

# East Kalimantan, Indonesia



## Jurisdictional indicators brief

State area:	128,031 km <sup>2</sup> (6.72% of Indonesia)
Original forest area:	114,191 km <sup>2</sup>
Current forest area (2018):	64,794 km <sup>2</sup> (50.6% of East Kalimantan)
Yearly deforestation (2018)	548 km <sup>2</sup>
Yearly deforestation rate (2018)	0.83%
Interannual deforestation change (2017-2018)	-47%
Accumulated deforestation (2001-2018):	12,127 km <sup>2</sup>
Protected conservation areas:	4,461 km <sup>2</sup> (3.5% of East Kalimantan)
Carbon stocks (2015):	715 millions tons (above ground biomass)
Representative crops (2017):	Rice (400,102 tons); Bananas and plantains (102,598 tons); NA (NA tons)
Value of agricultural production (2017):	\$3,300,203,070 USD
More on jurisdictional sustainability	<a href="#">State of jurisdictional sustainability</a>

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## Forest and people

In 2018, the estimated area of forest in the province of East Kalimantan was 64,794 km<sup>2</sup>, equivalent to 50.6% of the province's total area, and to 7.7% of the forest remaining in Indonesia. The total accumulated forest lost during the period 2001-2018 was 12,127 km<sup>2</sup>, equivalent to 13.3% of the forest area remaining in 2001. East Kalimantan concentrated about 7.7% of the carbon reserves stored in the biomass of the Indonesia tropical forest (about 715 mt C as of 2018).

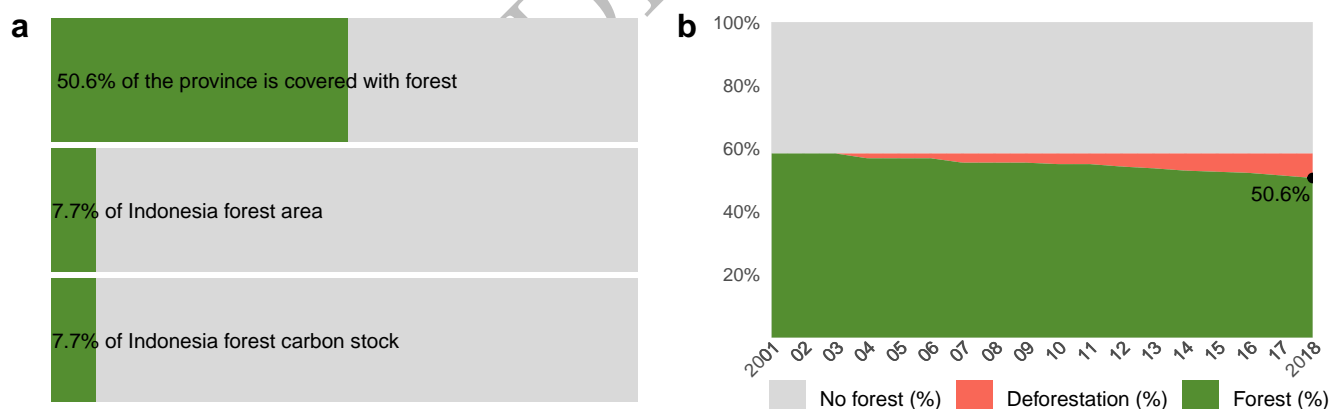


Figure 1: a) forest share and b) transition of forest to deforestation over the last years

There were 4.6 million people living in East Kalimantan as of 2020, distributed in 18 districts, with 0.7 million people living in the capital city of Samarinda. The province has formally designated conservation areas which represent 3% of the province (see Figure 2).

