Papua, Indonesia

Jurisdictional indicators brief



State area:	$313,374 \text{ km}^2$ (16.45% of Indonesia)
Original forest area:	$262,686 \text{ km}^2$
Current forest area (2018):	248,806 km ² (79.4% of Papua)
Yearly deforestation (2018)	846 km^2
Yearly deforestation rate (2018)	0.34%
Interannual deforestation change	+333%
(2017-2018)	
Accumulated deforestation (2001-2018):	$6,871 \text{ km}^2$
Protected conservation areas:	$68,632 \text{ km}^2 (21.9\% \text{ of Papua})$
Carbon stocks (2015):	2,528 millions tons (above ground biomass)
Representative crops (2017):	Sweet potato (250,245 tons); NA (NA tons); NA (NA tons)
Value of agricultural production (2017):	1,559,420,455 USD
More on jurisdictional sustainability	State of jurisdictional sustainability

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Forest and people

In 2018, the estimated area of forest in the province of Papua was 248,806 km², equivalent to 79.4% of the province's total area, and to 29.4% of the forest remaining in Indonesia. The total accumulated forest lost during the period 2001-2018 was 6,871 km², equivalent to 2.2% of the forest area remaining in 2001. Papua concentrated about 27.3% of the carbon reserves stored in the biomass of the Indonesia tropical forest (about 2,528 mt C as of 2018)



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

There were 3.4 million people living in Papua as of 2020, distributed in 18 districts, with 0.1 million people living in the capital city of Jayapura . The province has formally designated conservation areas which represent 22% of the province (see Figure 2).



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

Deforestation

The yearly deforestation in Papua has varied irregularly between low levels and marked peaks in 2015 and 2018. In 2018 deforestation increased rapidly, reaching a rate of 0.34%, the highest since 2001 and almost on par with the rates of Central Kalimantan and North Kalimantan for this year. The reported deforestation in 2018 was 846 km², representing the largest contribution to deforestation among the Indonesian provinces 17.1% of the total deforestation in that year. This signaled also an interannual increase of 333% with respect to 2017.

With the latest official figure of 2018 , the province's defore station is 14% above the reference defore station baseline 1990-2012 (see Figure 3).

48% of the deforestation is located in the five most affected districts in the province (see Figure 4). In 2015 the district of Merauke represented of the province's deforestation with 238 km^2 .



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

Year	Forest (km^2)	Deforestation	Deforestation rate $(\%)$	Annual variation $(\%)$
2001	$254,\!292$	262.77	0.10	-90.9
2002	$254,\!292$	262.77	0.10	0
2003	$254,\!292$	262.77	0.10	0
2004	251,738	791.59	0.31	201.2
2005	251,738	791.59	0.31	0
2006	251,738	791.59	0.31	0
2007	$250,\!692$	351.75	0.14	-55.6
2008	$250,\!692$	351.75	0.14	0
2009	$250,\!692$	351.75	0.14	0
2010	$250,\!395$	148.64	0.06	-57.7
2011	$250,\!395$	148.64	0.06	0
2012	$250,\!287$	232.22	0.09	56.2
2013	$250,\!156$	131.69	0.05	-43.3
2014	$249,\!951$	204.43	0.08	55.2
2015	249,747	678.58	0.27	231.9
2016	249,068	$\overline{67.30}$	0.03	-90.1
2017	249,001	195.31	0.08	190.2
2018	$248,\!806$	845.87	0.34	333.1

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



Prepared by Earth Innovation Institute

Burned area

According to the NASA-USGS analysis of MODIS satellite observations, the average yearly burned area in Papua was 1,491 km² 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 1,835 km² and the worst year in the last decade was 2015 with 5,614 km² 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 (km²). Source: EII analysis of MODIS-MCD64

Emissions from deforestation

The accumulated emissions from deforestation in the province of Papua between 2000 and 2015 amount to 597 million tons of CO2eq, 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 52 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



Figure 6: Emissions from deforestation (left) and avoided emissions (right) (CO2eq Millions tons)

Livestock







Sweet potato 0,45 0.4 75 0,35 0,34 0.28 0.3 50 35 0.2 31 31 28 25 18 0.1 0.0 0 Rice Harvested area (Thousand hectares) Crop production (Millions tons) 0.2 0.1 0.1 0.1 75 50 41 26 24 25 0.10 0.09 80.0 0.0 0 Oil palms 0.4 75 0.3 50 51 50 39 0.2 26 25 0,09 0,08 0.1 0,07 0 0.0 2017 2000 ~6 S ି රං 8 Ŷ S 0 2 ŝ 5 0 00 5 N

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

Harvested area (Thousand hectares)

Crop production (Millions tons)

Agriculture

Aquaculture

The plot shows the aquaculture production in the province of Papua 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.¹



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