Indonesia

Indicators brief

Indonesia area:	$1,904,569 \text{ km}^2$
Original forest area:	$NA \ km^2$
Current forest area (2018):	$846,126 \ {\rm km^2}$
Yearly deforestation (2018):	$4,934 \mathrm{~km^2}$
Yearly deforestation rate (2015):	0.62%
Interannual deforestation change (2017-2018):	0%
Accumulated deforestation (2001-2018):	$111,769 \ \rm km^2$
Protected conservation areas:	$217,339 \text{ km}^2 (11.4\% \text{ of Indonesia})$
Carbon stocks (2015):	313 millions tons (above ground biomass)
NA	NA
NA	NA
More on jurisdictional sustainability	State of jurisdictional sustainability
ndex : Forest and people <u>Deforestation</u> <u>Bu</u>	rned area
missions from deforestation Livestock Agr	iculture Aquaculture

Forest and people

In 2018, the estimated area of tropical forest in the Indonesia was $846,126 \ km^2$, distributed among 29 provinces (see Figure 1). This represented 44.43% of the area of Indonesia and about 5% of the global tropical forest area. The Indonesia concentrates about 4.85% of the carbon reserves stored in the biomass of the world's tropical forest.

There were about 176.18 million people living in the Indonesia as of 2020, distributed in 29 provinces. The largest city was Seruyan (Central Kalimantan) with a population of 0.2 million people. There were 0 settlements with at least 250,000 people (see Figure 2). 0% of the area was delimited as indigenous territories where an estimate of 0 indigenous people lived as reported in the most recent census of -Inf.

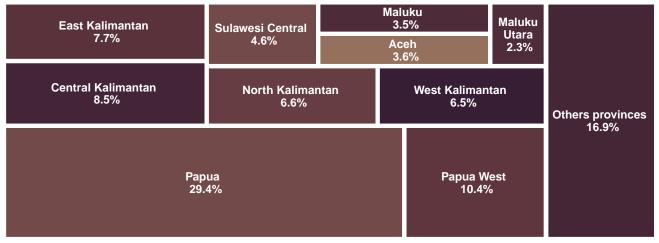


Figure 1: Distribution of forest by Indonesia provinces

Deforestation

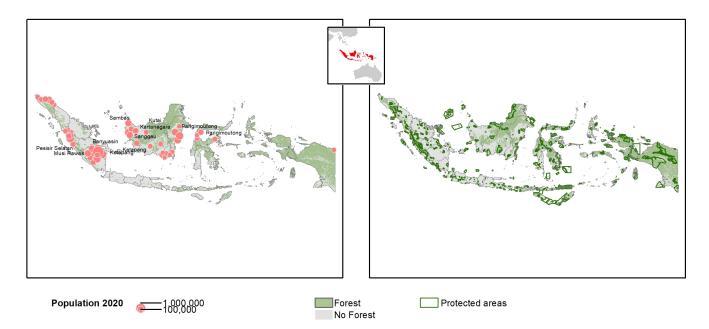
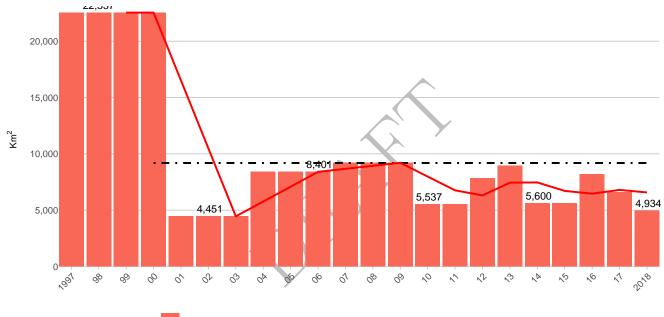


Figure 2: Maps of most populated places (> 250,000 people) and indigenous and protected areas in Indonesia



Table 1. Forest and deorestation indicators in indonesia (2001-2015)											
Year	Forest (km^2)	Deforestation	Deforestation rate (%)	Annual variation $(\%)$							
2001	988,169	$4,\!451$	0.45	-80.2							
2002	988,169	$4,\!451$	0.45	-							
2003	988,169	$4,\!451$	0.45	-							
2004	$962,\!998$	$8,\!401$	0.85	88.8							
2005	$962,\!998$	$8,\!401$	0.87	-							
2006	$962,\!998$	$8,\!401$	0.87	-							
2007	$934,\!493$	$9,\!207$	0.96	9.6							
2008	$934,\!493$	$9,\!207$	0.99	-							
2009	$934,\!493$	$9,\!207$	0.99	-							
2010	$924,\!205$	$5,\!537$	0.59	-39.9							
2011	$924,\!205$		0.6	-							
2012	$918,\!947$	$7,\!856$	0.85	41.9							
2013	$910,\!076$	8,929	0.97	13.7							
2014	$894,\!525$	$5,\!981$	0.62	-37.3							
2015	$887,\!547$	$11,\!752$	0.62	-							