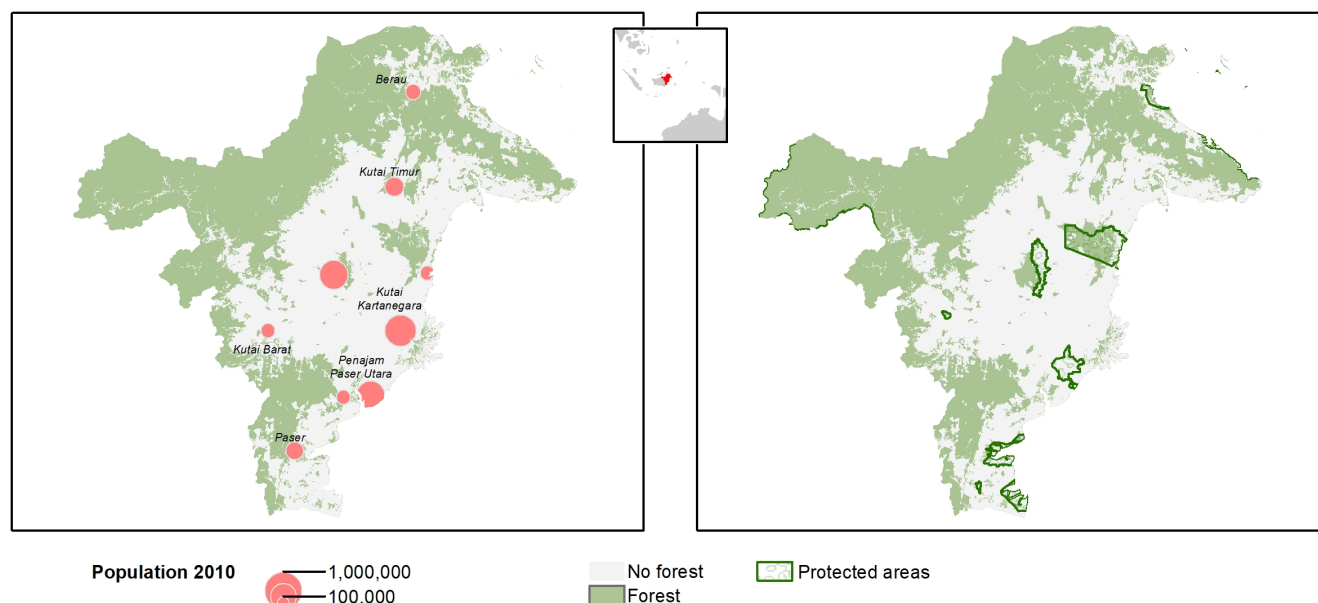


Figure 2: Map of most populated places (> 150,000 people) and indigenous and protected areas in East Kalimantan

## Deforestation

The yearly deforestation in East Kalimantan has varied irregularly over the last two decades. In 2018 deforestation declined 46.8% with respect to 2017, reaching an area of 548 km<sup>2</sup>. In spite of this decline, East Kalimantan represented the second largest contribution to deforestation among the Indonesian provinces, 11.1 in 2018.

The deforestation rate of 2018 was 0.83%, slightly higher than that of West Kalimantan. The province's deforestation is 30% below the reference deforestation baseline 1990-2012 (see Figure 3).

78% of the deforestation is located in the five most affected districts in the province (see Figure 4). In 2015 the district of Kutai Barat represented one of the province's deforestation with 142 km<sup>2</sup>.

