

# Aceh, Indonesia



## Jurisdictional indicators brief

State area:	56,776 km <sup>2</sup> (2.98% of Indonesia)
Original forest area:	33,485 km <sup>2</sup>
Current forest area (2018):	30,349 km <sup>2</sup> (53.5% of Aceh)
Yearly deforestation (2018)	75 km <sup>2</sup>
Yearly deforestation rate (2018)	0.25%
Interannual deforestation change (2017-2018)	-70%
Accumulated deforestation (2001-2018):	3,240 km <sup>2</sup>
Protected conservation areas:	8,276 km <sup>2</sup> (14.6% of Aceh)
Carbon stocks (2015):	313 millions tons (above ground biomass)
Representative crops (2017):	Rice (2,494,613 tons); Oil palms (911,697 tons); NA (NA tons)
Value of agricultural production (2017):	\$3,038,301,169 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 Aceh was 30,349 km<sup>2</sup>, equivalent to 53.5% of the province's total area, and to 3.6% of the forest remaining in Indonesia. The total accumulated forest lost during the period 2001-2018 was 3,240 km<sup>2</sup>, equivalent to 8.7% of the forest area remaining in 2001. Aceh concentrated about 3.4% of the carbon reserves stored in the biomass of the Indonesia tropical forest (about 313 mt C as of 2018)

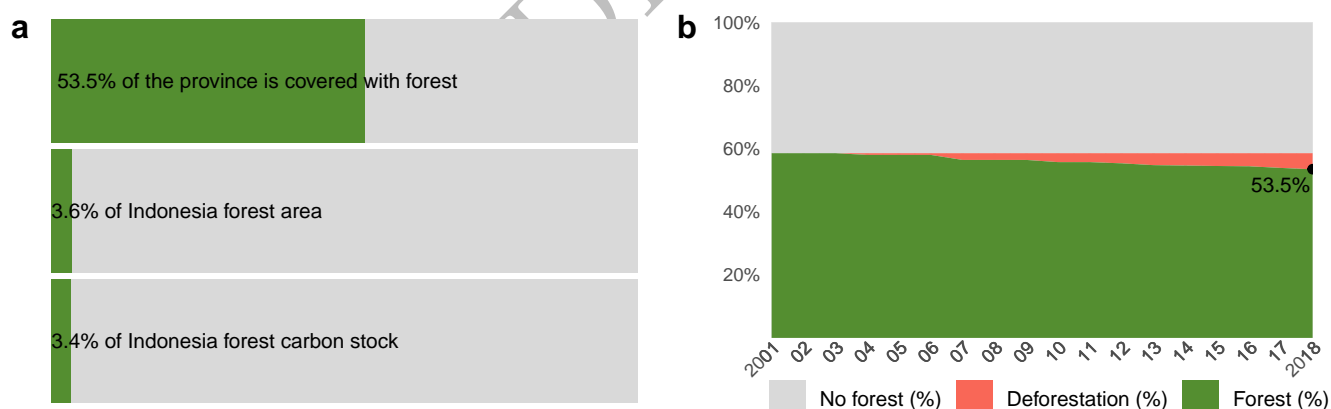


Figure 1: a) forest share and b) transition of forest to deforestation over the last years

There were 5.5 million people living in Aceh as of 2020, distributed in 18 districts, with 0.2 million people living in the capital city of Banda Aceh. The province has formally designated conservation areas which represent 15% of the province (see Figure 2).

