BERINGIN RAYO	69	KUALAN HULU
7	TANJUNG BEULANG	70	KUALAN TENGAH
	LICENSE-FREE PEATLAND	71	LABAI HILIR
8	AIR HITAM BESAR	72	LAMAN SATONG
9	AIR HITAM HULU	73	LEGONG
10	DANAU BUNTAR	74	LUBUK KAKAP
12	KAMPAR SEBOMBAN	75	MEKAR RAYA
13	KEMUNING BIUTAK	76	MENSUBANG
15	KUALA TOLAK	78	MENYUMBUNG
16	LABAI HILIR	79	MERAWA
17	PESAGUAN KANAN	81	PANGKALAN TELOK
18	SUNGAI NANJUNG	82	PELEMPANGAN
19	SUNGAI PELANG	83	PENDAMAR INDAH
21	SUNGAI PUTRI	85	RANDAU
22	TANJUNG BAIK BUDI	86	RANDAU JUNGKAL
23	TEMPURUKAN	87	RIAM DADAP
	PRODUCTION FOREST (HP) FOR PS	88	SEKUCING LABAI
26	KEDONDONG	89	SEKUKUN
27	KEMUNING BIUTAK	90	SEMANDANG HULU
29	KENANGA	92	SEMPURNA
30	KENDAWANGAN KIRI	93	SENDURUHAN
32	LABAI HILIR	94	SIMPANG TIGA SEMBELANGAAN
33	PAGAR MENTIMUN		
34	PANGKALAN BATU	95	SINAR KURI
36	RANDAU LIMAT	96	SUNGAI DAKA
37	SEMANTUN		*PROPOSED PS*
38	SENDURUHAN	97	KRIO HULU
39	SUKAMULYA		
40	SUNGAI BESAR		
41	SUNGAI JELAYAN		
43	SUNGAI NANJUNG		
48	SUNGAI PELANG		
52	TANJUNG PURA		
53	ULAK MEDANG		
	COMMUNITIES-INPUT INFORMATION		
55	ALAM PAKUAN		
58	BALAI PINANG HULU		
59	BATU DAYA		
60	BATU LAPIS		
61	BAYUNSARI		
62	BEGINCI DARAT		

Legend:

Deforestasi
- Rendah (green)
- Moderat (yellow)
- Tinggi (red)

Taraf hidup masyarakat
- Meningkat
- Tidak berubah
- Menurun

Deforestation and livelihood changes are closely related with the forest area status and the PS biophysical area condition.

Deforestation
- *Forest Area Status (Non-Forest APL, Protected Forest HL, Limited Production Forest HPT, Production Forest HP, and Convertible Production Forest HPK):* Deforestation tends to be higher on the PS areas that is located in the relatively high anthropogenic activities, i.e. in HP, HPK and APL, compared to the areas on HL and HPT areas.
- *Market Accessibility, a good climate situation for living or farming, and the settlement location situation:* Deforestation tends to be higher on the PS areas that has a good market accessibility (<2 km from main road or cities), an optimum climate for farming/living (annual precipitation is 190-210 mm/month in the dry season and 270-300 mm/month in the wet season), and being near to the settlement/transmigration areas (<10 km).
- *Peatland and rainfall:* Deforestation tends to be higher on the PS areas that is located on a damaged peatland and with very low precipitation levels, whether it's in the dry season (May to September, <100 mm/month) or in the wet season, right before the dry season occurs (November to March, <300 mm/month). This is closely linked with the peatland's fire vulnerability level due to the decrease of groundwater. High PS vulnerability to fire on peatland areas and deforestation are occurred particularly when an extreme condition happens, like when the El Niño took places in 2015.

Livelihood
- *Market accessibility and good supporting living or agricultural climate:* Livelihood improvement tends to be happen in the PS area with a good market access (near main road or cities) and has an optimum climate for living or farming (annual precipitation is 190-210 mm/month in the dry season and 270-300 mm/month in the wet season).
- *Distance from settlement or transmigration area and plantation industries:* Livelihood improvement tends to be happened on the PS areas that is remotely located from the settlement or transmigration areas (>20 km) and from plantation industries, especially the oil palm plantation (> 3 km).

Conclusions

Findings
- High deforestation rate occurs on the PS areas that are closely related with forest area status on HP, HPK, and APL, that tend to have high level of anthropogenic activities, settlement and market accessibility, and the living/agricultural supporting climate.
- Degraded peatlands with low precipitation levels in dry season, make it vulnerable to fire, affecting the deforestation rate on the PS areas.
- Communities' livelihood improvement tends to be happened on the PS locations with good market accessibility, supporting climates on agricultural productivity, and remotely located from settlement/transmigration or plantation industry areas especially the oil palm plantations.

Suggestions
- PS locations on degraded peatlands are very vulnerable to fires; PS area proposal should be done simultaneously with the human capacity building and peatland management collaboration activities.
- High deforestation rates and decreasing of living standard occur on the PS areas that are located near settlement/transmigration or agricultural industrial areas; needs special treatments i.e. capacity building and community engagement facilitation activities.

Questions
- Which PS areas that are need to be prioritised?
- What is the most needed facilitation activities theme? By whom?
- What are the policy barriers? Does it need to be changed?

References

[1] Ministry of Environment and Forestry (2016) *Peta Indikatif Alokasi Perhutanan Sosial* PIAPS (Social Forestry Area Indicative Map). Jakarta, Indonesia.

[2] Regulation of Ministry of Environment and Forestry Law Number P.83/MENLHK/SETJEN/KUM.1/10/2016 on Social Forestry

[3] Republic of Indonesia (2014) *Rencana Pembangunan Jangka Menengah Nasional RPJMN 2015-2019* (National Midterm Development Plan for 2015-2019). URL:
http://www.bpkp.go.id/public/upload/unit/sesma/files/Buku%20II%20RPJMN%202015-2019.pdf.

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