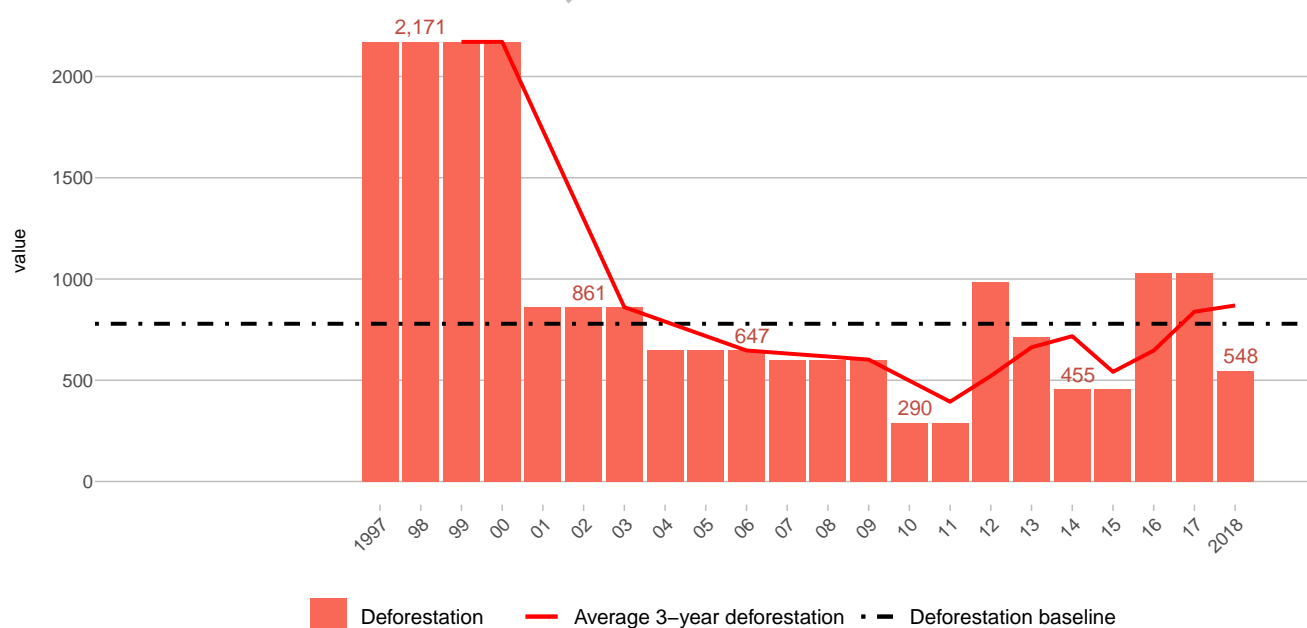


Figure 3: Yearly deforestation (km<sup>2</sup>) and deforestation baseline

Year	Forest (km <sup>2</sup> )	Deforestation	Deforestation rate (%)	Annual variation (%)
2001	74,741	861.49	1.12	-60.3
2002	74,741	861.49	1.15	0
2003	74,741	861.49	1.15	0
2004	72,779	646.94	0.87	-24.9
2005	72,779	646.94	0.89	0
2006	72,779	646.94	0.89	0
2007	70,996	601.80	0.83	-7
2008	70,996	601.80	0.85	0
2009	70,996	601.80	0.85	0
2010	70,415	290.06	0.41	-51.8
2011	70,415	290.06	0.41	0
2012	69,414	983.43	1.40	239
2013	68,710	715.04	1.03	-27.3
2014	67,764	454.89	0.66	-36.4
2015	67,309	454.89	0.67	0
2016	66,854	1,030.00	1.52	126.4
2017	65,824	1,030.00	1.53	0
2018	64,794	548.10	0.83	-46.8