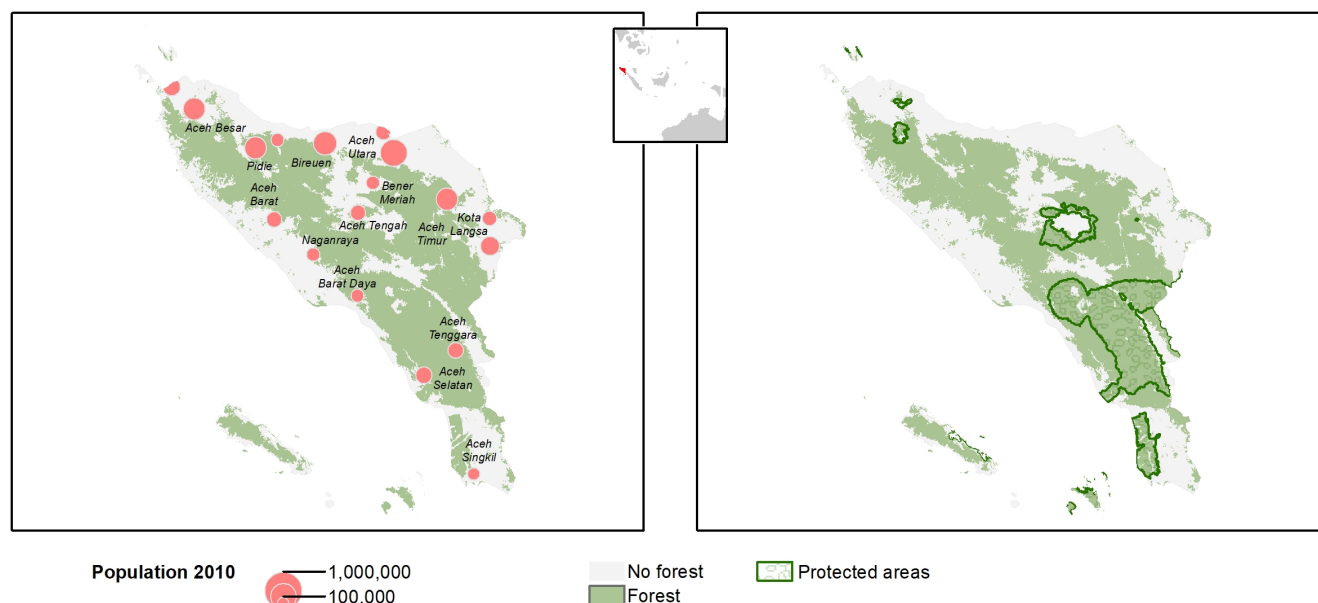


Figure 2: Map of most populated places (> 150,000 people) and indigenous and protected areas in Aceh

## Deforestation

The yearly deforestation in Aceh has varied irregularly over the last two decades. In 2018 deforestation returned to a minimum figures observed in 2001 and more recently in 2015. The reported deforestation in Aceh 2018 was 75 km<sup>2</sup>, indicating a sharp interannual decline equivalent to -70% with respect to 2017.

The deforestation rate of 2018 was 0.25%, one of the lowest among the Indonesian provinces for this year. This represented 1.5% of the total deforestation in Indonesia and set the province's deforestation 71% below the reference deforestation baseline 1990-2012 (see Figure 3).

51% of the deforestation is located in the five most affected districts in the province (see Figure 4). In 2015 the district of Aceh Jaya represented of the province's deforestation with 11 km<sup>2</sup>.