Table 1: Forest and deforestation indicators in Indonesia (2001-2015)



Deforestation — Average 3-year deforestation \cdot — Deforestation baseline Figure 3: Yearly deforestation (km^2) and deforestation baseline

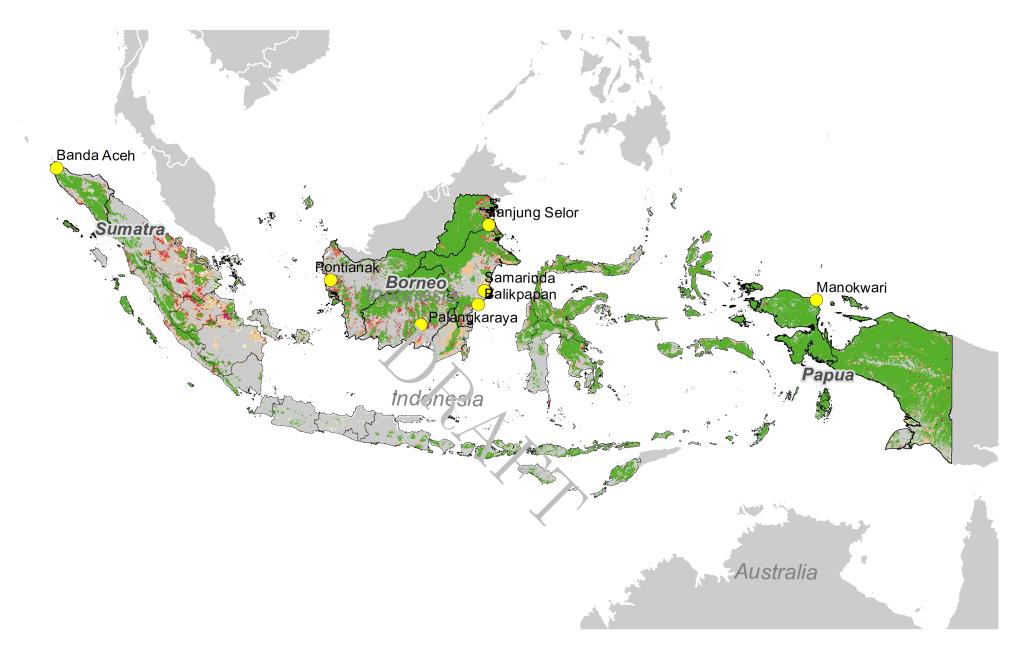
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Central Kalimantan	517	517	517	853	853	853	1,394	1,394	1,394	1,150) 1,150	565	867	667	1,897	1,157	1,168	278
West Kalimantan	347	347	347	753	753	753	984	984	984	628	628	997	2,970	363	458	1,251	524	424
East Kalimantan ——	861	861	861	647	647	647	602	602	602	29 0	290	983	715	455	455	1,030	1,030	548
Jambi ——	171	171	171	205	205	205	1,253	1,253	1,253	320	320	326	988	525	267	579	393	151
Papua	263	263	263	792	792	792	352	352	352	149	149	232	132	204	679	67	195	846
North Kalimantan	154	154	154	744	744	744	385	385	385	181	181	298	300	241	241	410	280	228
Sulawesi Central	315	315	315	340	34ф	340	231	231	231	239	239	90	319	49	214	285	445	233
South Kalimantan	179	179	179	166	166	166	105	105	105	42	42	79	91	69	525	356	68	172
Sulawesi Southeast	48	48	48	175	175	175	89	89	89	10\$	105	66	34	24	71 <mark>1</mark>	187	155	318
Maluku Utara	68	68	68	58	58	58	29	29	29	108	108	41	57	16	120	258	245	118
Nusa Tenggara East	2	2	2	67	67	67	1	1	1	17	17	515	52	2	14\$			177
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Figure 4: Yearly defore station in most affected provinces 2001-2018 $(km^2).$ Darker colors correspond with high values of defore station.

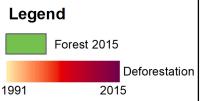


Figure 5: Defore station in 2018 by (a) provinces (km^2) and (b) districts (km^2)

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Prepared by Earth Innovation Institute

Burned area

According to the NASA-USGS analysis of MODIS satellite observations, the average yearly burned area in the Indonesia was $9,394 \text{ km}^2$ 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 20,671 km² and the worst year in the last decade was 2015 with 25,976 km² burned. In most years, the months of September and October represented the peak of the fire season (see Figure 5).