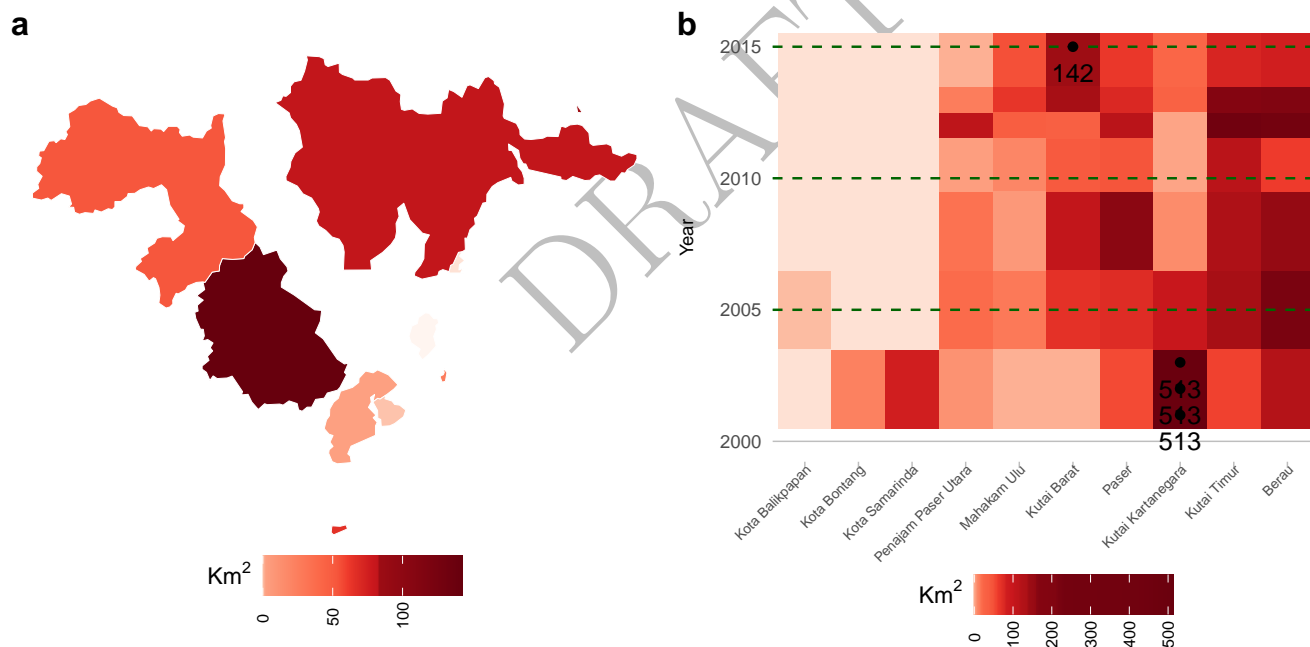
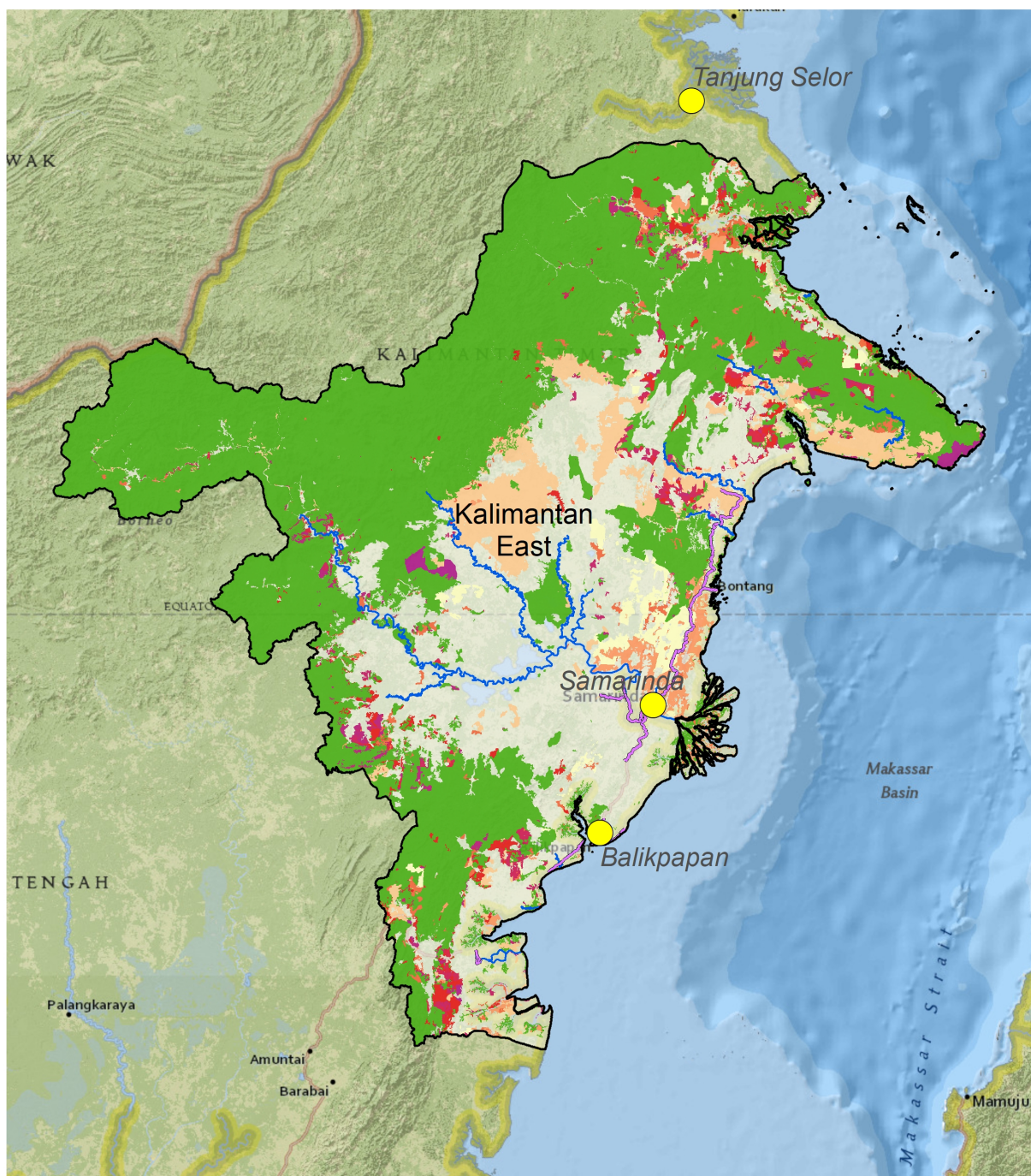