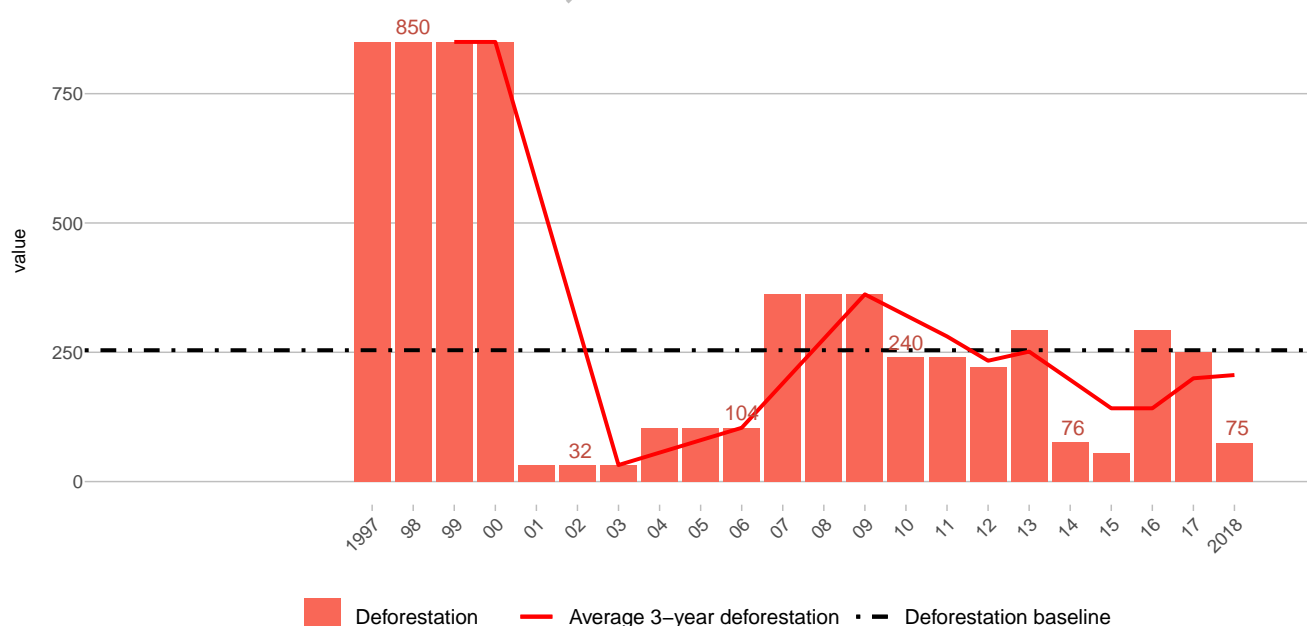
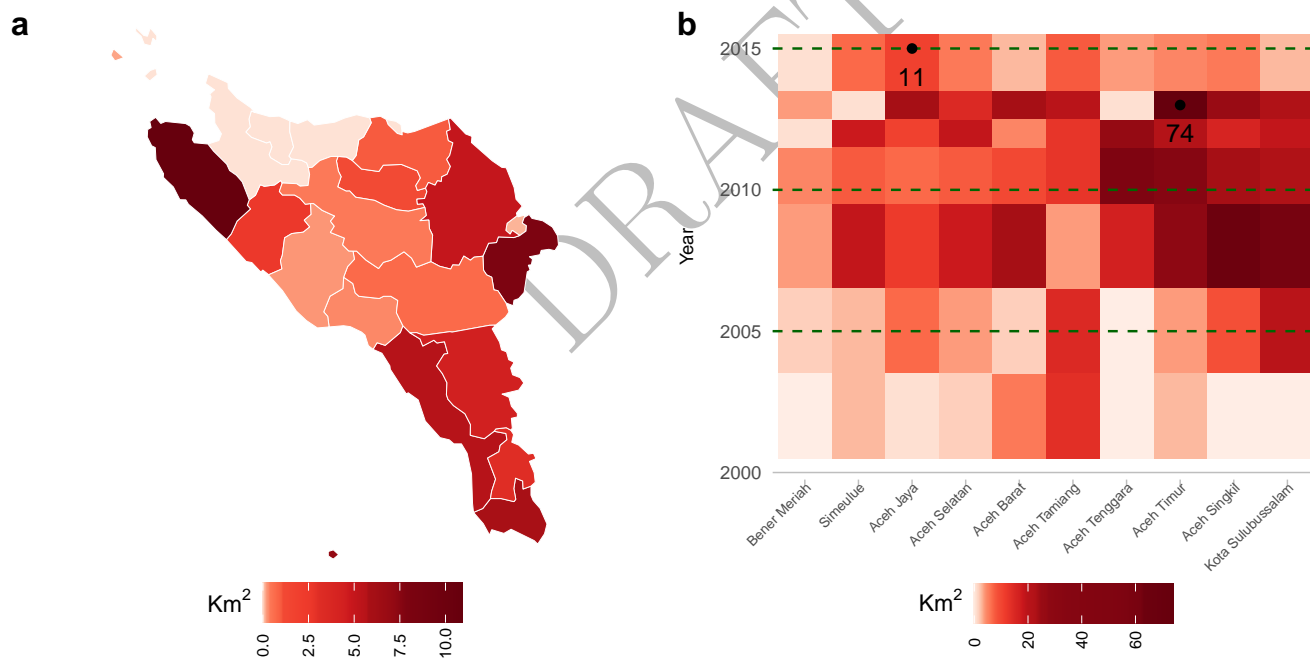


Figure 3: Yearly deforestation (km<sup>2</sup>) and deforestation baseline

Table 1: Forest and deforestation indicators in the province of Aceh

Year	Forest (km <sup>2</sup> )	Deforestation	Deforestation rate (%)	Annual variation (%)
2001	33,254	32.46	0.10	-96.2
2002	33,254	32.46	0.10	0
2003	33,254	32.46	0.10	0
2004	32,941	104.29	0.31	221.3
2005	32,941	104.29	0.32	0
2006	32,941	104.29	0.32	0
2007	32,038	361.95	1.10	247.1
2008	32,038	361.95	1.13	0
2009	32,038	361.95	1.13	0
2010	31,646	239.79	0.75	-33.8
2011	31,646	239.79	0.76	0
2012	31,424	221.11	0.70	-7.8
2013	31,101	293.34	0.93	32.7
2014	31,024	76.48	0.25	-73.9
2015	30,948	55.79	0.18	-27.1
2016	30,892	292.63	0.95	424.5
2017	30,599	250.10	0.81	-14.5
2018	30,349	75.02	0.25	-70