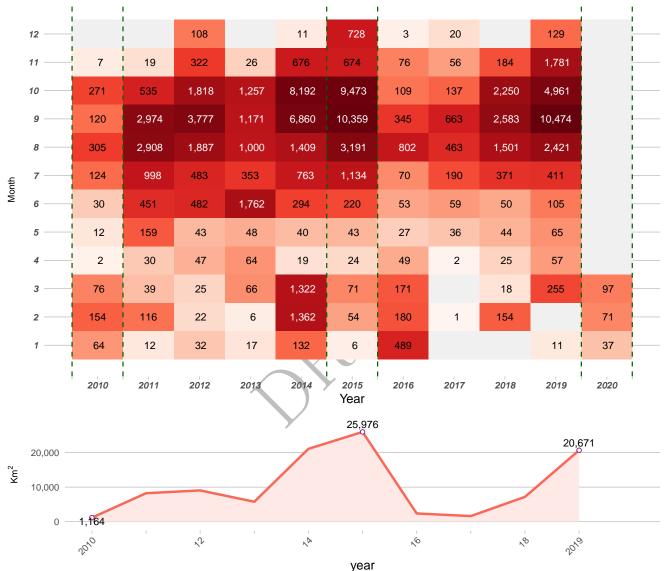
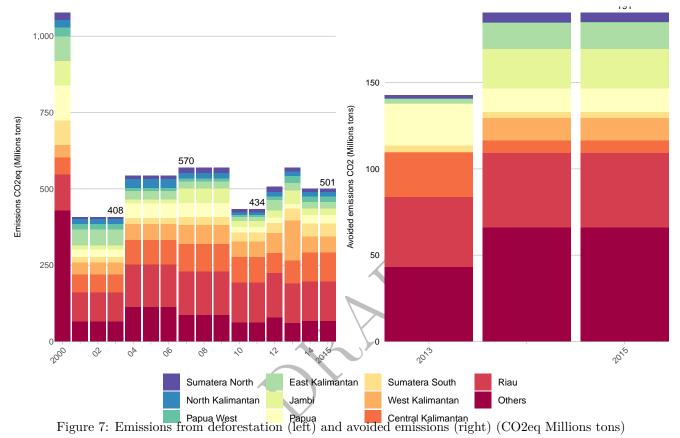


Figure 6: Monthly burned area since 2010 (km²). Source: EII analysis of MODIS-MCD64

Emissions from deforestation

The accumulated emissions from deforestation in the Indonesia between 2000 and 2015 amount to 8,586 million tons of CO2eq. Considering the observed yearly deforestation, the mean carbon density of the Indonesia forest and the business as usual deforestation baseline, the accumulated gross avoided emissions from deforestation during the period from 2013 to 2015 was 524 million tons of CO2eq. 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



Aquaculture

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

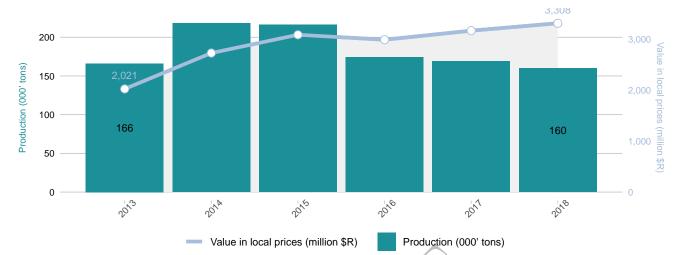


Figure 8: Yearly aquaculture production (thousand tons) and value of production (million of Reales) in the Indonesia

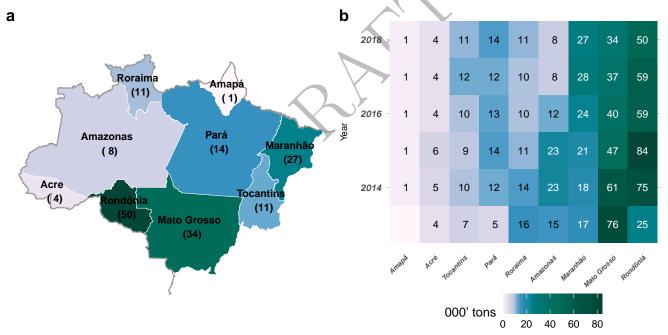


Figure 9: a) Yearly aquaculture production (thousand tons) in provinces of the Indonesia in 2018. b) Yearly aquaculture production by provinces (000' tons)

¹The 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.