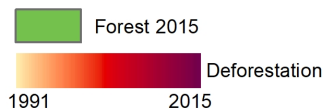
Figure 4: a) Yearly deforestation by districts in 2015 b) Yearly deforestation in top 10 most affected districts ( $km^2$ )



### Kalimantan East, Indonesia Forest and accumulated deforestation

The map shows the most recent forest cover and yearly deforestation mapped by Derived from Ministry of Forestry data. Intense red colors represent the most recent deforestation whereas light orange colors earlier deforestation as noted in the legend

#### Legend



Prepared by Earth Innovation Institute

## Burned area

According to the NASA-USGS analysis of MODIS satellite observations, the average yearly burned area in East Kalimantan was 485 km<sup>2</sup> for the period 2010-2020. This figure includes burned areas due to fires in forest, savannahs and opened agricultural areas. The burned area in 2019 was 1,020 km<sup>2</sup> and the worst year in the last decade was 2015 with 2,401 km<sup>2</sup> burned. In most years, the months of October and September represented the peak of the fire season (see Figure 5).



Figure 5: Monthly burned area since 2010 (km<sup>2</sup>). Source: EII analysis of MODIS-MCD64





## Emissions from deforestation

The accumulated emissions from deforestation in the province of East Kalimantan between 2000 and 2015 amount to 519 million tons of CO<sub>2</sub>eq, which was equivalent to xx% of the total emissions from deforestation in Indonesia during this period. Considering the observed yearly deforestation, the mean carbon density of the province forest and the business as usual deforestation baseline, the accumulated gross avoided emissions from deforestation during the period from 2013 to 2015 was 33 million tons of CO<sub>2</sub>eq. This results from summing avoided emissions during the period from 2013 to 2015 in which the deforestation was lower than the business as usual deforestation baseline