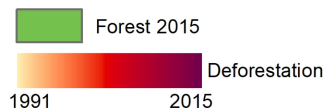
Figure 4: a) Yearly deforestation by districts in 2015 b) Yearly deforestation in top 10 most affected districts (km<sup>2</sup>)



### Aceh, 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 Aceh was 33 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 23 km<sup>2</sup> and the worst year in the last decade was 2014 with 83 km<sup>2</sup> burned. In most years, the months of January and July represented the peak of the fire season (see Figure 5).

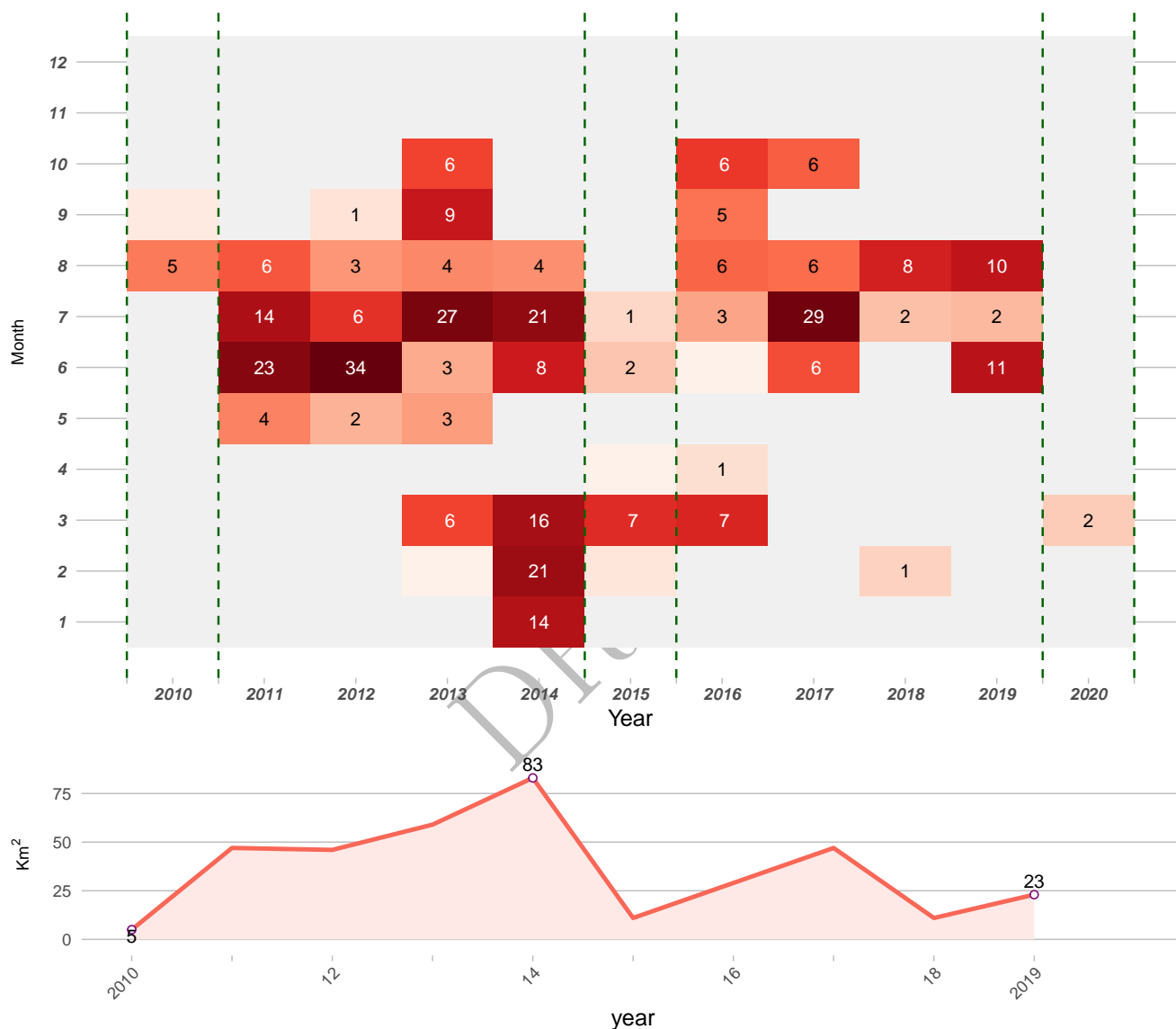


Figure 5: Monthly burned area since 2010 (km<sup>2</sup>). Source: EII analysis of MODIS-MCD64