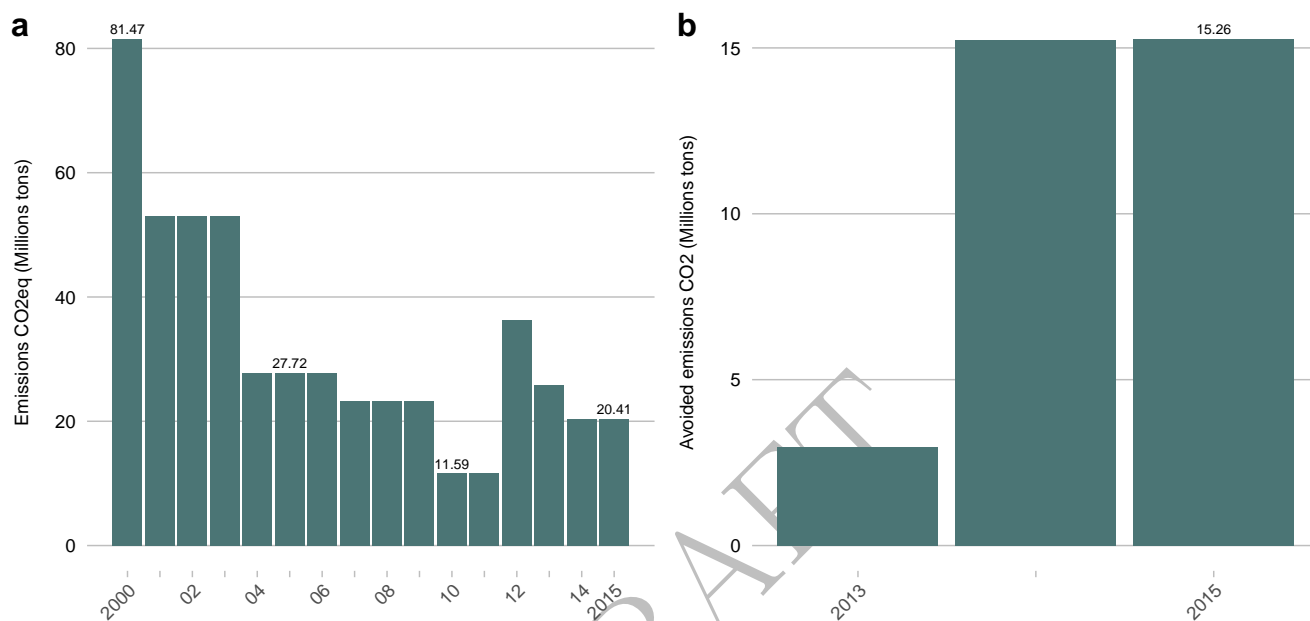




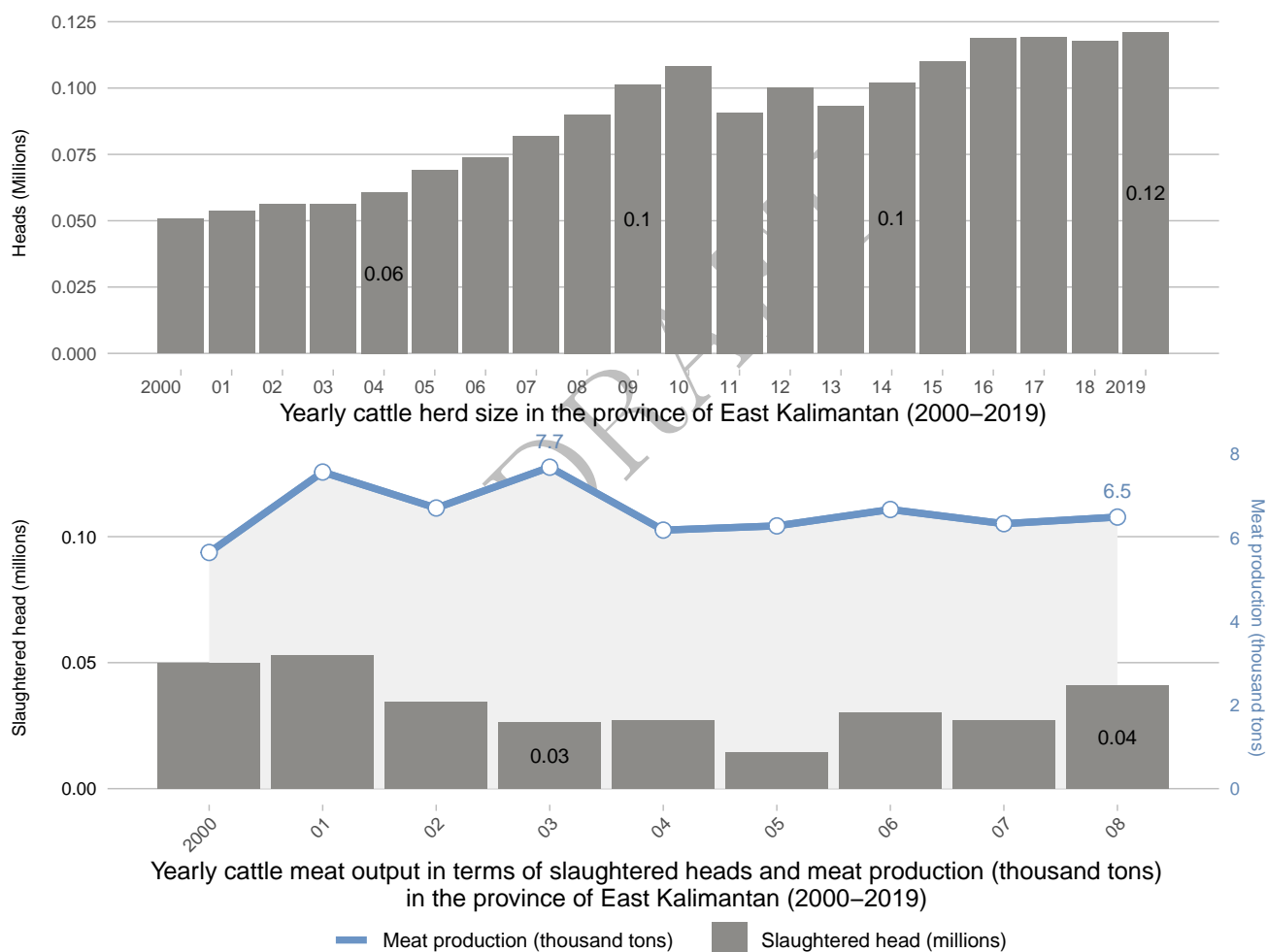


Figure 6: Emissions from deforestation (left) and avoided emissions (right) (CO<sub>2</sub>eq Millions tons)