## Emissions from deforestation

The accumulated emissions from deforestation in the province of Aceh between 2000 and 2015 amount to 178 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 13 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

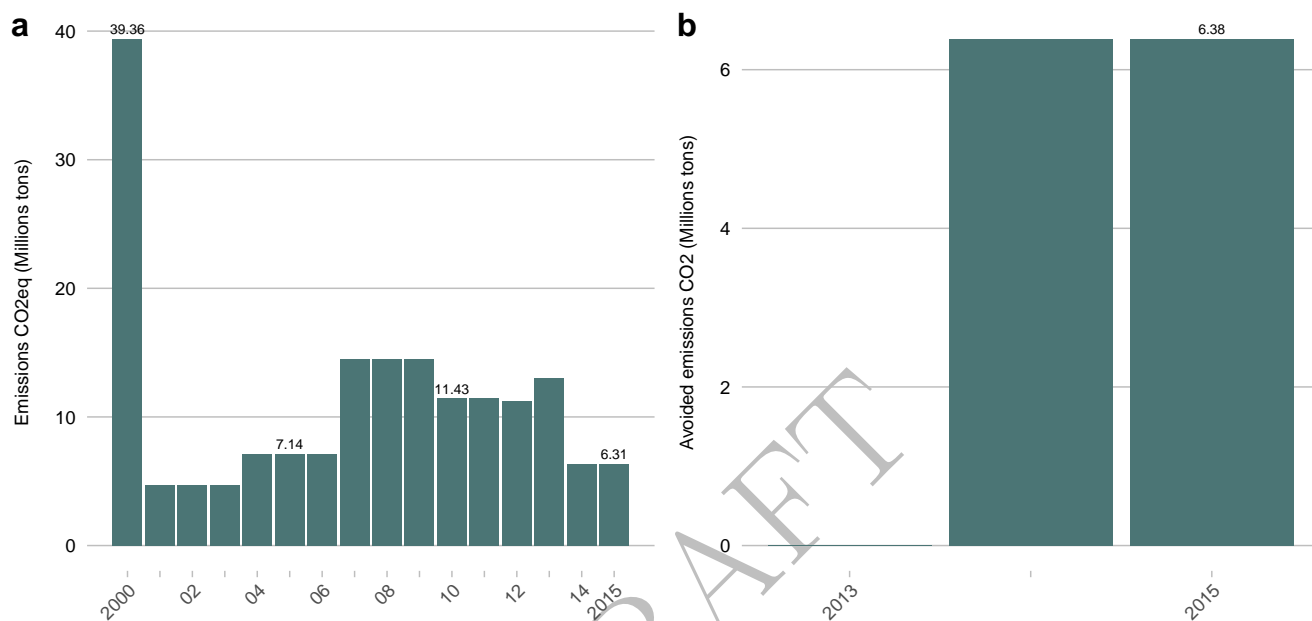




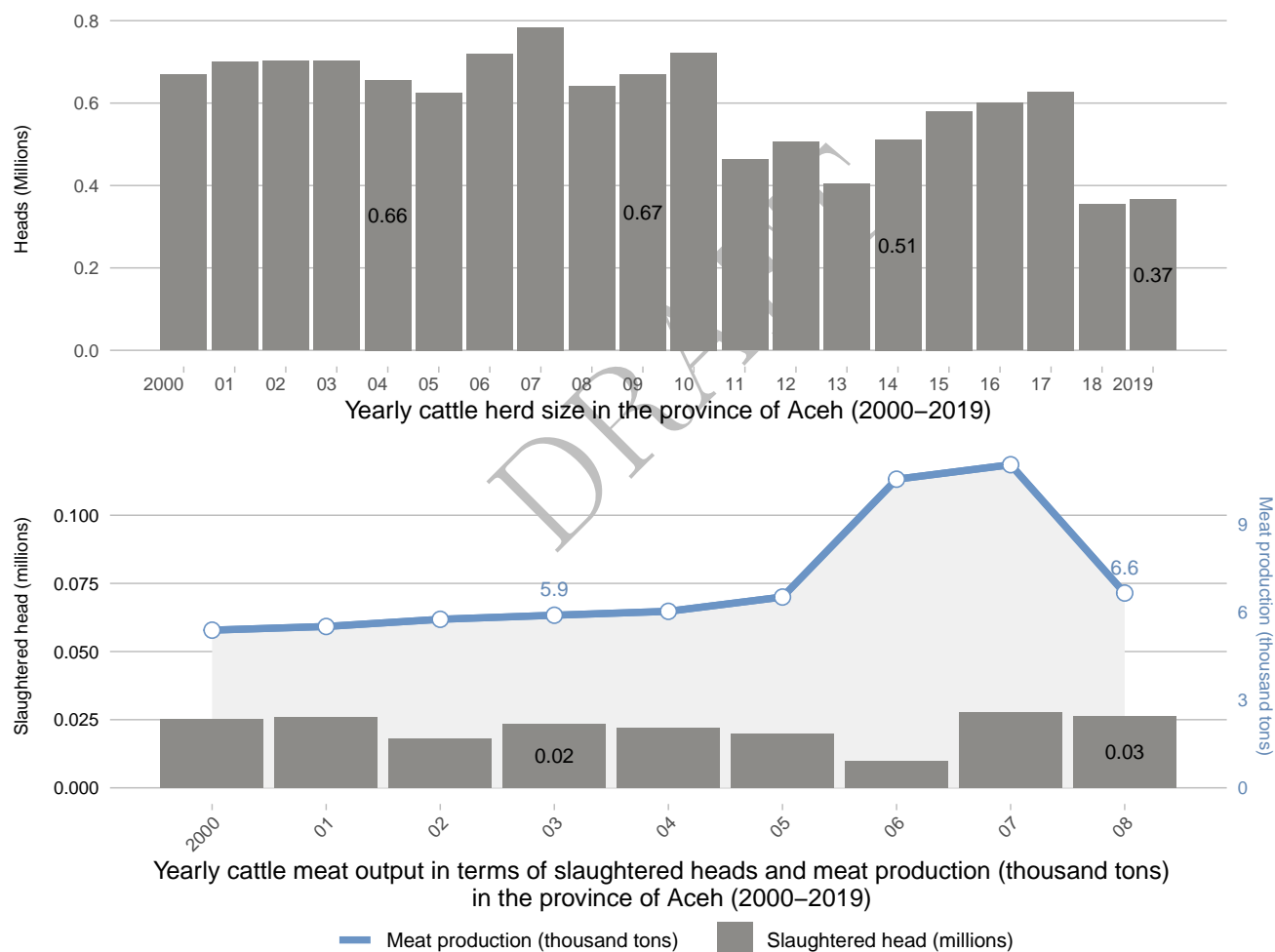


Figure 6: Emissions from deforestation (left) and avoided emissions (right) (CO<sub>2</sub>eq Millions tons)

## Livestock

Table 2: Livestock indicators in Aceh

				
	<b>Cattle</b>	<b>Pig</b>	<b>Poultry</b>	<b>Fish</b>
Year	2019	2019	2019	NA
Herd size:	365,422	2,470	45,741,821	
Slaughtered heads:	NA	NA	NA	
Meat production (tons):	11,870	125	54,929	
Value (thousands):				RpNA IDR





## Agriculture

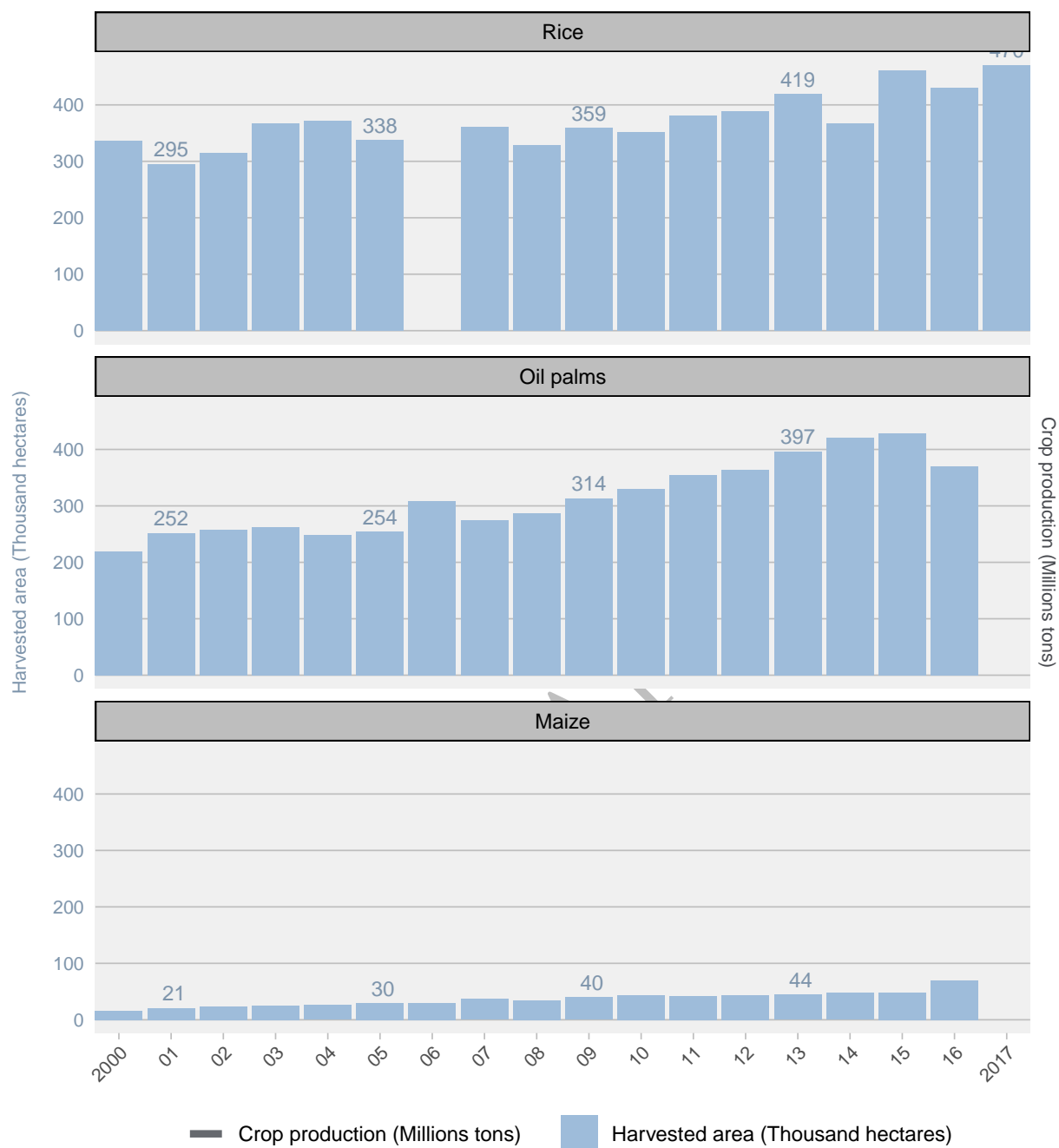


Figure 7: Harvested area and production of the three crops most produced in Aceh





## Aquaculture

The plot shows the aquaculture production in the province of Aceh 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>