## Livestock

Table 2: Livestock indicators in East Kalimantan

				
	<b>Cattle</b>	<b>Pig</b>	<b>Poultry</b>	<b>Fish</b>
Year	2019	2019	2019	NA
Herd size:	121,148	81,341	56,474,196	
Slaughtered heads:	NA	NA	NA	
Meat production (tons):	8,104	1,239	60,893	
Value (thousands):				RpNA IDR



## Agriculture

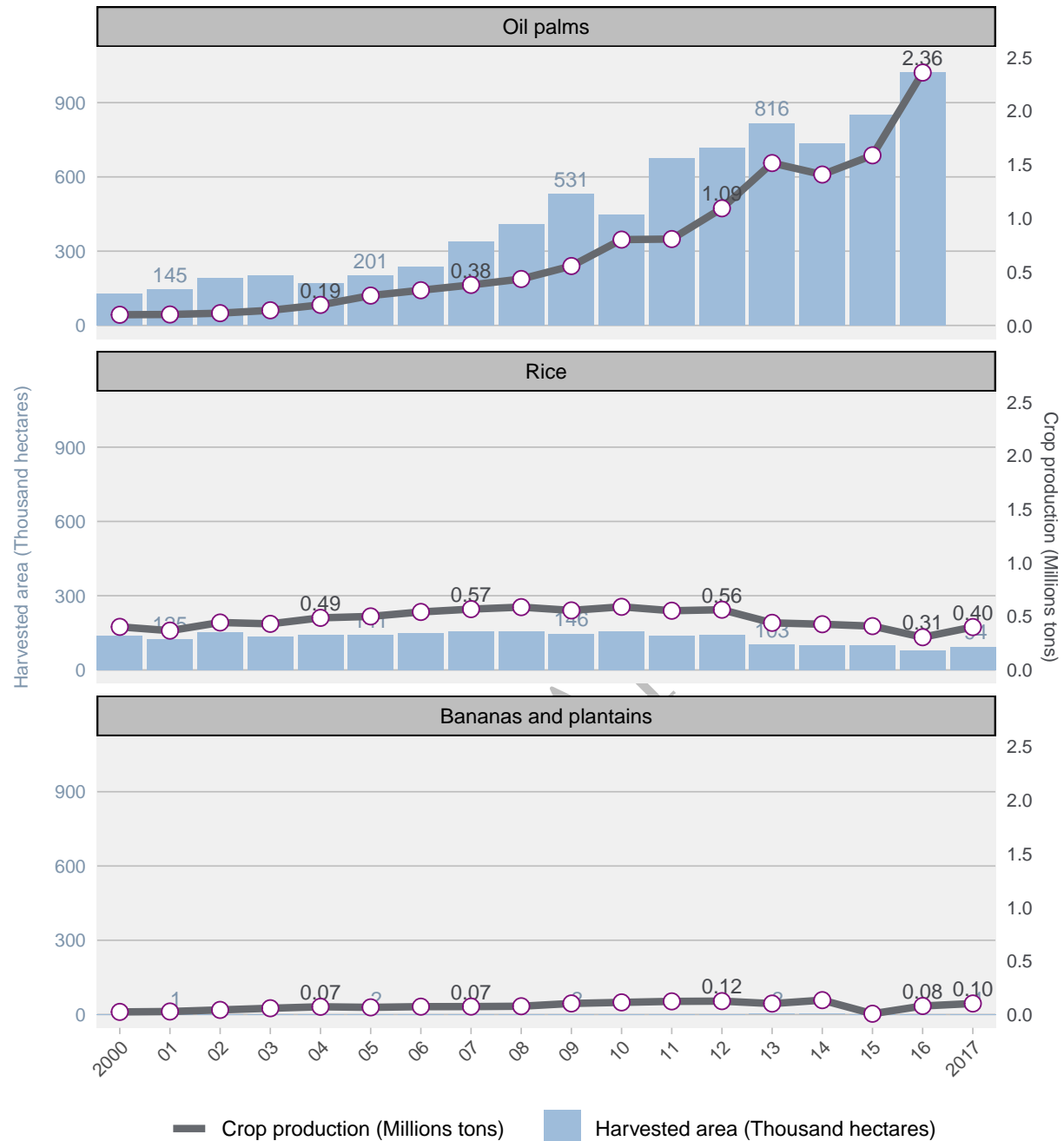


Figure 7: Harvested area and production of the three crops most produced in East Kalimantan



## Aquaculture

The plot shows the aquaculture production in the province of East Kalimantan over the last 6 years and the value of this production. The data includes production of fish such as Skunk catfish, Tiger shovelnose