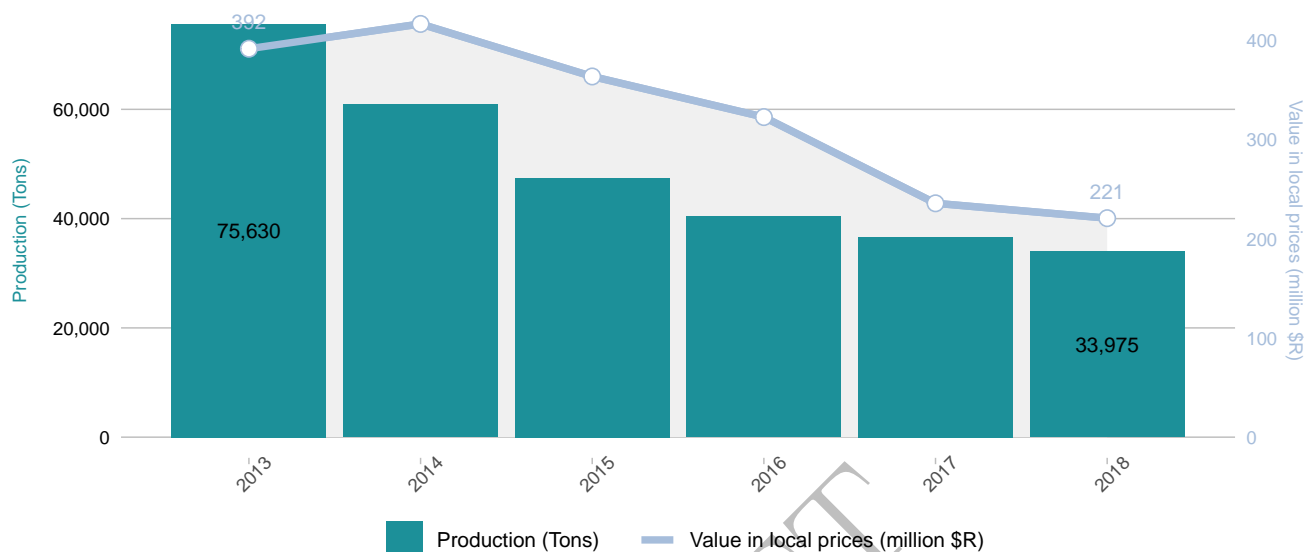


Figure 8: Yearly aquaculture production (tons) and value of production (Reales) in Aceh

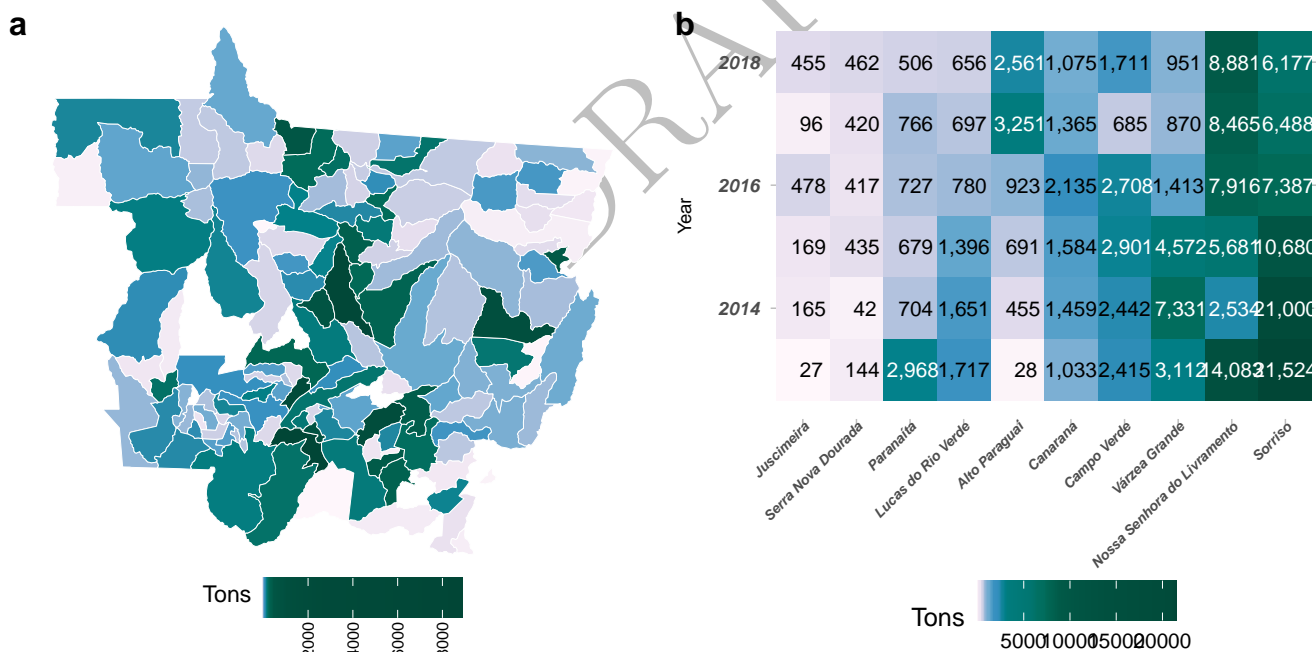


Figure 9: a) Yearly aquaculture production (tons) in districts of Aceh in 2018. b) Yearly aquaculture production by districts (Tons)

<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.