catfish, Tambaqui or Tilapia and includes only activities related with fish farming under controlled conditions. Does not include fishing activities.<sup>1</sup>



Figure 8: Yearly aquaculture production (tons) and value of production (Reales) in East Kalimantan

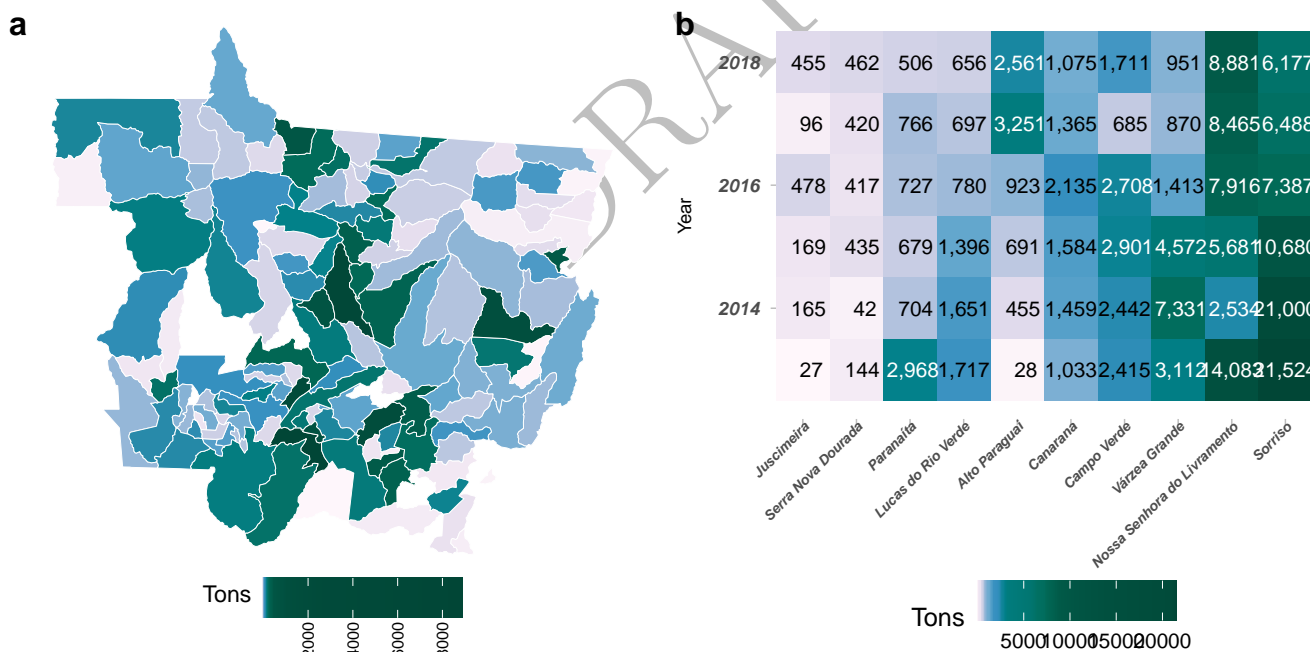


Figure 9: a) Yearly aquaculture production (tons) in districts of East Kalimantan in 2018. b) Yearly aquaculture production by districts (Tons)

<sup>1</sup>The value of production don't include the class Shellfish seeds, Shrimp, Shrimp larvae and post-larvae, Oysters, scallops and mussels, Other products (frog, alligator, crab, lobster, etc.) and Alevinos.